HORIZON NUCLEAR POWER

WYLFA NEWYDD

ENERGY WORKING FOR BRITAIN

Wylfa Newydd Project

Environmental Statement Addendum – Appendices

PINS Reference Number: EN010007

25 March 2019

Revision 2.0
Examination Deadline 8

Regulation Number: 5(2)(a)

Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Horizon Internal DCRM Number: WN0902-HZDCO-PAC-REP-00282

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Contents

WN0902-HZDCO-PAC-REP-00304	Environmental Statement Addendum - Appendix C-A Road Traffic-related Effects (Project-Wide) Figure Booklet – Volume C
WN0902-HZDCO-PAC-REP-00314	Environmental Statement Addendum Appendix C5-1-A Noise and Vibration Effects of Traffic
WN0902-HZDCO-PAC-REP-00311	Environmental Statement Addendum Appendix D-A WNDA Development Figure Booklet – Volume D
WN0902-HZDCO-PAC-REP-00305	Environmental Statement Addendum Appendix D5-A Air Quality (Excluding Emissions from Traffic)
WN0902-HZDCO-PAC-REP-00306	Environmental Statement Addendum Appendix D5-2-A Dispersion Modelling of Emissions to Atmosphere Arising from Main Site
WN0902-HZDCO-PAC-REP-00308	Environmental Statement Addendum Appendix D6-1-A Noise Modelling Inputs and Results
WN0902-HZDCO-PAC-REP-00345	Environmental Statement Addendum Appendix D8-A (Previously part of REP6-010 Appendix 1-6)
WN0902-HZDCO-PAC-REP-00310	Environmental Statement Addendum Appendix D15-1-A Navigational Risk Assessment
WN0902-HZDCO-PAC-REP-00313	Environmental Statement Addendum Appendix I4-2-A Project-wide and WNDA Development Intra-project Air Quality Assessment

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HORIZON NUCLEAR POWER

WYLFA NEWYDD

ENERGY WORKING FOR BRITAIN

Wylfa Newydd Project
Environmental Statement Addendum - Appendix C-A Road Traffic-related Effects (Project-Wide) Figure Booklet – Volume C

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Contents

Figure C5-24 - LOCATIONS OF RESIDENTIAL RECEPTORS ESTIMATED TO BE ELIGIBLE FOR NOISE INSULATION LOGISTICS CENTRE AND PARK AND RIDE

Figure C5-25 - LOCATIONS OF RESIDENTIAL RECEPTORS ESTIMATED TO BE ELIGIBLE FOR NOISE INSULATION A5025 OVERVIEW

Overview of Figure 2-3 - Overview of Figure 2-3 - SCENARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE ROAD TRAFFIC NOISE LEVELS, DB LAEQ, 16HR OVERVIEW

Figure 2-3 - SCENARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE ROAD TRAFFIC NOISE LEVELS, DB LAEQ, 16HR

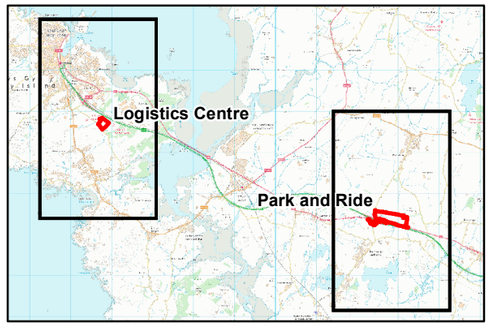
Overview of Figure 2-4 - Overview of Figure 2-4 - SCENARIO 1 (DCO + WEEKDAY EVENING) 2023 OFF-LINE ROAD TRAFFIC NOISE LEVELS, DB LAEQ, 16HR OVERVIEW

Figure 2-4 - SCENARIO 1 (DCO + WEEKDAY EVENING) 2023 OFF-LINE ROAD TRAFFIC NOISE LEVELS, DB LAEQ, 16HR

FIGURE C5-24

Legend

- Logistics Centre and Park and Ride
- Study area
- Calculation area
- Residential receptor estimated to be eligible for noise insulation



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2.0	MAR 19	DCO submission	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

LOCATIONS OF RESIDENTIAL RECEPTORS ESTIMATED TO BE ELIGIBLE FOR NOISE INSULATION
LOGISTICS CENTRE AND PARK AND RIDE

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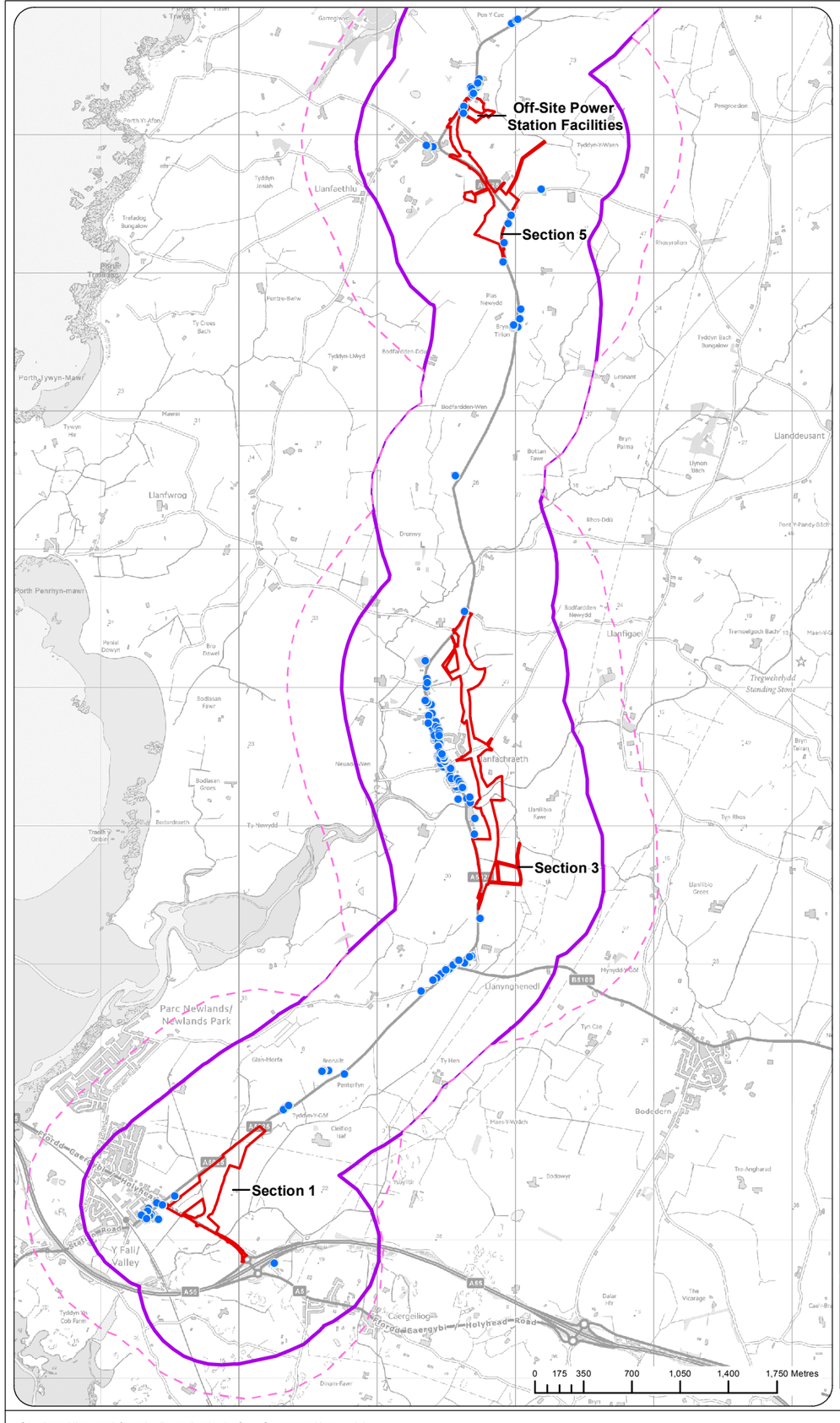
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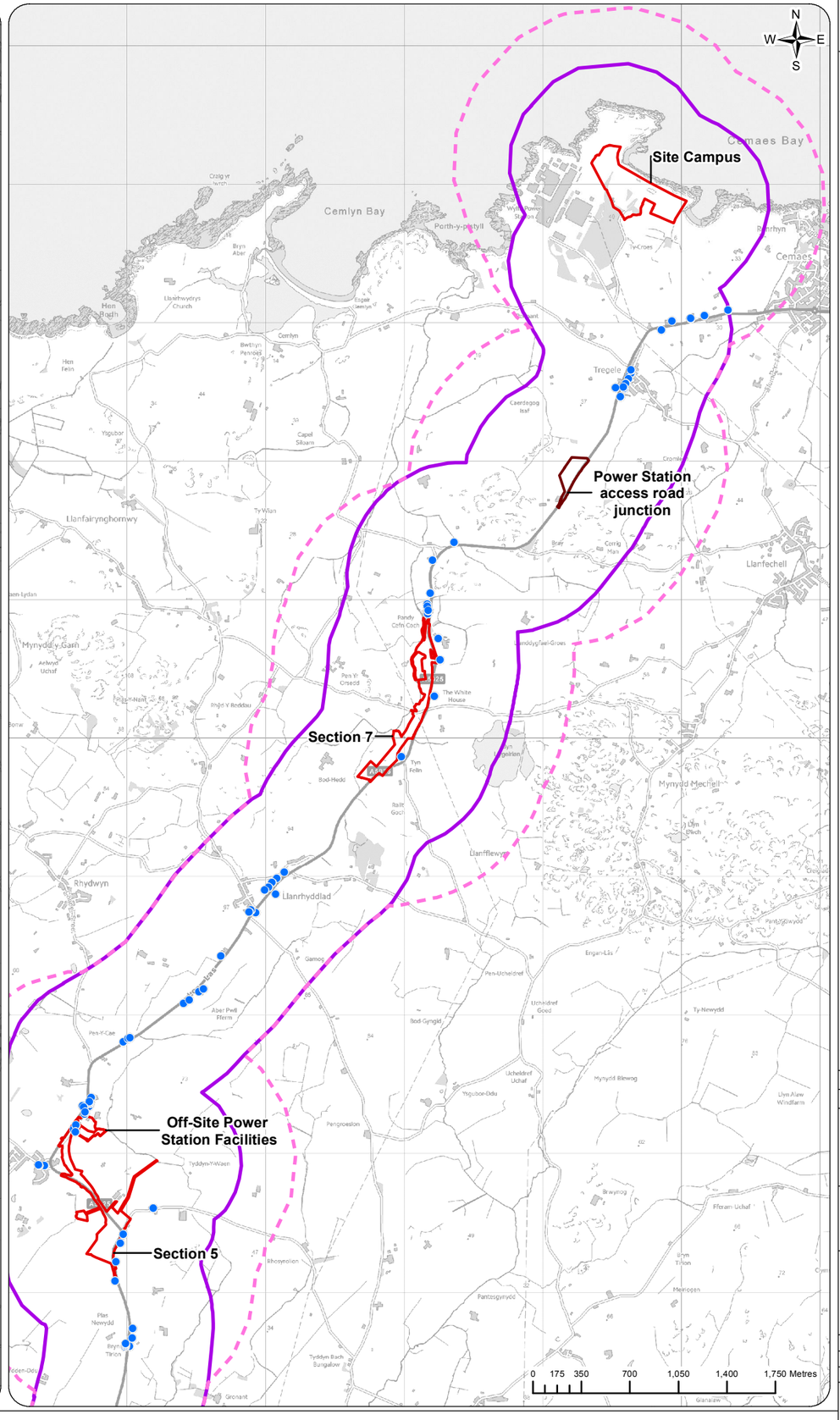
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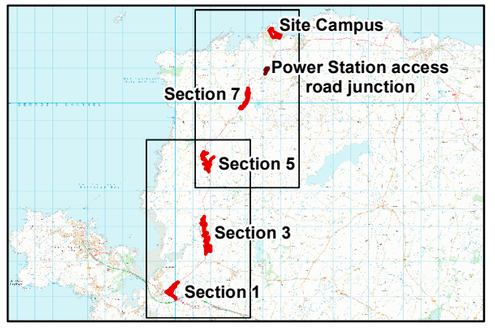
FIGURE C5-25





Legend

- Site Campus and A5025 Off-line Highway Improvements and Off-Site Power Station Facilities
- Work package 1J
- Study area
- Calculation area
- Residential receptor estimated to be eligible for noise insulation



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Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

LOCATIONS OF RESIDENTIAL RECEPTORS ESTIMATED TO BE ELIGIBLE FOR NOISE INSULATION
A5025 OVERVIEW

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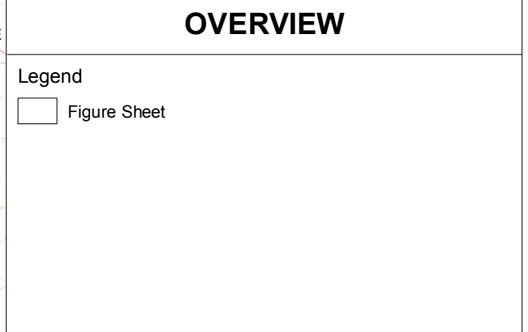
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OVERVIEW

Legend

Figure Sheet



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Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

SCENARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
OVERVIEW

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0 250 500 1,000 metres

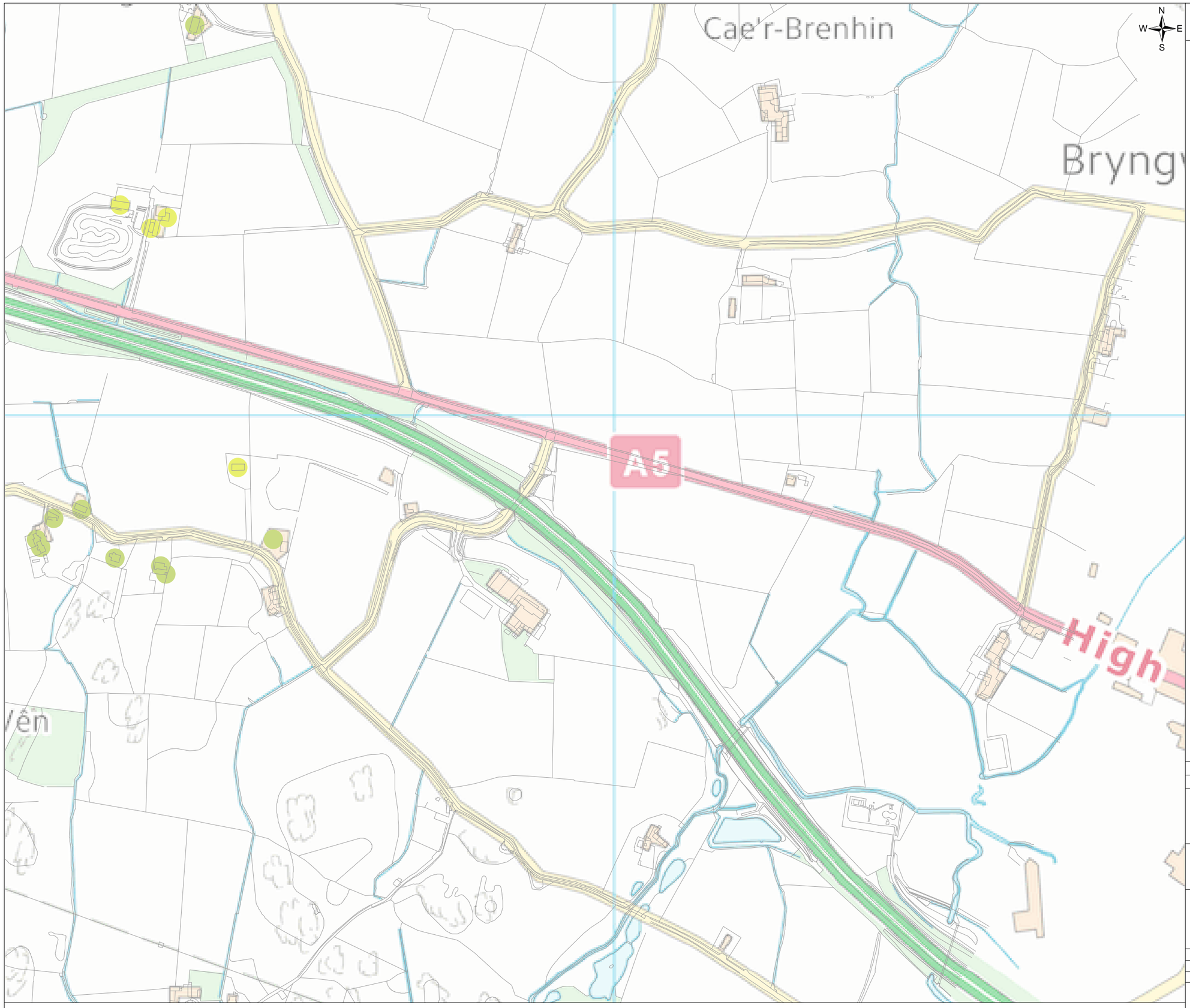


FIGURE 2-3

Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



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Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

SCENARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 1 OF 17

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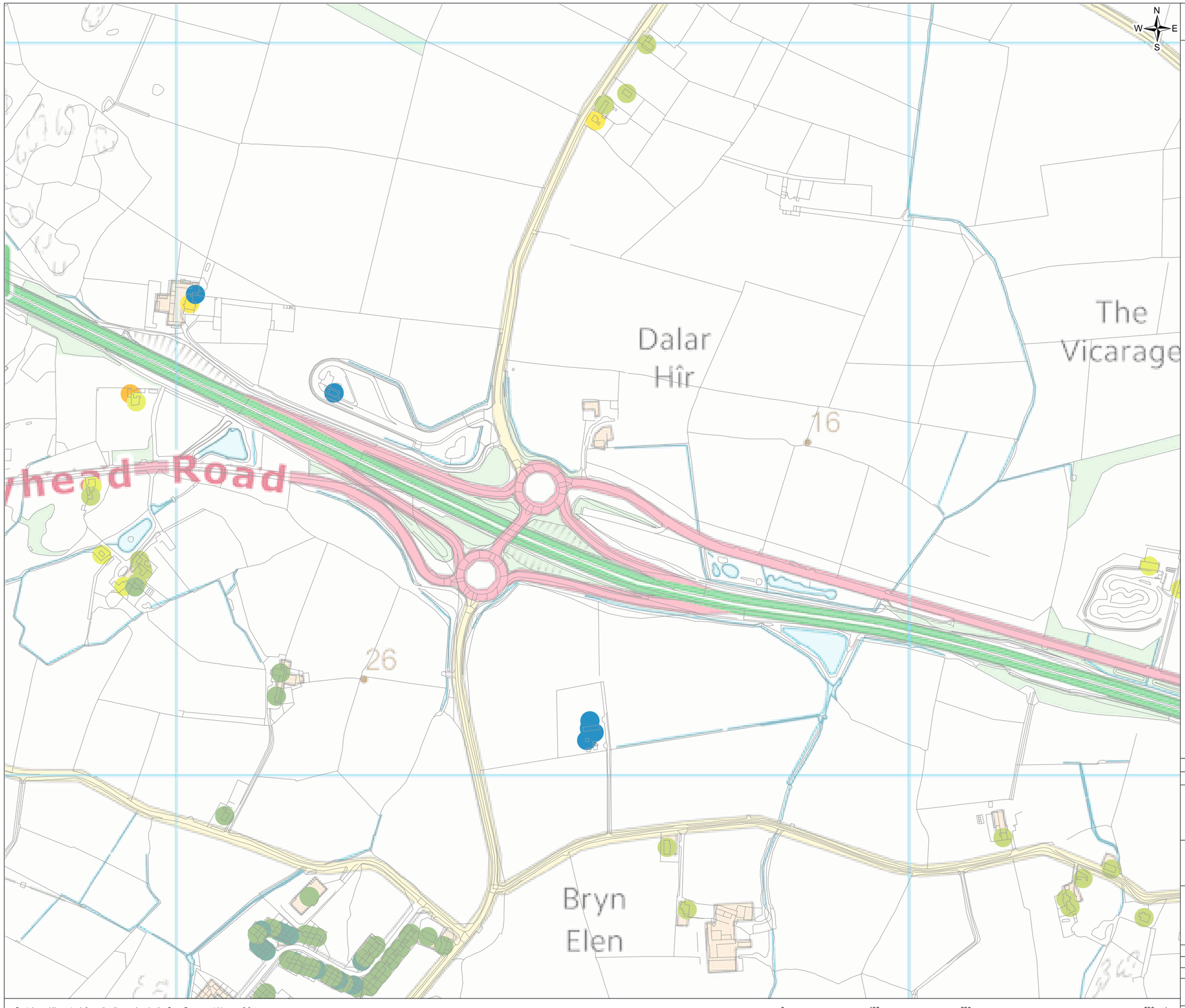
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FIGURE 2-3



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



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HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

SCENARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 2 OF 17

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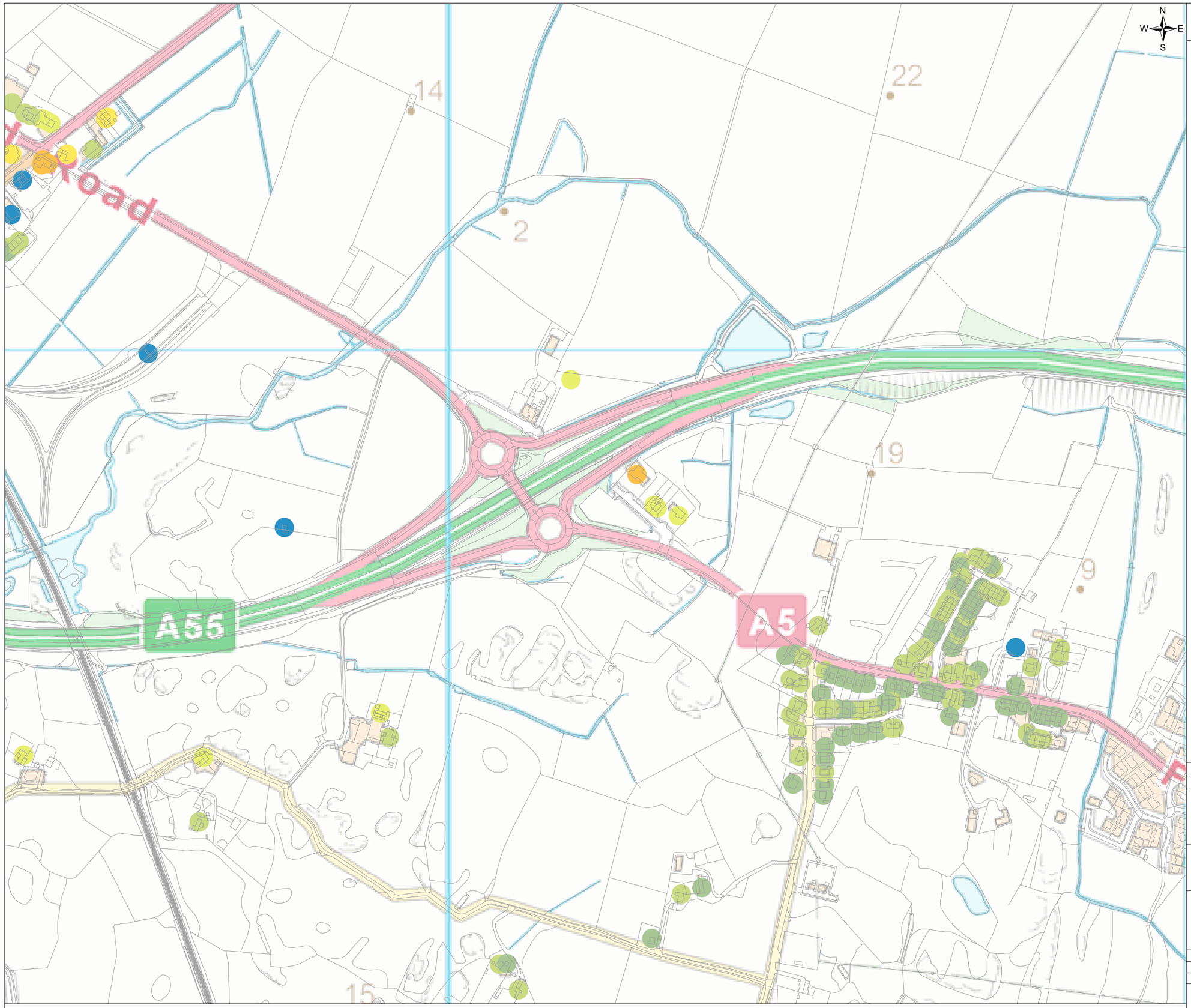
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FIGURE 2-3



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



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Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

SCENARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 3 OF 17

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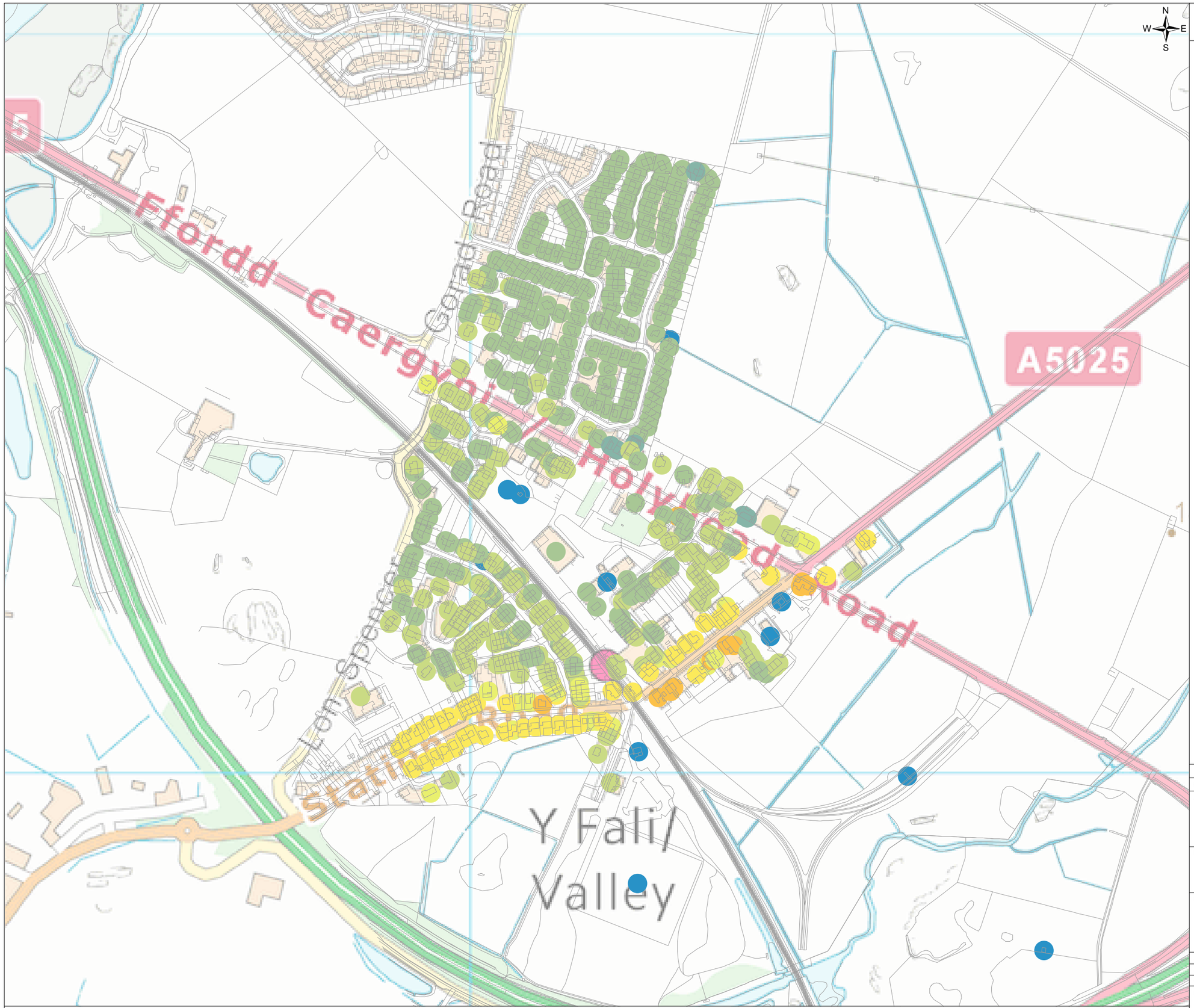
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0 125 250 500 metres

FIGURE 2-3



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

SCENARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
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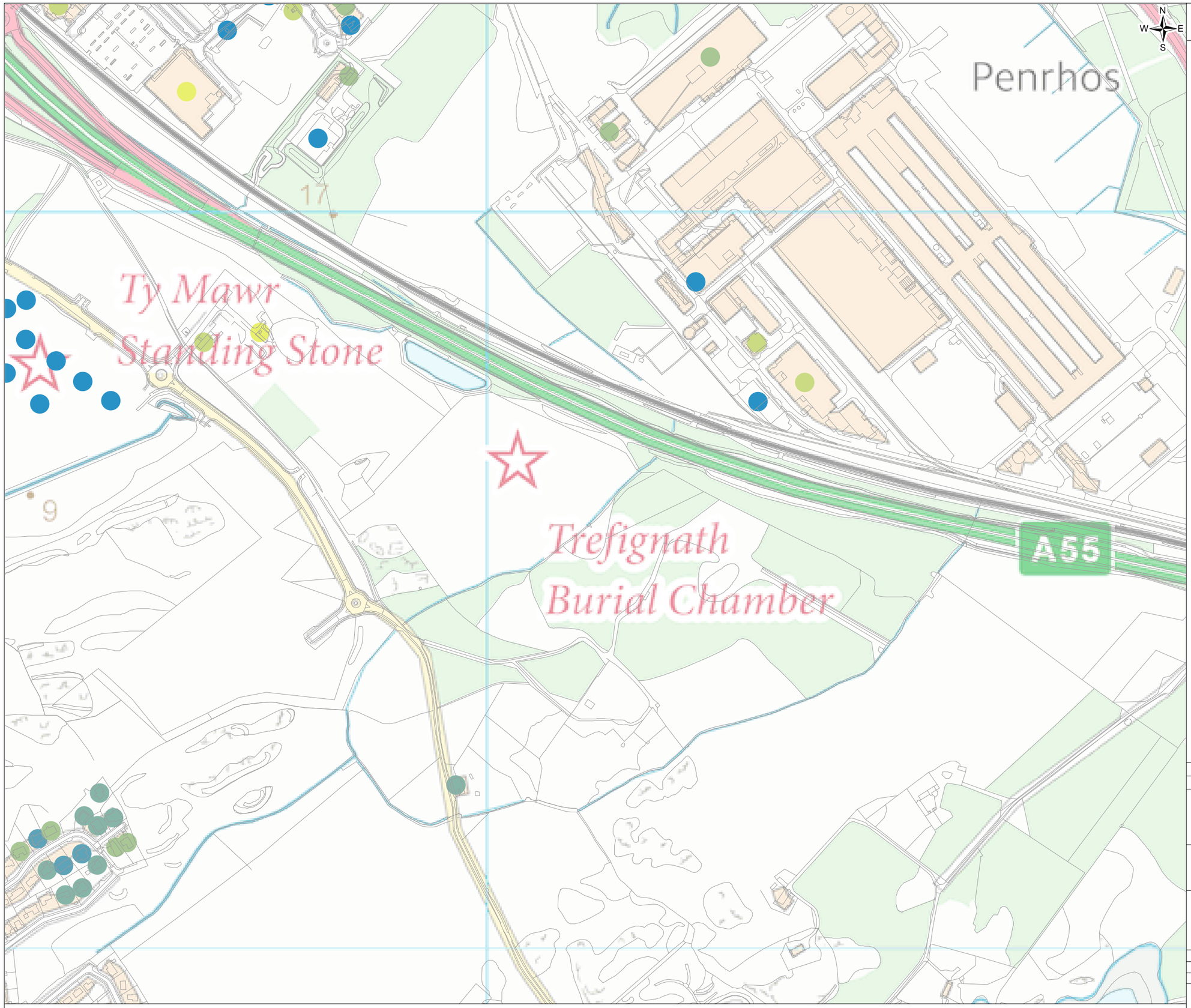
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FIGURE 2-3



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



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ENVIRONMENTAL STATEMENT

Drawing Title: SCENARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 5 OF 17

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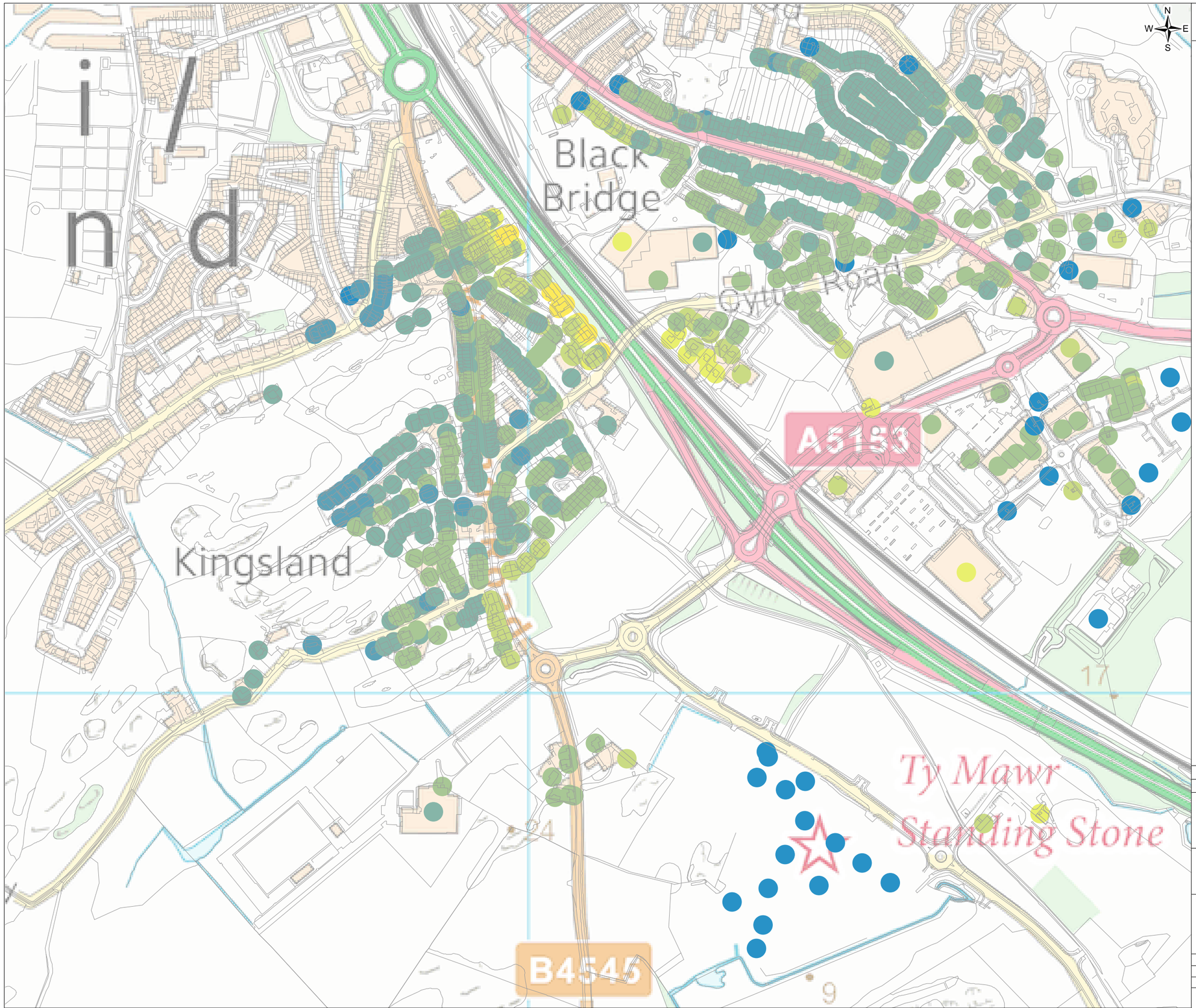
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0 125 250 500 metres

FIGURE 2-3



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



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Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: SCENARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 6 OF 17

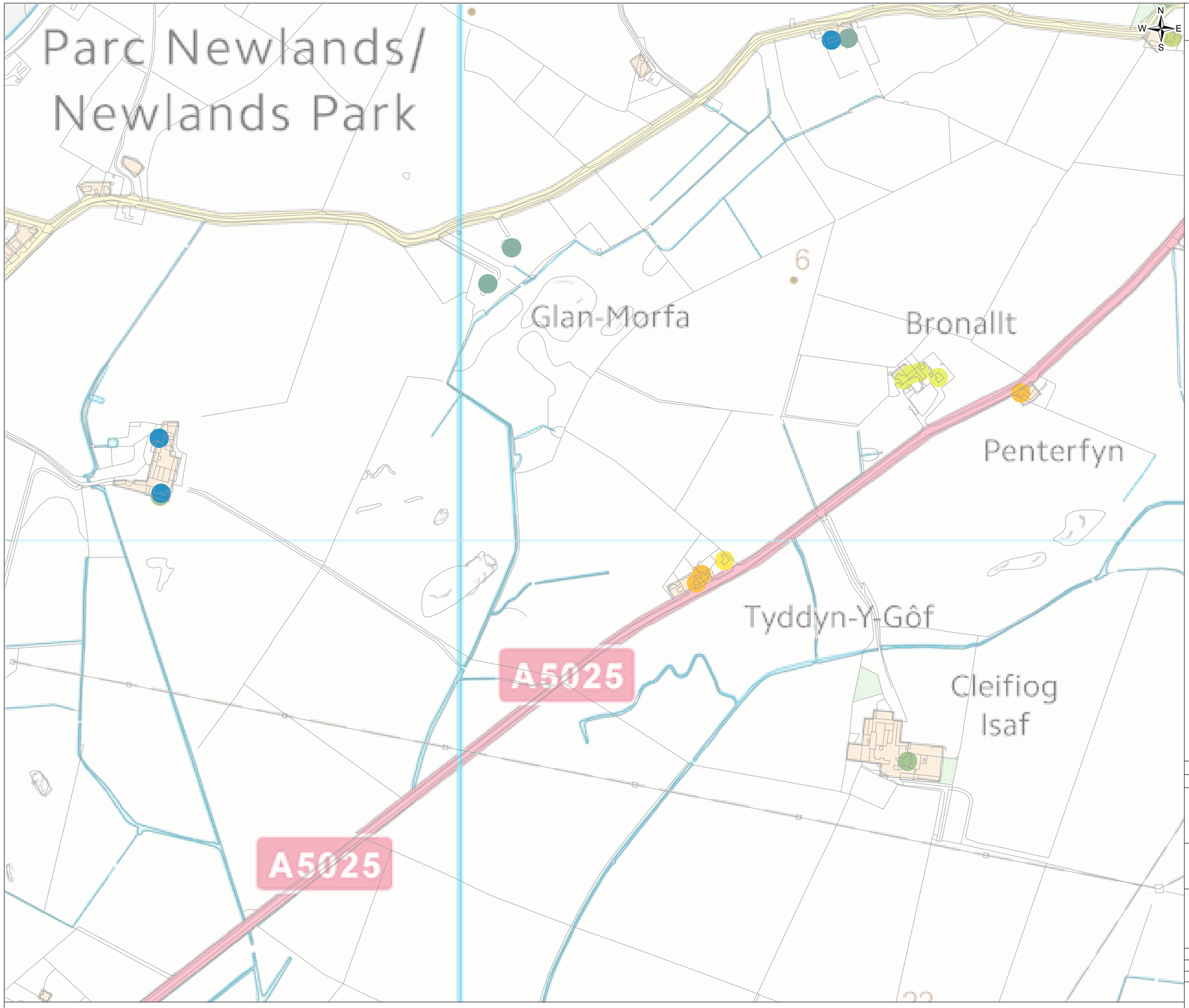
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0 125 250 500 metres



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0 125 250 500 metres

FIGURE 2-3

Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



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Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

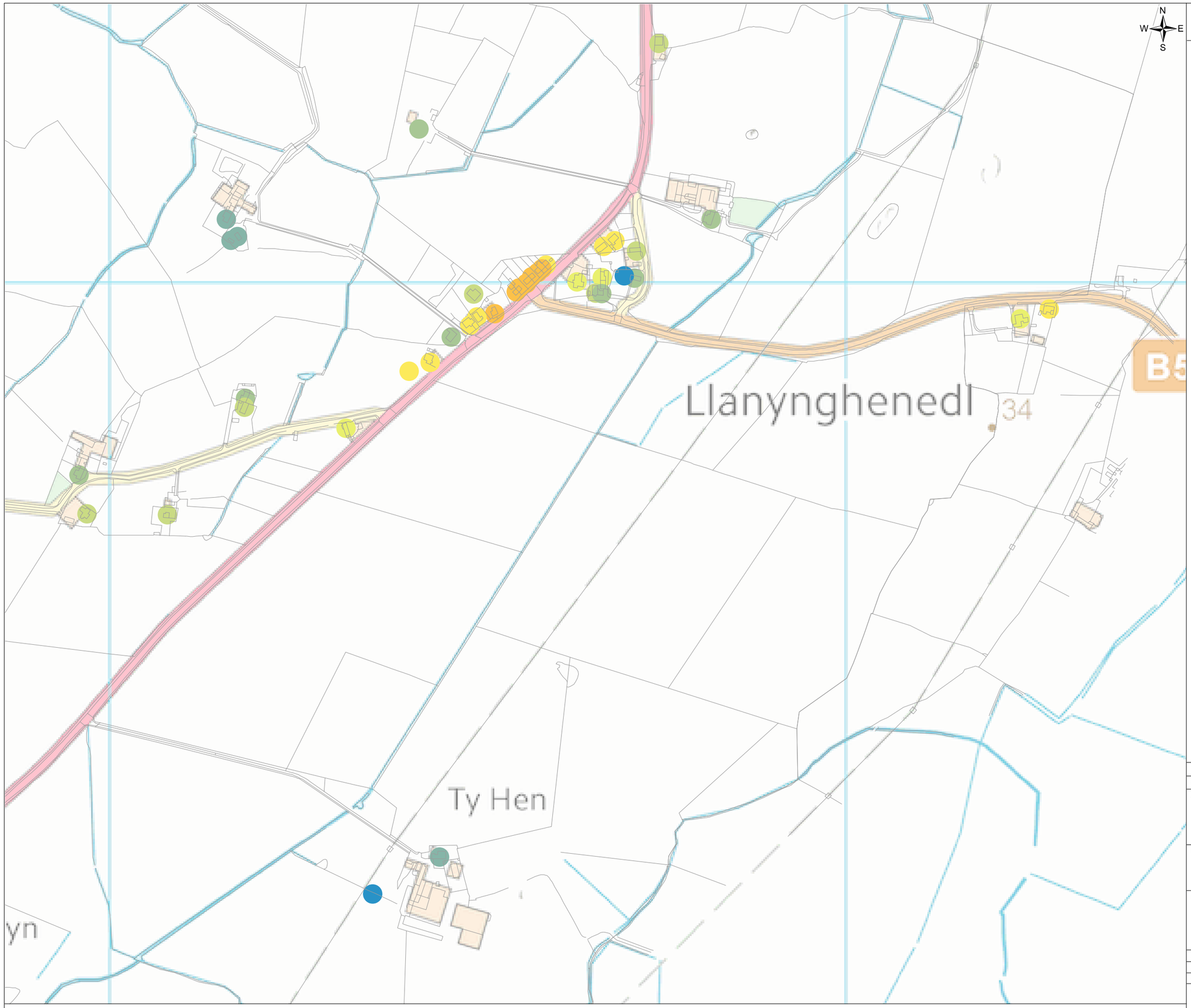
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SHEET 7 OF 17

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FIGURE 2-3



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



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Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: SCENARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 8 OF 17

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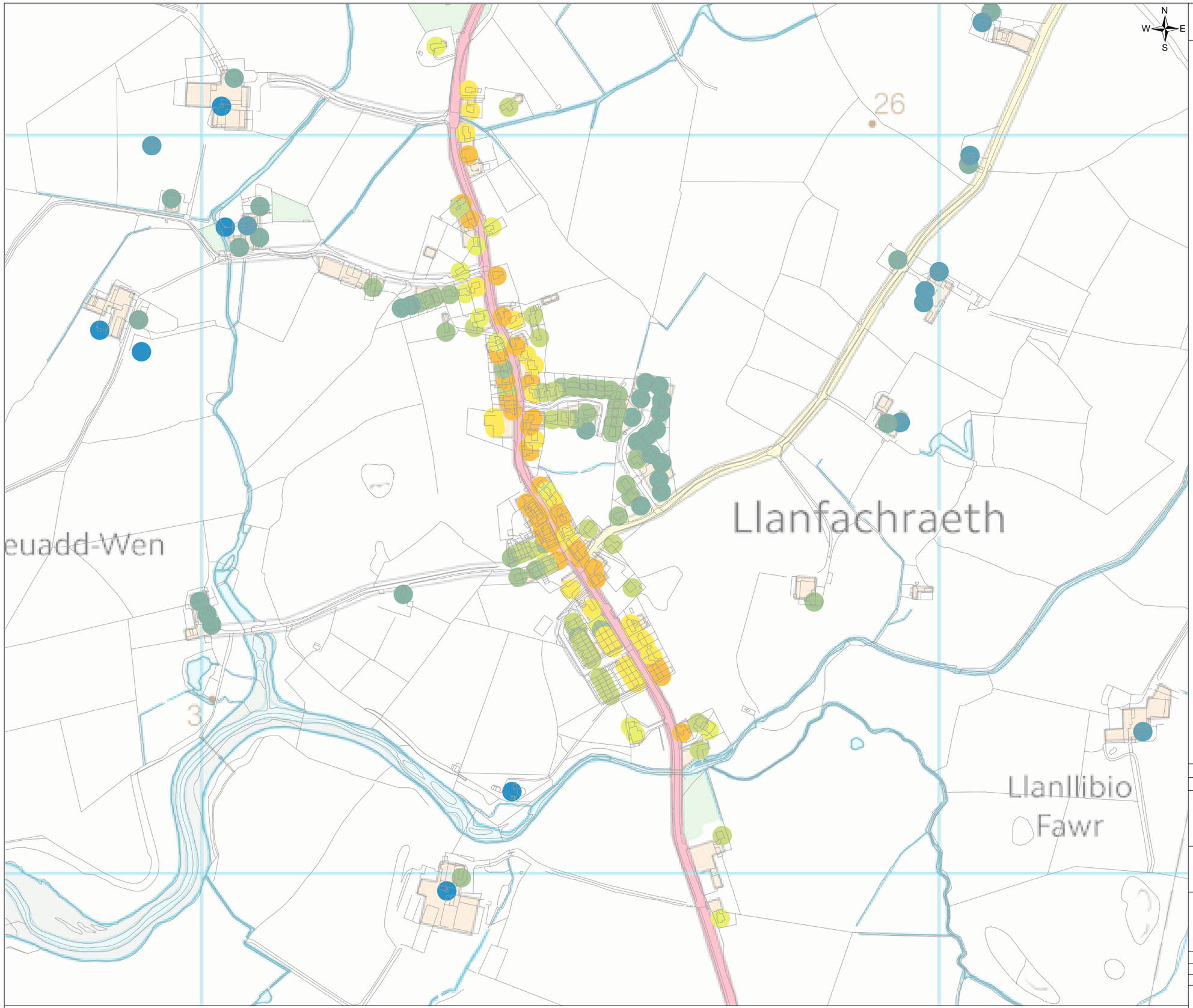
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0 125 250 500 metres

FIGURE 2-3



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



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HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

SCENARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 9 OF 17

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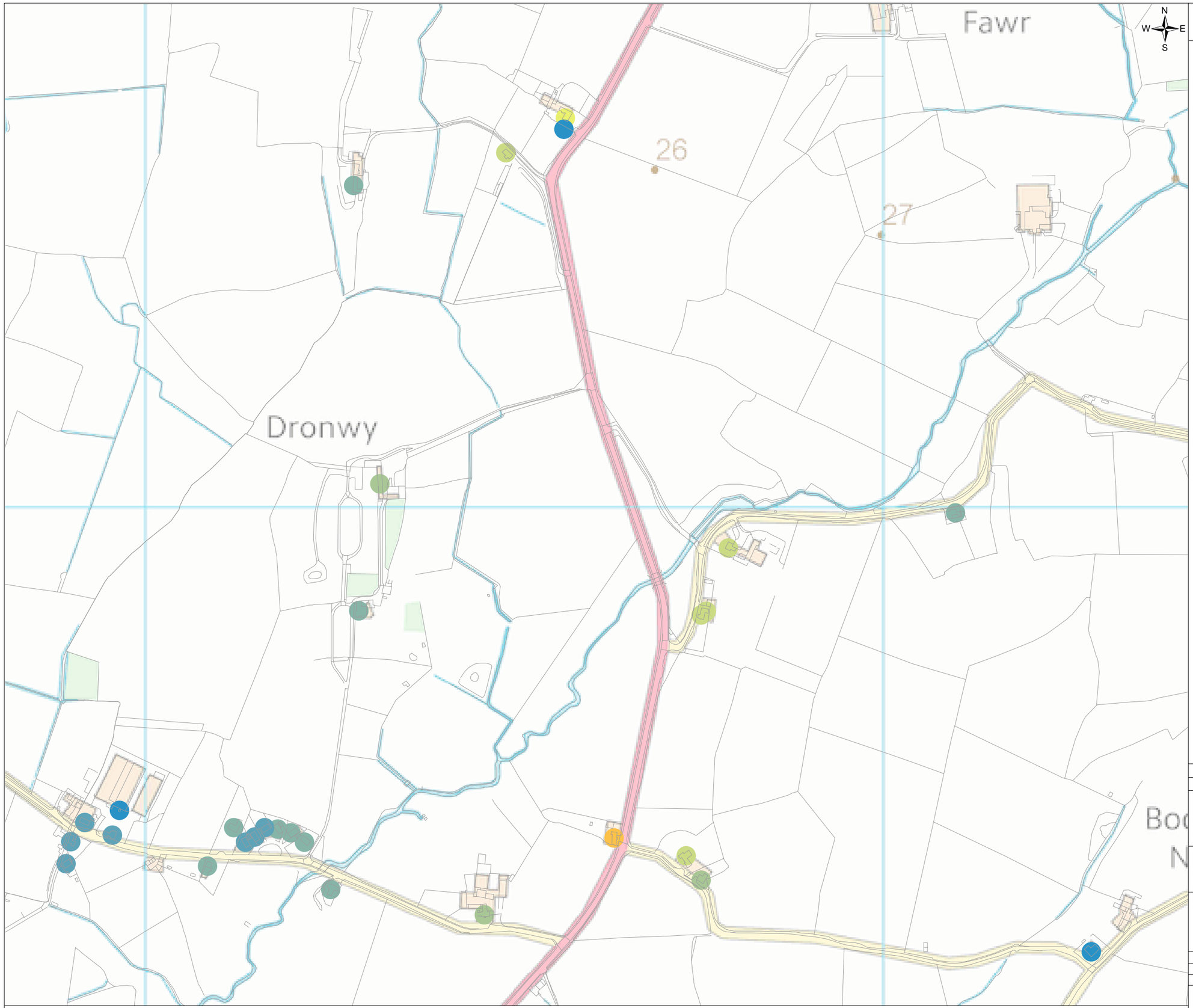
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0 125 250 500 metres

FIGURE 2-3



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



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HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

SCENARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 10 OF 17

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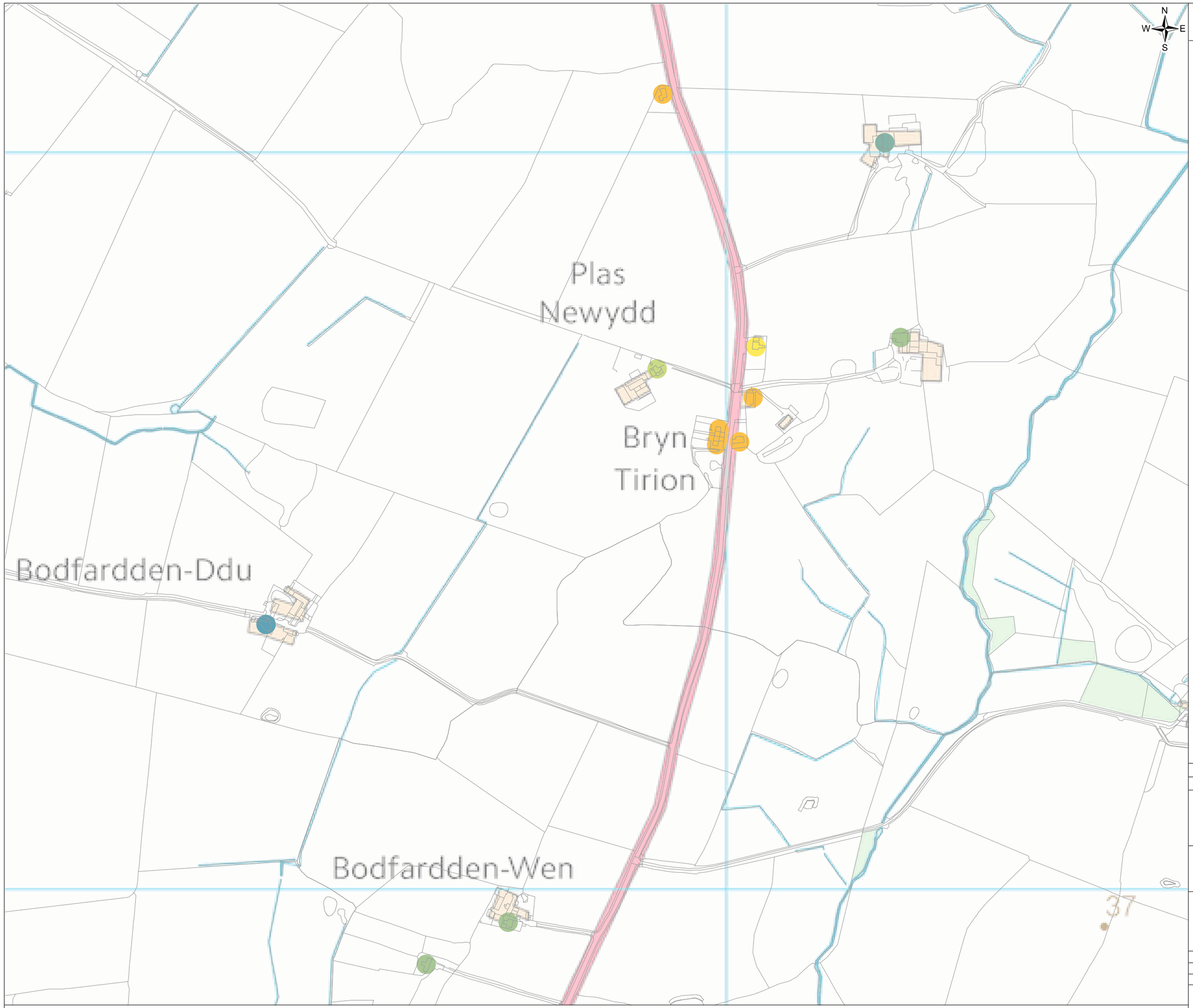
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FIGURE 2-3



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



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Project

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ENVIRONMENTAL STATEMENT

Drawing Title

SCENARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 11 OF 17

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Client No.		

Drawing No.

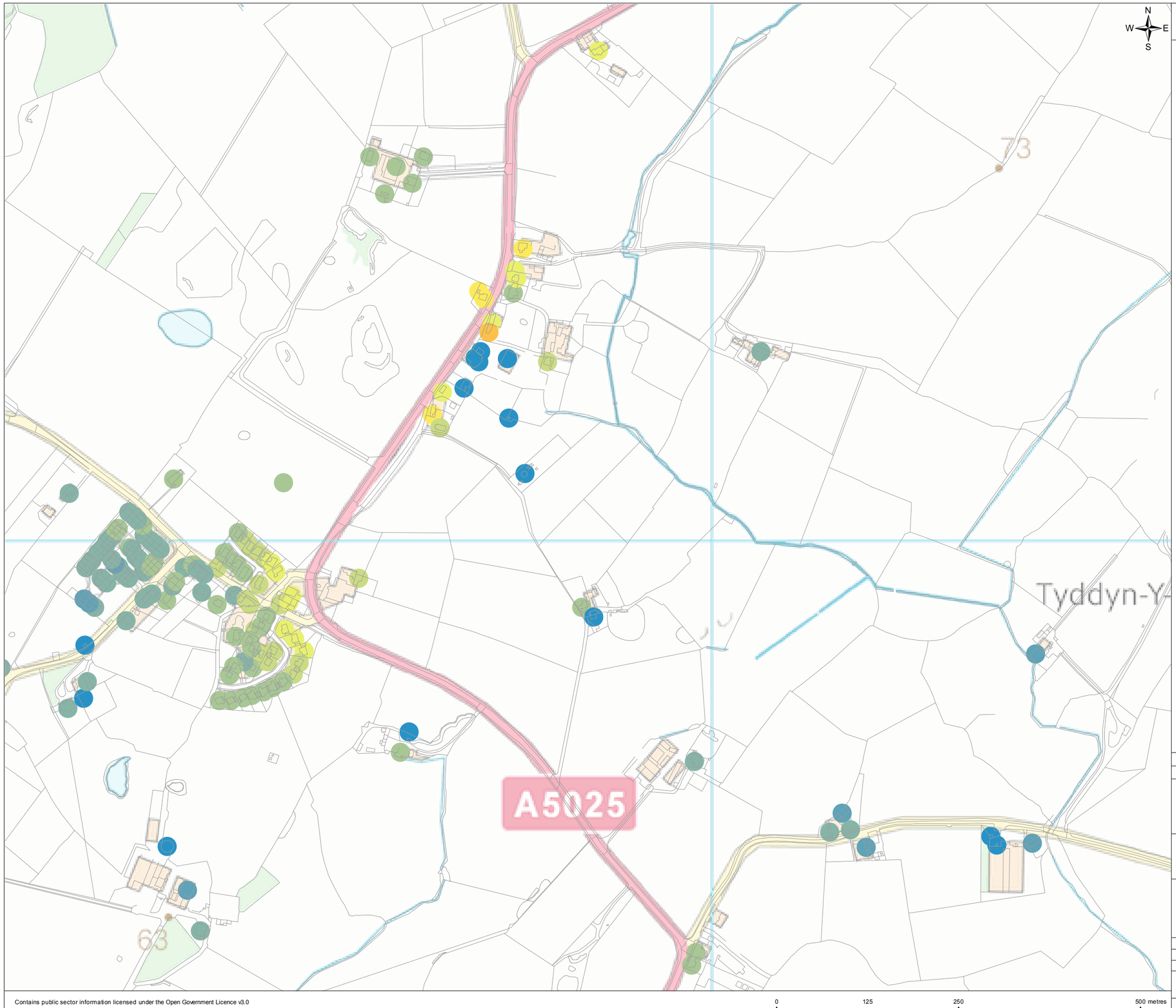
60PO80AS_NOISE_A5025_ONLINE

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0 125 250 500 metres

FIGURE 2-3



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: SCENARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 12 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_A5025_ONLINE

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0 125 250 500 metres

FIGURE 2-3



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

SCENARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 13 OF 17

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Client No.		

Drawing No.

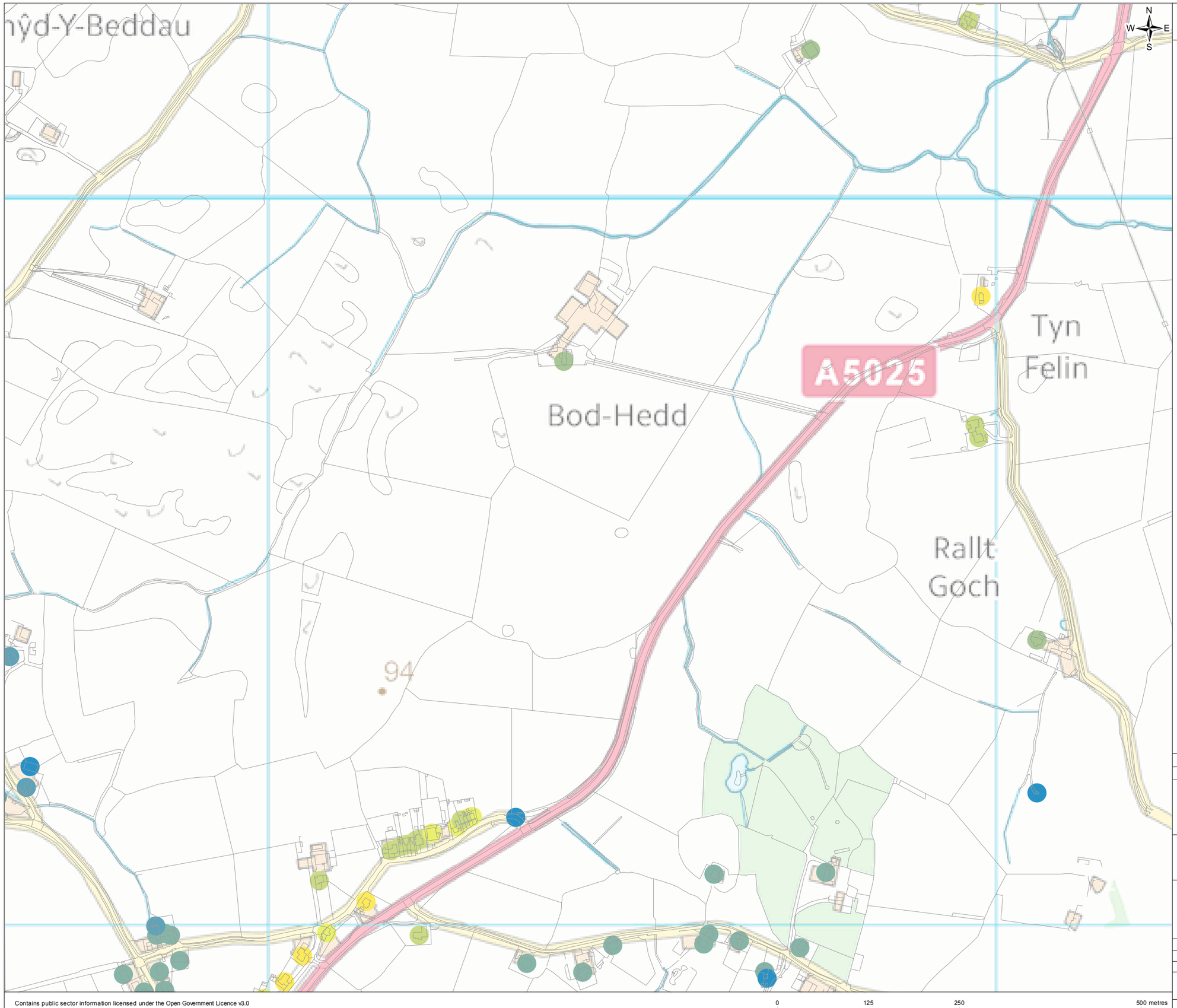
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0 125 250 500 metres

FIGURE 2-3



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

SCENARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 14 OF 17

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Client No.		

Drawing No.

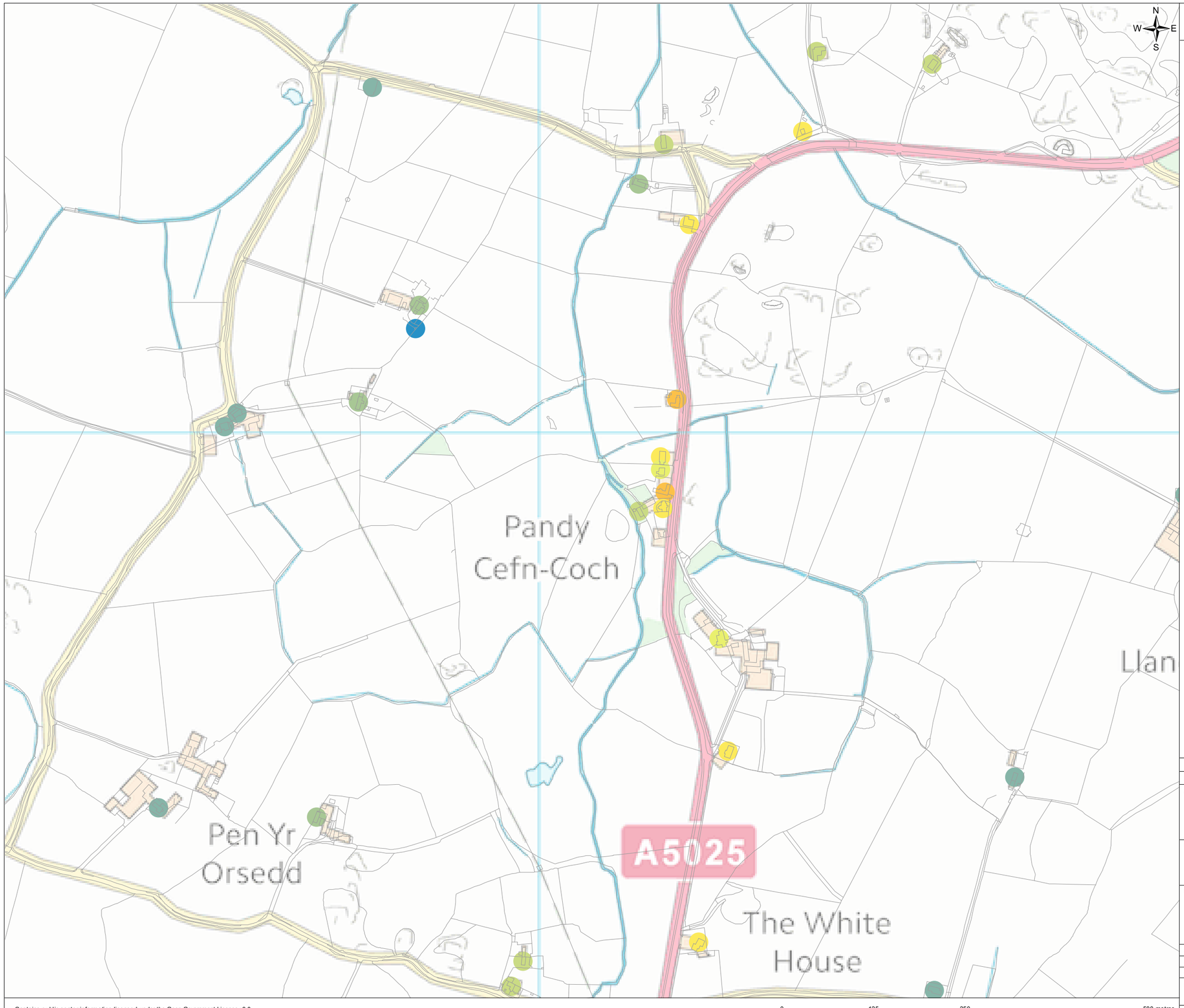
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0 125 250 500 metres

FIGURE 2-3



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: SCENARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 15 OF 17

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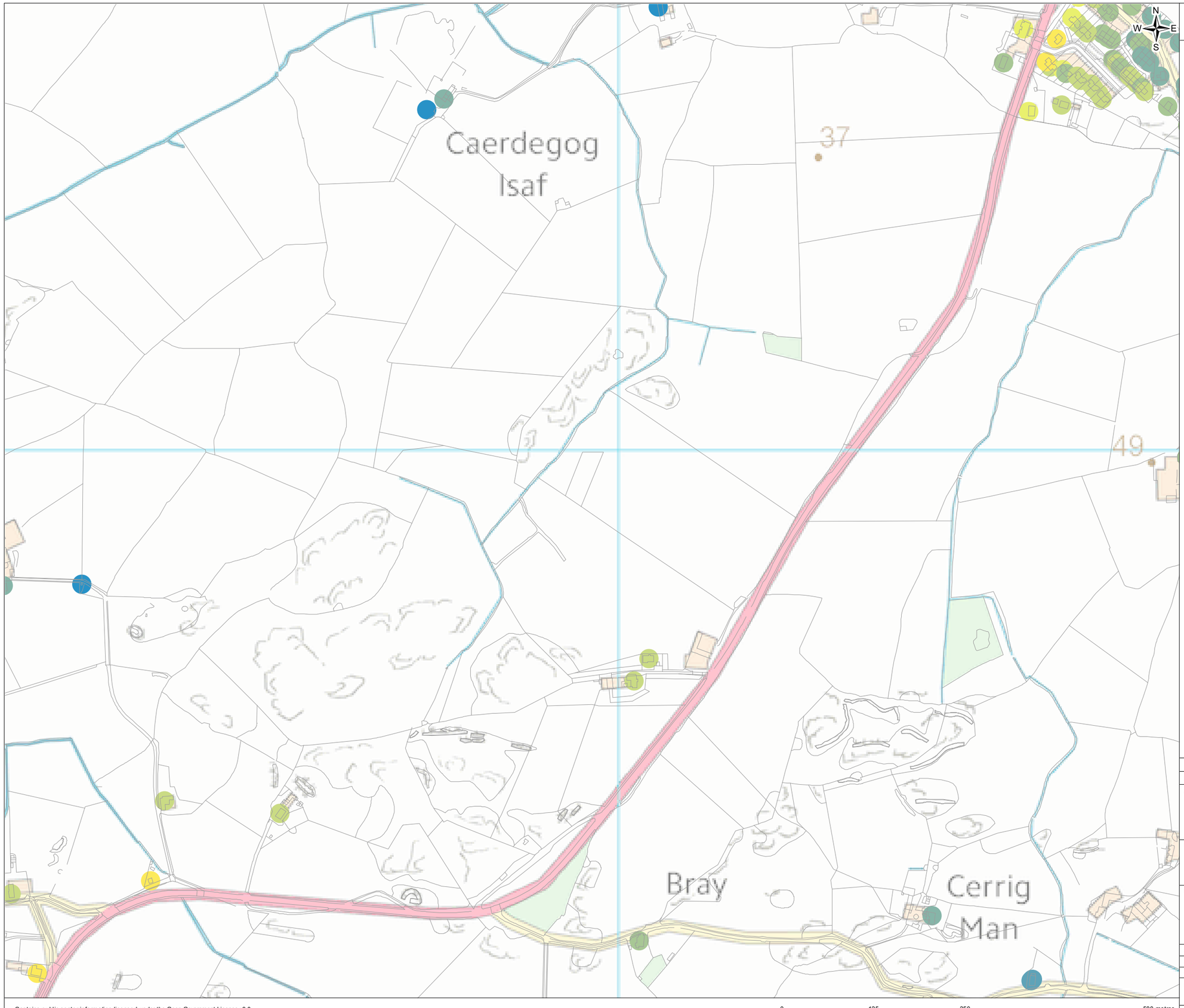
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0 125 250 500 metres

FIGURE 2-3



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

SCENARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 16 OF 17

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Client No.		

Drawing No.

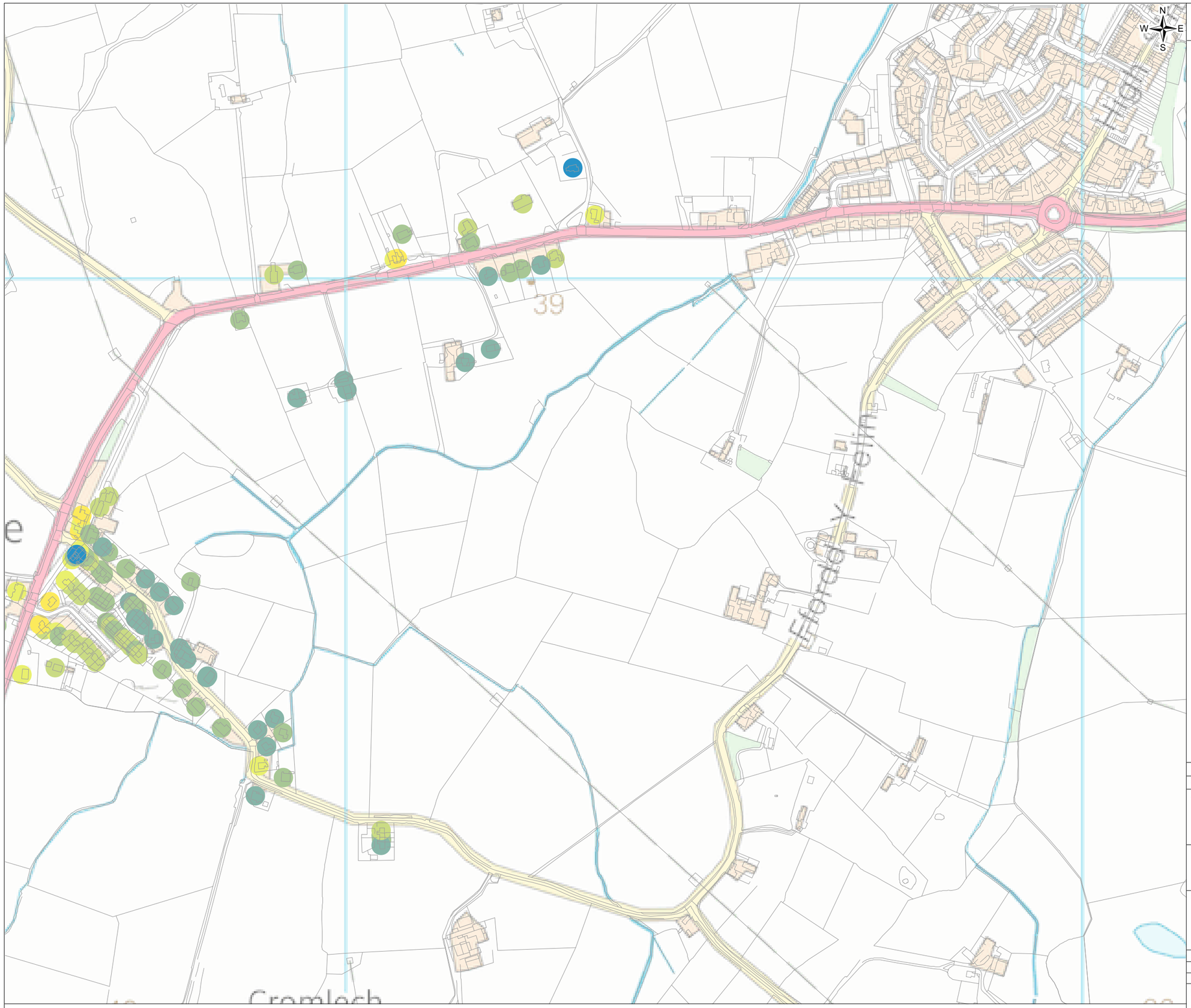
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0 125 250 500 metres

FIGURE 2-3



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: SCENARIO 1 (DCO + WEEKDAY EVENING) 2020 ON-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 17 OF 17

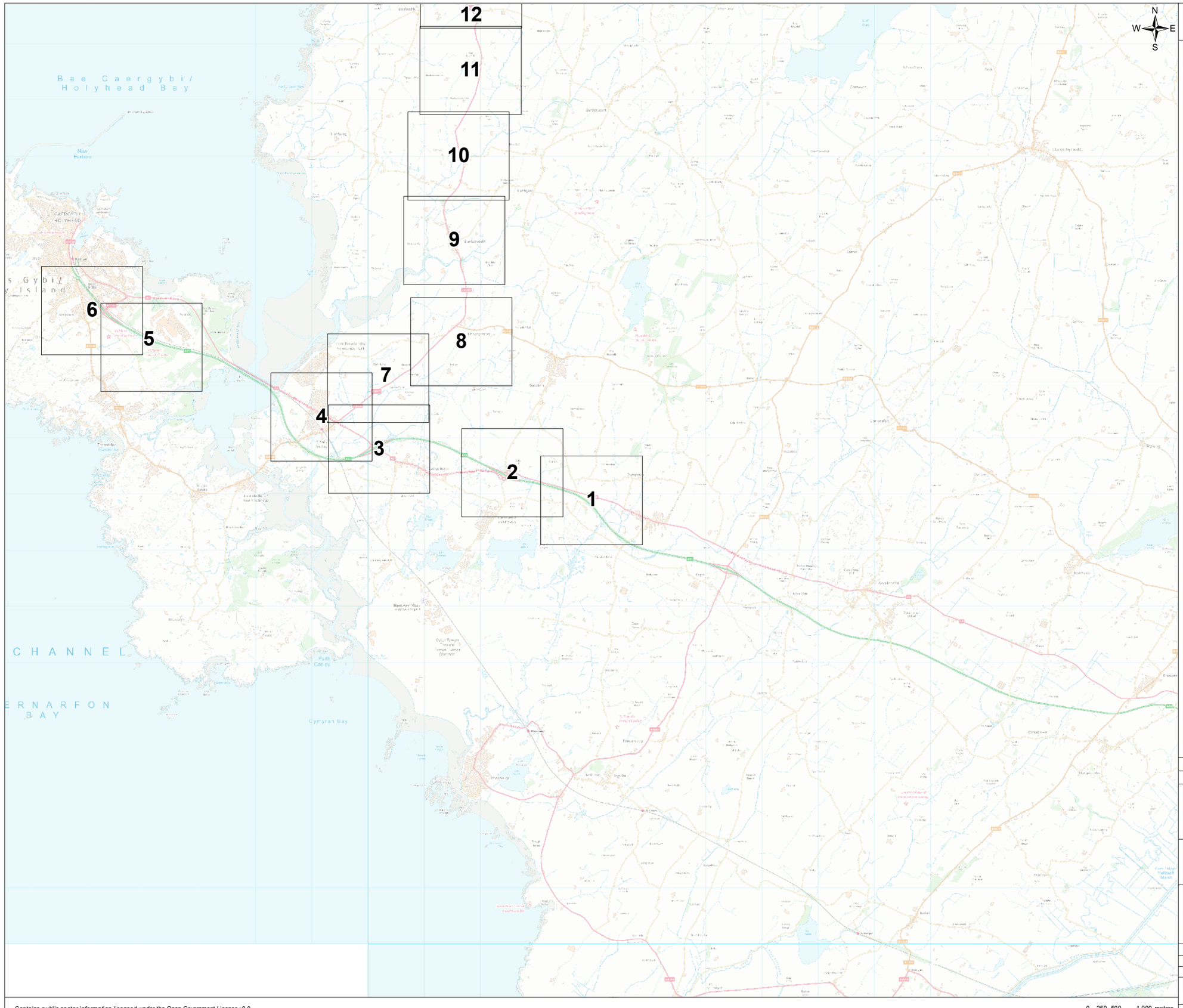
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Jacobs No.	60PO80AS	
Client No.		

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0 125 250 500 metres



OVERVIEW

Legend

Figure Sheet



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HORIZON NUCLEAR POWER

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WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

SCENARIO 1
(DCO + WEEKDAY EVENING) 2023 OFF-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
OVERVIEW

Scale @ A3	1:65,000	DO NOT SCALE
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0 250 500 1,000 metres

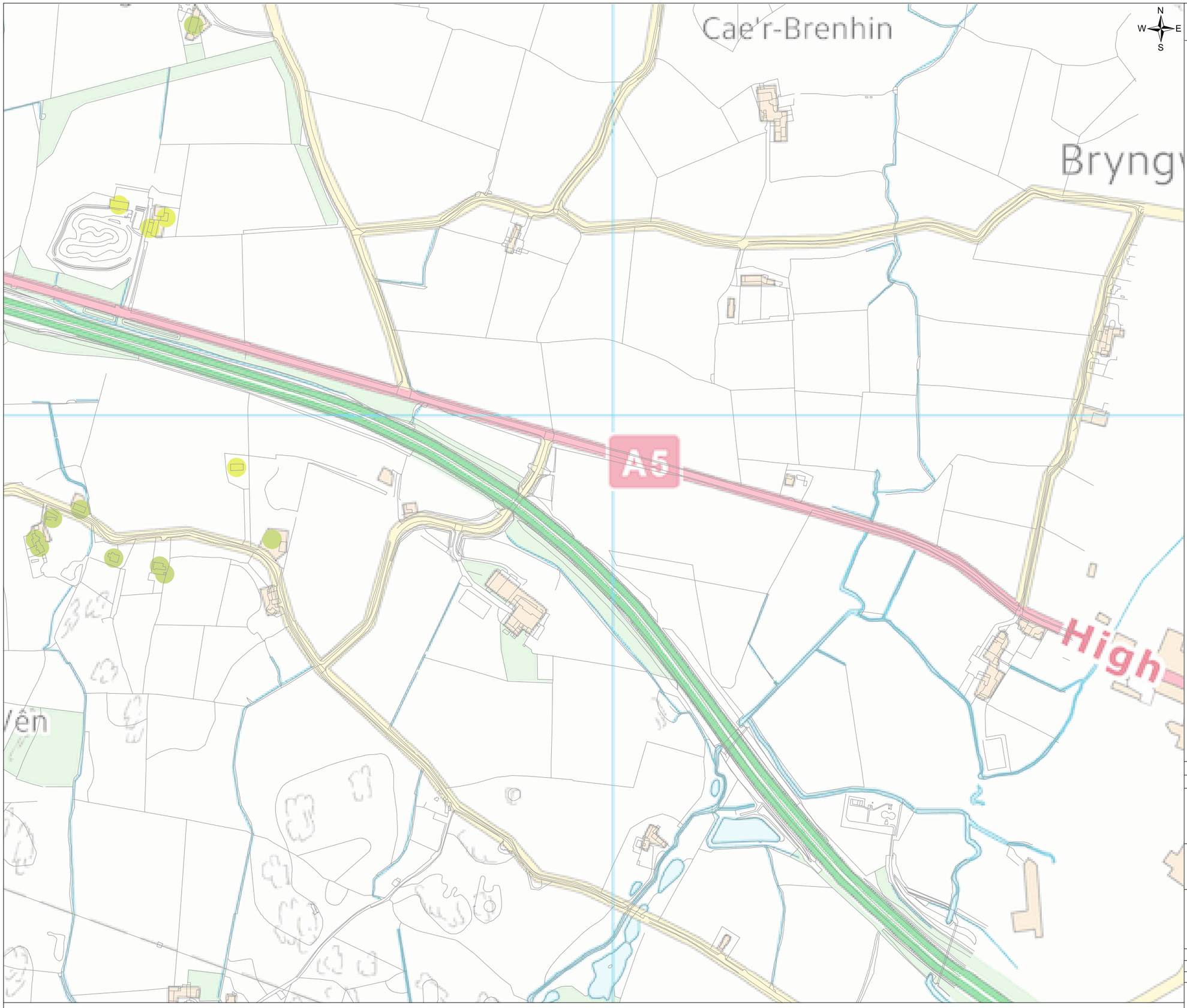


FIGURE 2-4

Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



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Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

SCENARIO 1
(DCO + WEEKDAY EVENING) 2023 OFF-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 1 OF 17

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Client No.		

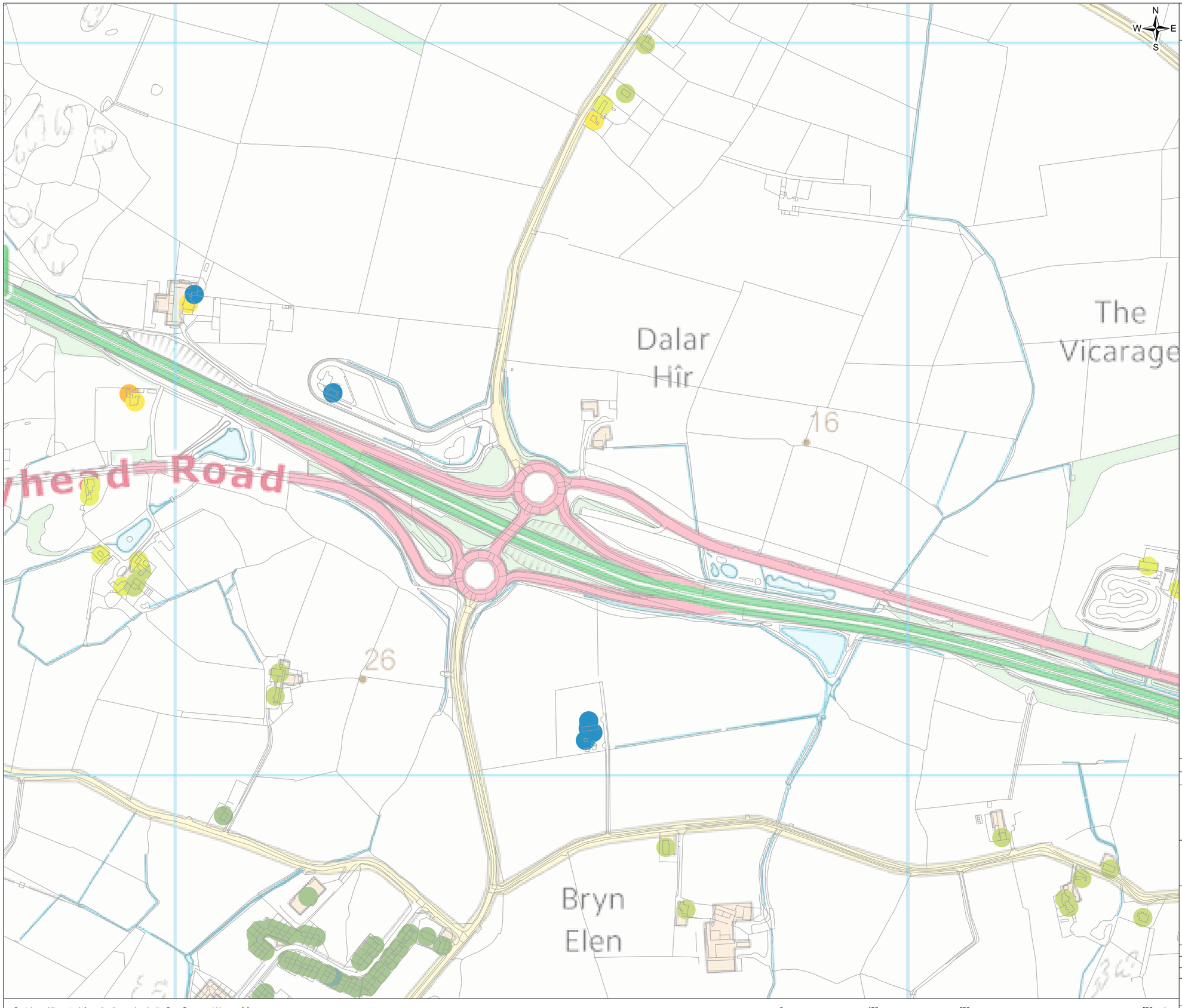
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FIGURE 2-4



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

SCENARIO 1
(DCO + WEEKDAY EVENING) 2023 OFF-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 2 OF 17

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Client No.		

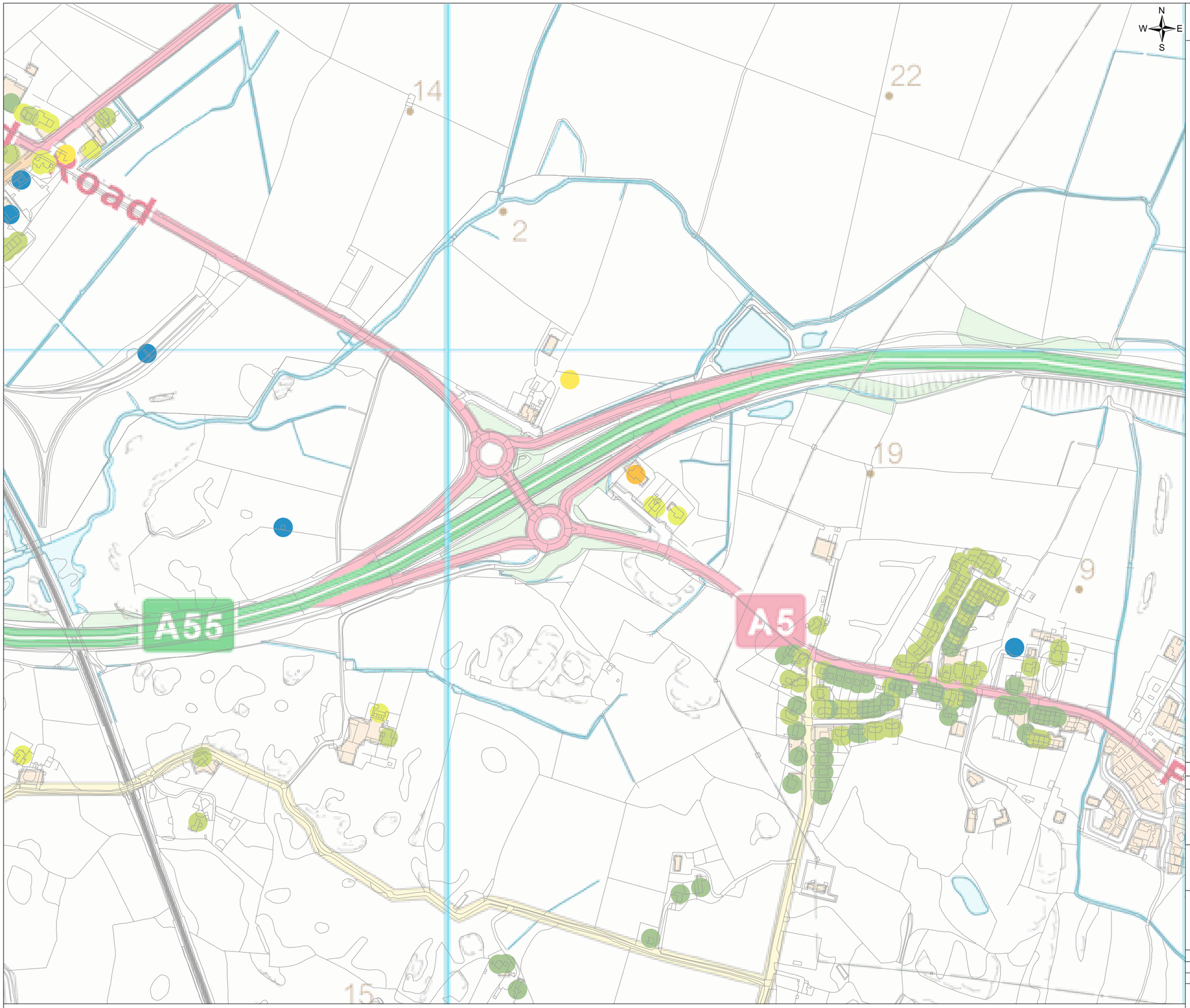
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FIGURE 2-4



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



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HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

SCENARIO 1
(DCO + WEEKDAY EVENING) 2023 OFF-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 3 OF 17

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Client No.		

Drawing No.

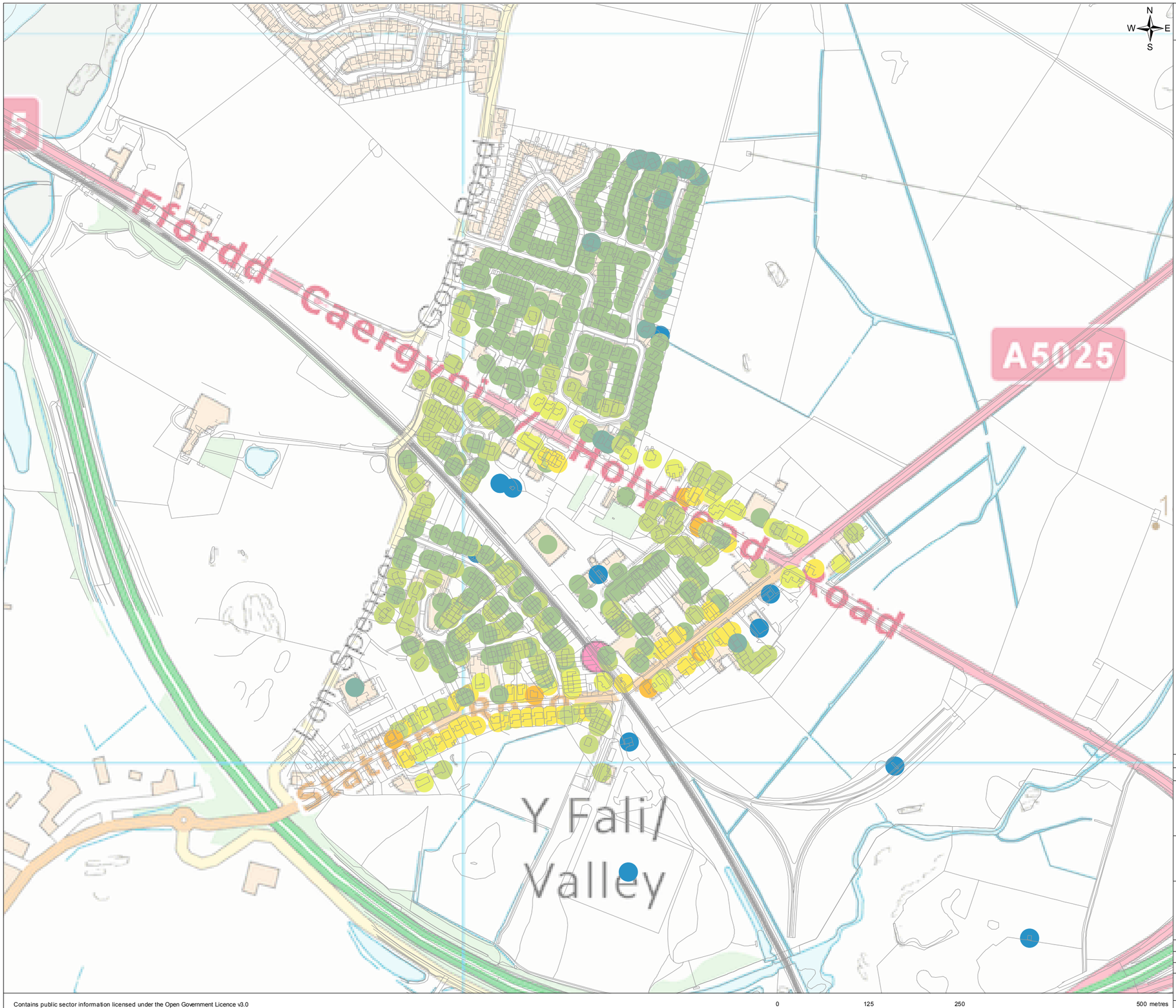
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0 125 250 500 metres

FIGURE 2-4



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: SCENARIO 1
(DCO + WEEKDAY EVENING) 2023 OFF-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 4 OF 17

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Client No.		

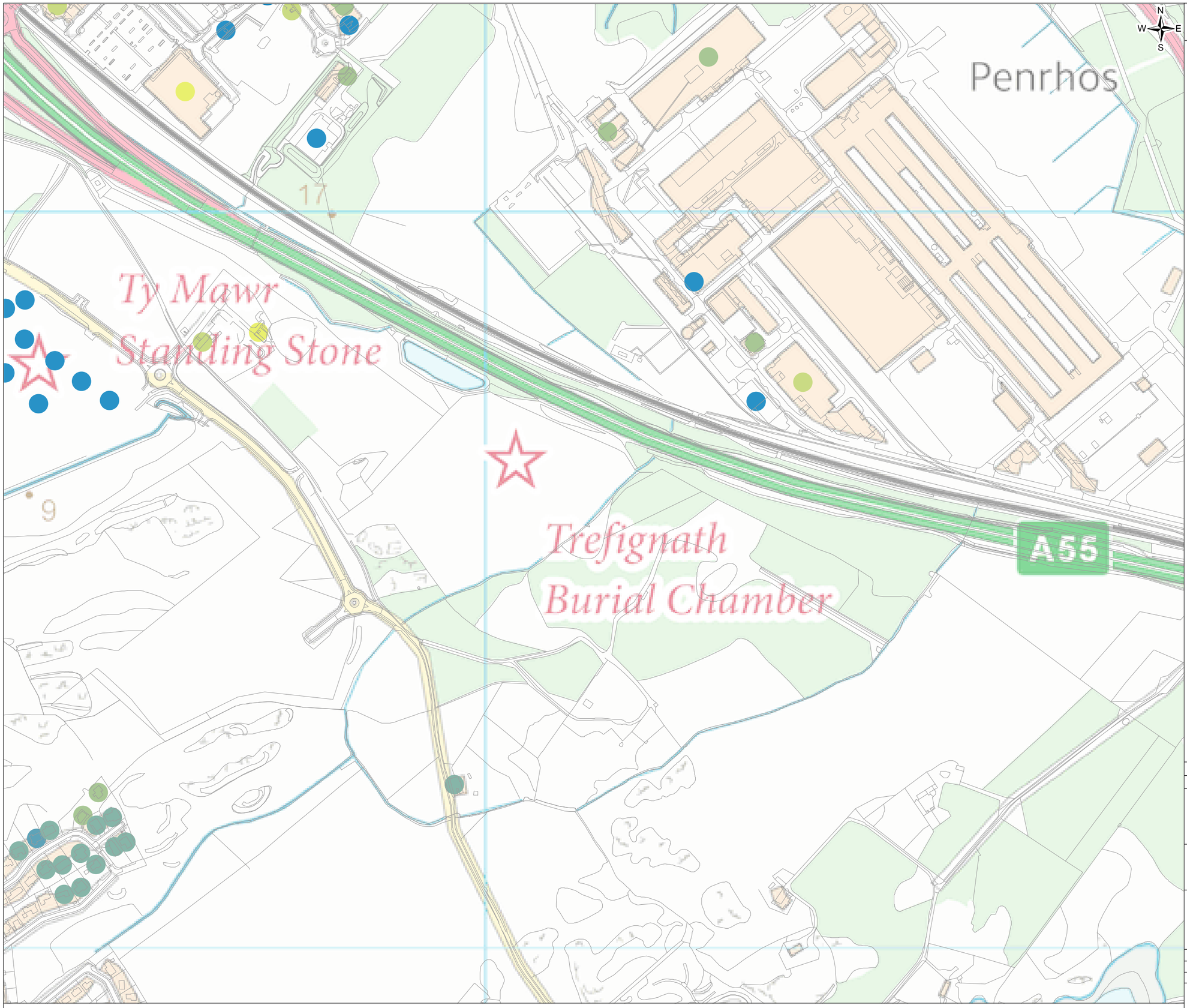
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0 125 250 500 metres

FIGURE 2-4



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: SCENARIO 1
(DCO + WEEKDAY EVENING) 2023 OFF-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 5 OF 17

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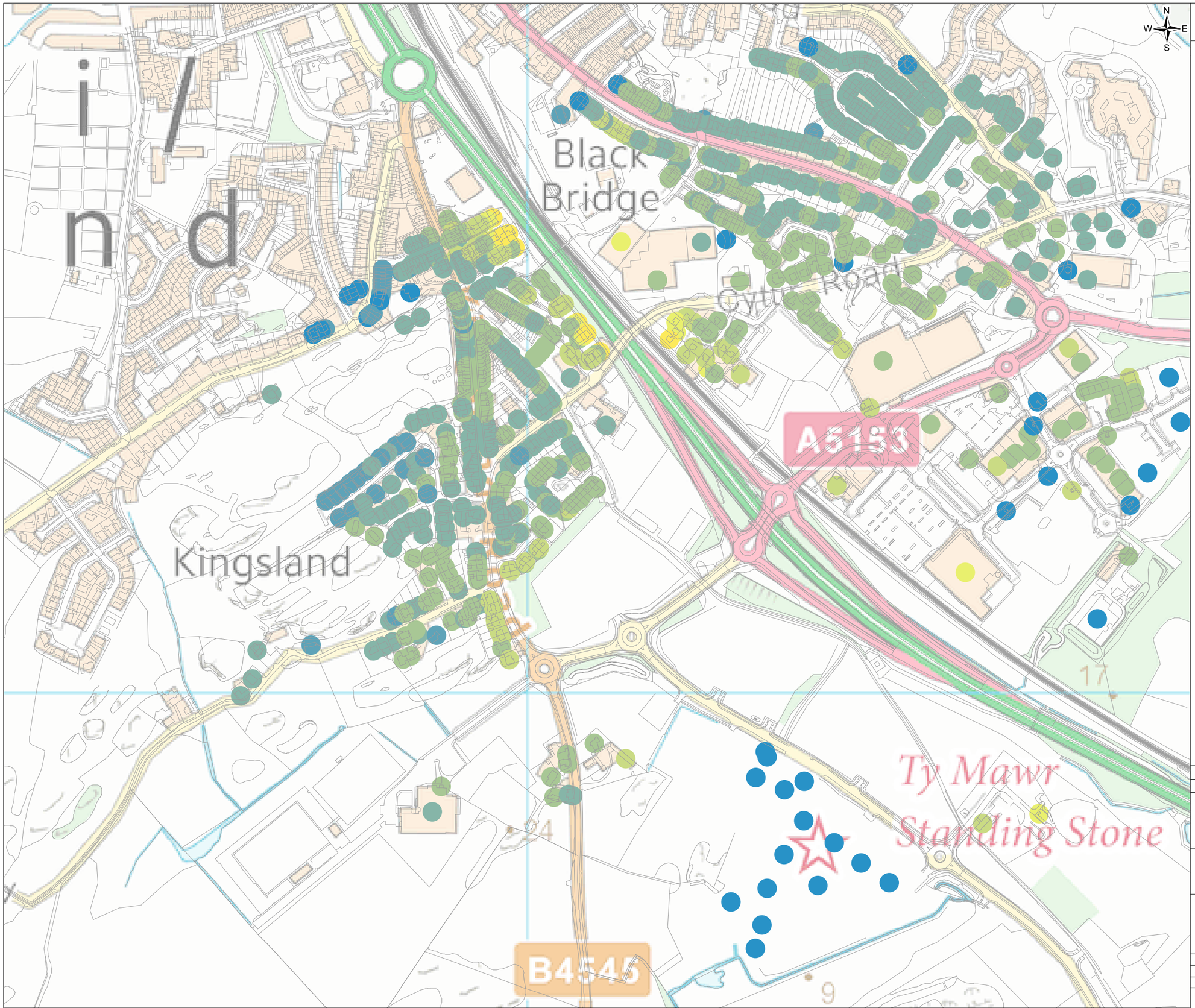
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0 125 250 500 metres

FIGURE 2-4



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: SCENARIO 1
(DCO + WEEKDAY EVENING) 2023 OFF-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 6 OF 17

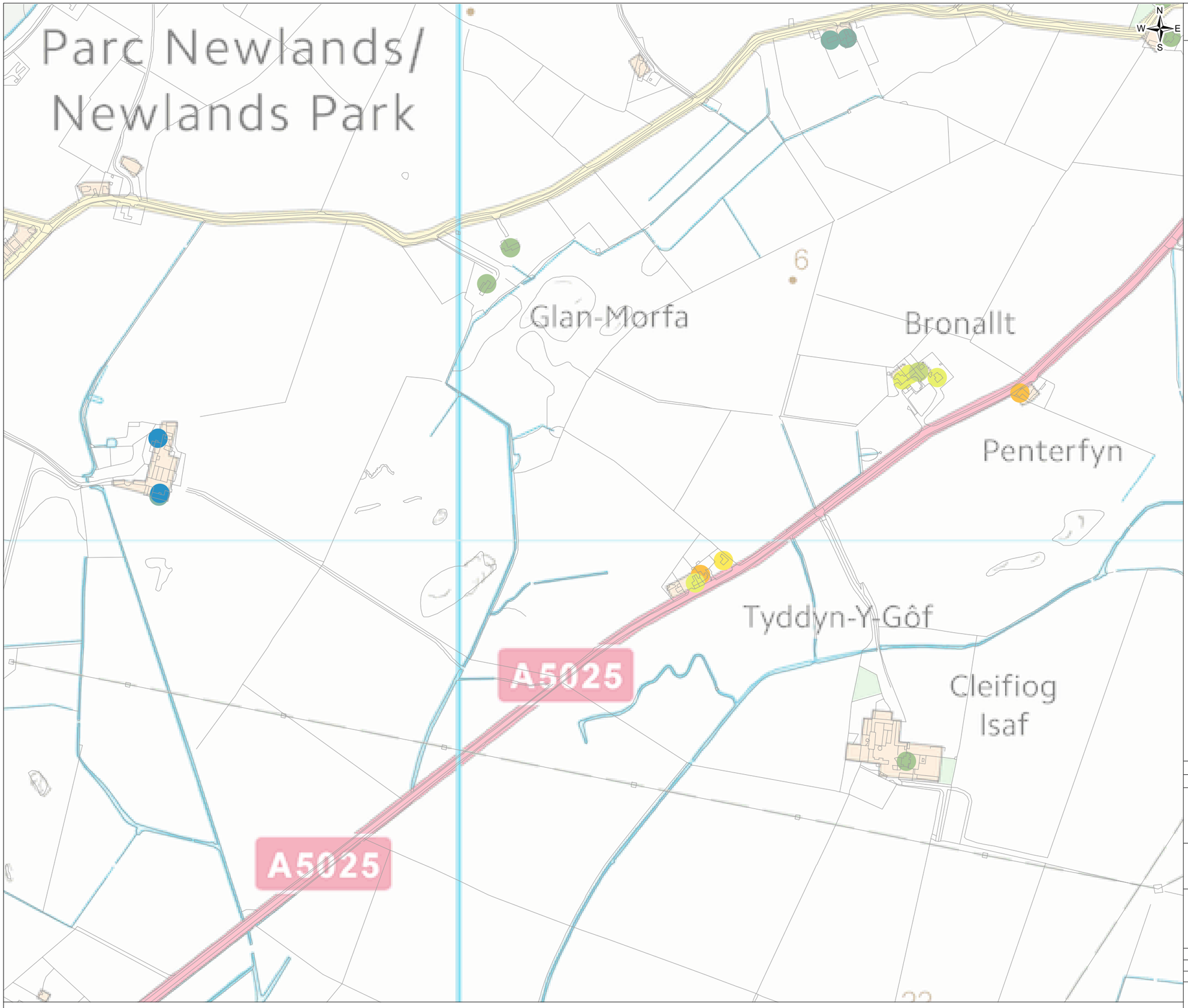
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Jacobs No.	60PO80AS	
Client No.		

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0 125 250 500 metres



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0 125 250 500 metres

FIGURE 2-4

Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

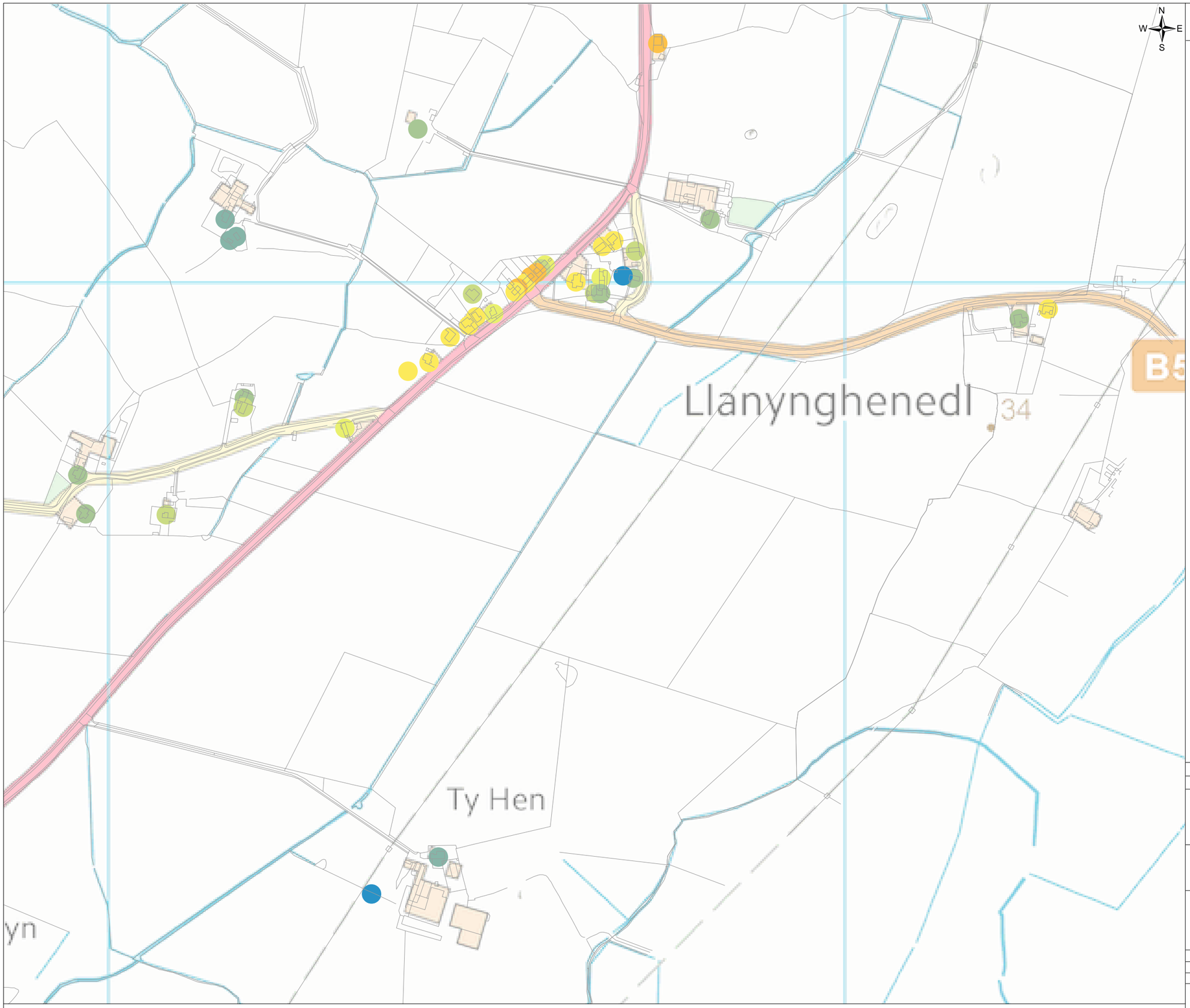
Drawing Title: SCENARIO 1
(DCO + WEEKDAY EVENING) 2023 OFF-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 7 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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FIGURE 2-4



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: SCENARIO 1
(DCO + WEEKDAY EVENING) 2023 OFF-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 8 OF 17

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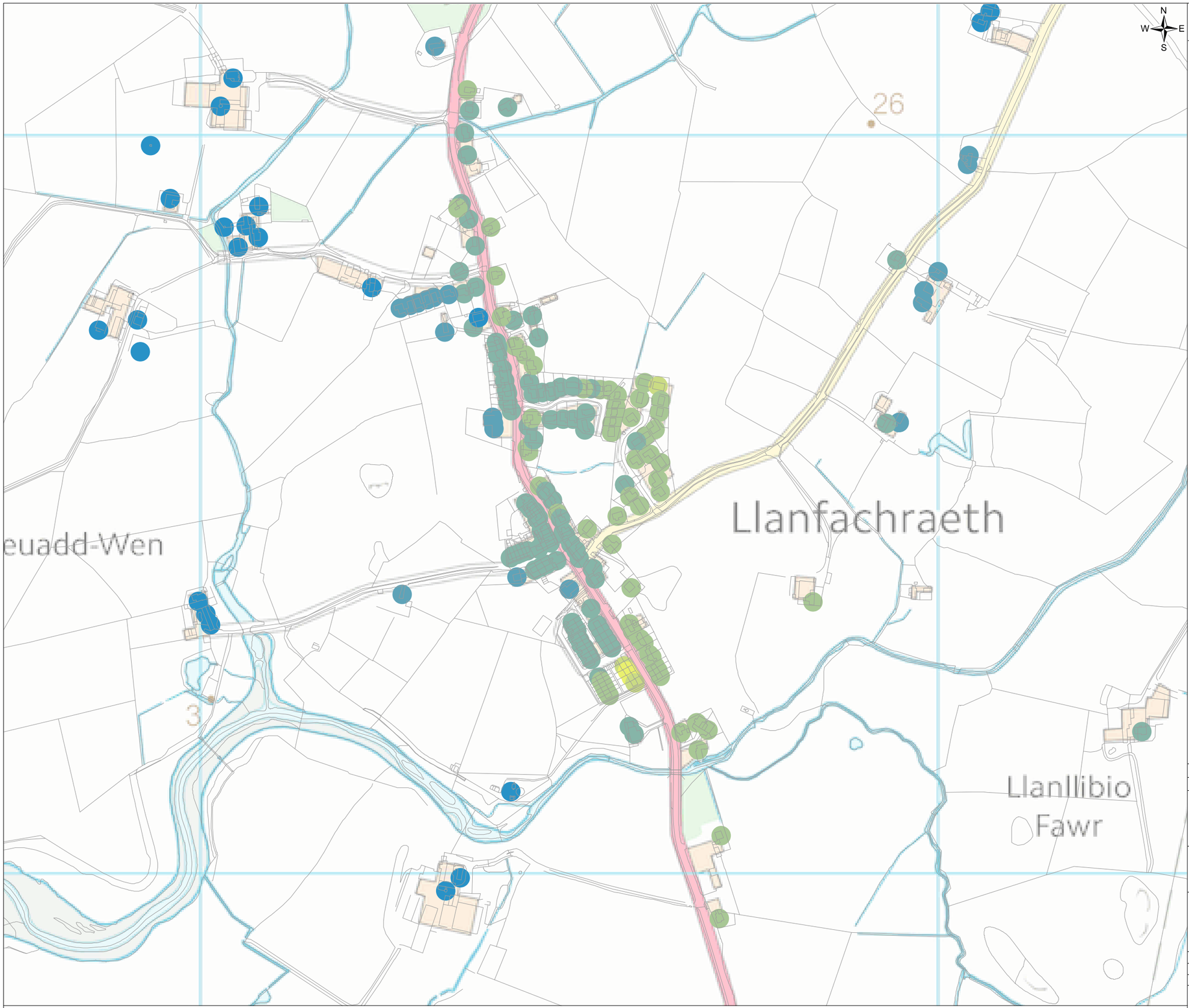
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0 125 250 500 metres

FIGURE 2-4



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

SCENARIO 1
(DCO + WEEKDAY EVENING) 2023 OFF-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 9 OF 17

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Client No.		

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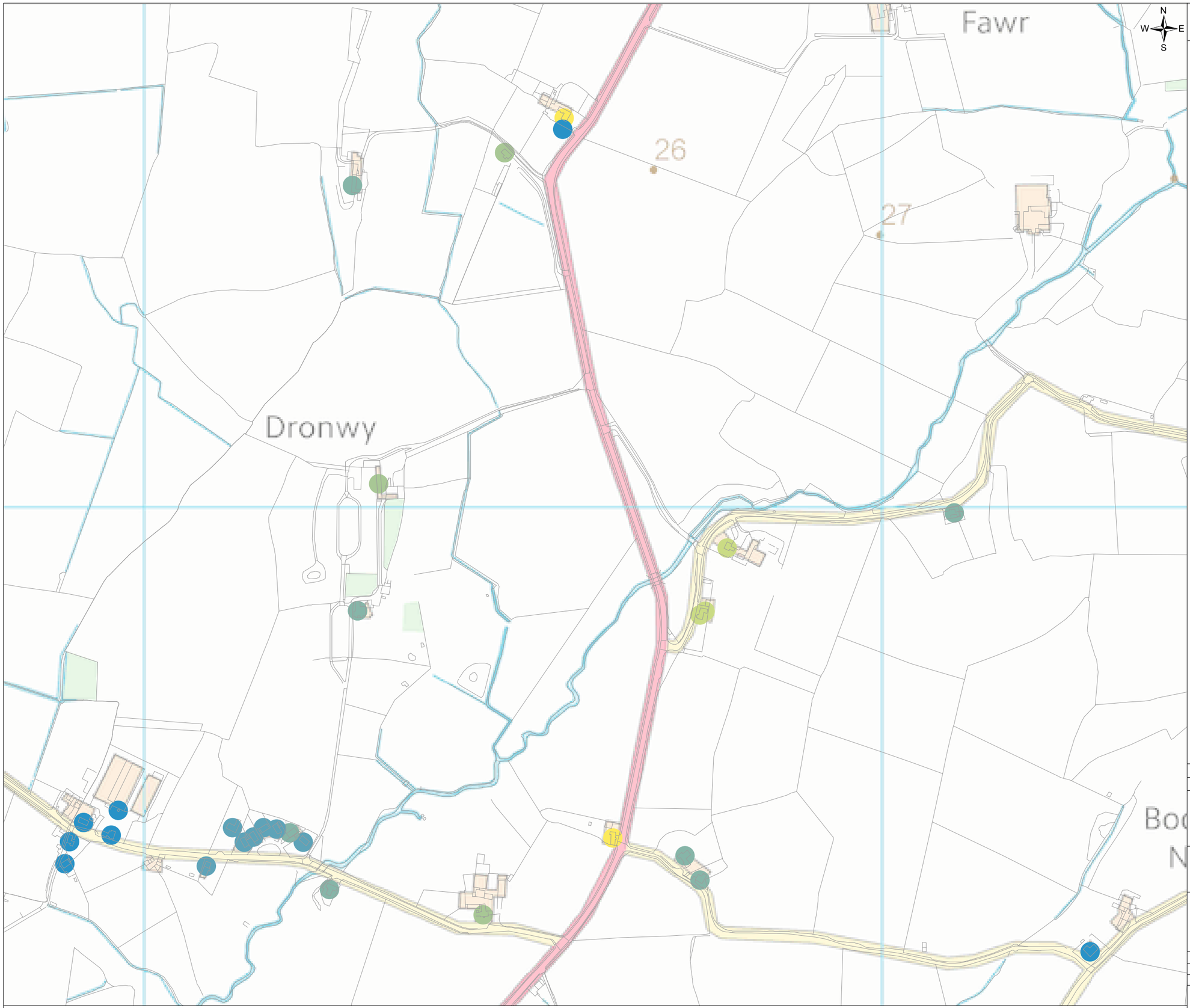
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0 125 250 500 metres

FIGURE 2-4



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: SCENARIO 1
(DCO + WEEKDAY EVENING) 2023 OFF-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 10 OF 17

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Jacobs No.	60PO80AS	
Client No.		

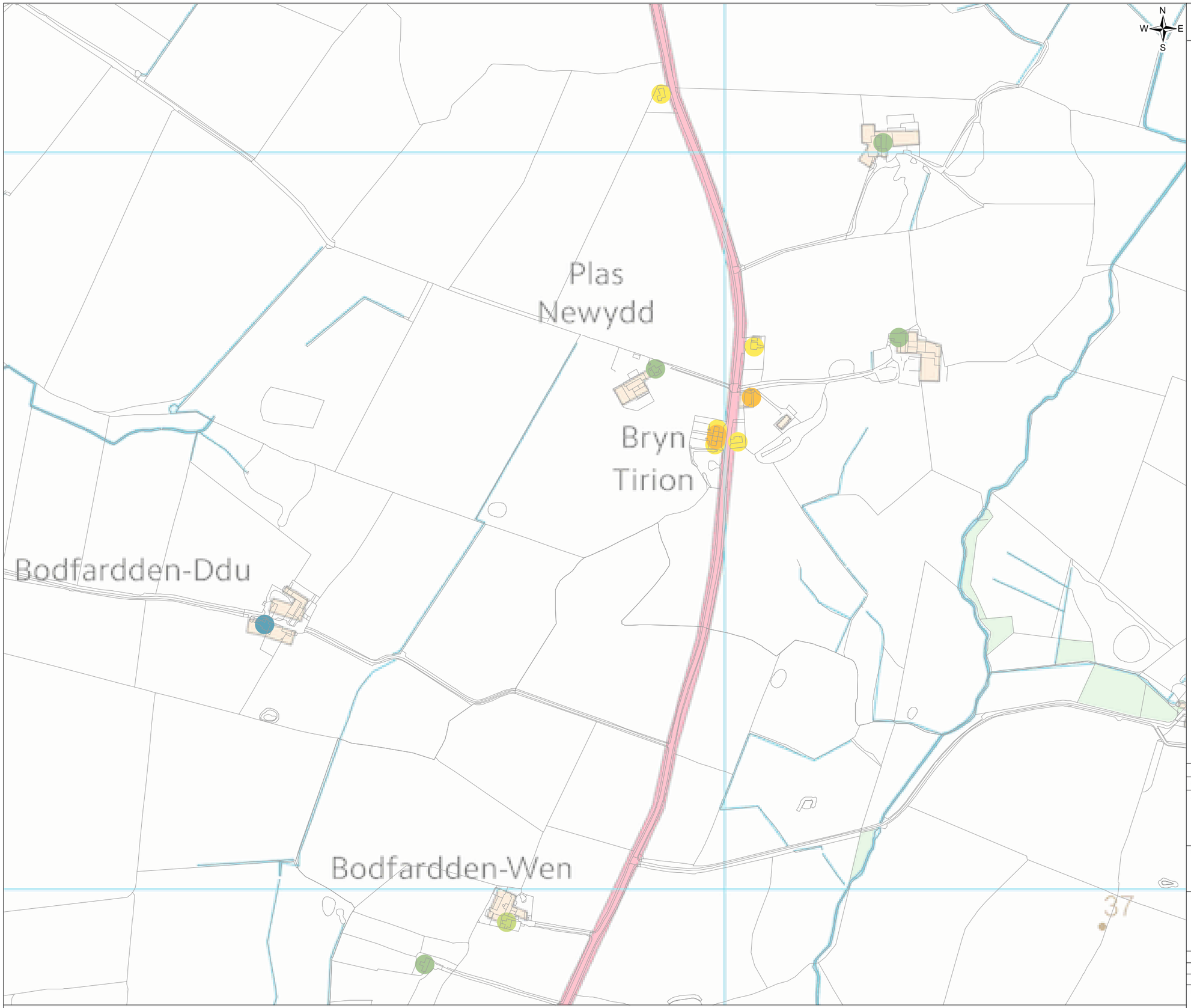
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0 125 250 500 metres

FIGURE 2-4



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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HORIZON NUCLEAR POWER

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WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

SCENARIO 1
(DCO + WEEKDAY EVENING) 2023 OFF-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 11 OF 17

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Jacobs No.	60PO80AS	
Client No.		

Drawing No.

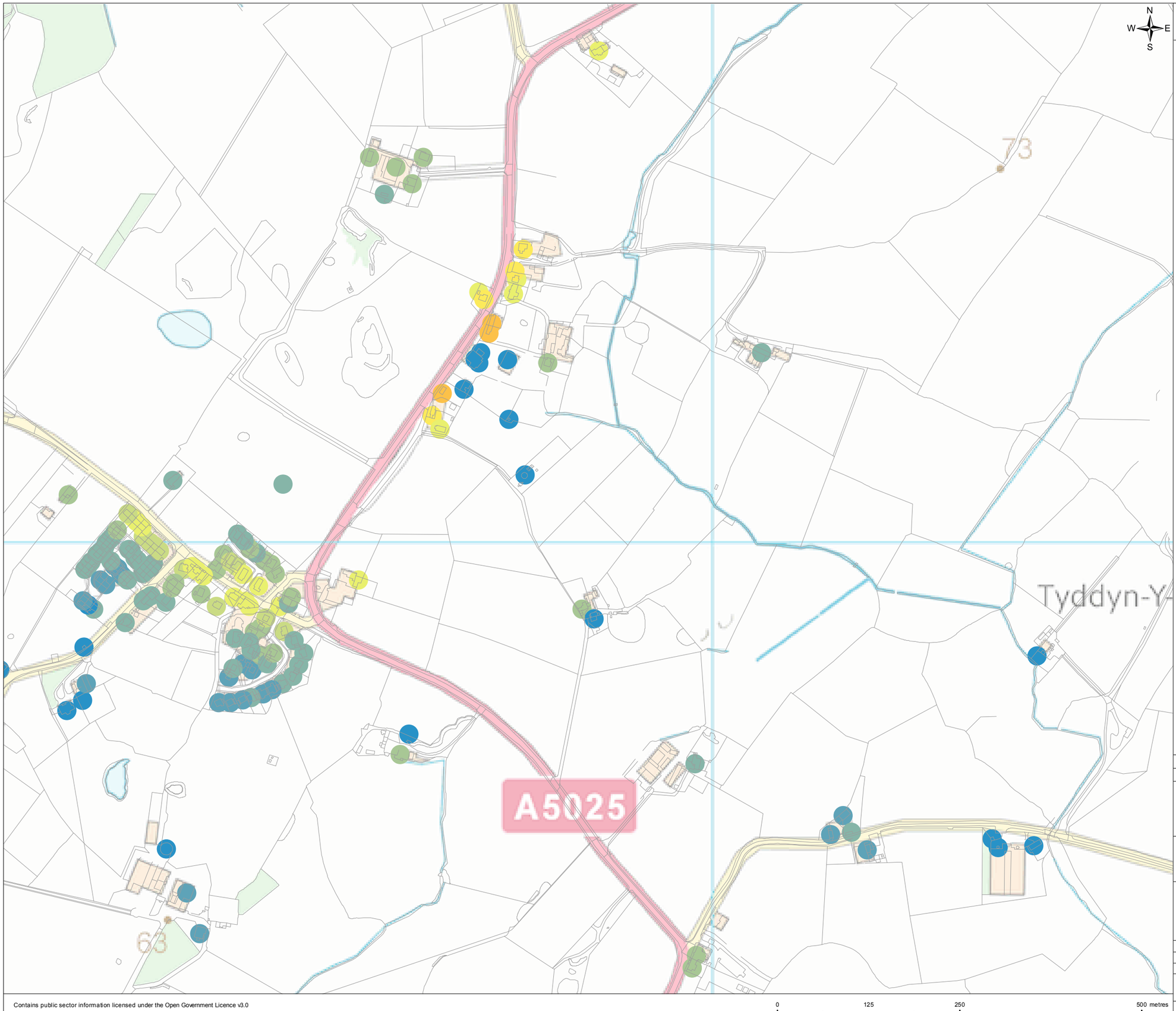
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0 125 250 500 metres

FIGURE 2-4



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: SCENARIO 1
(DCO + WEEKDAY EVENING) 2023 OFF-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 12 OF 17

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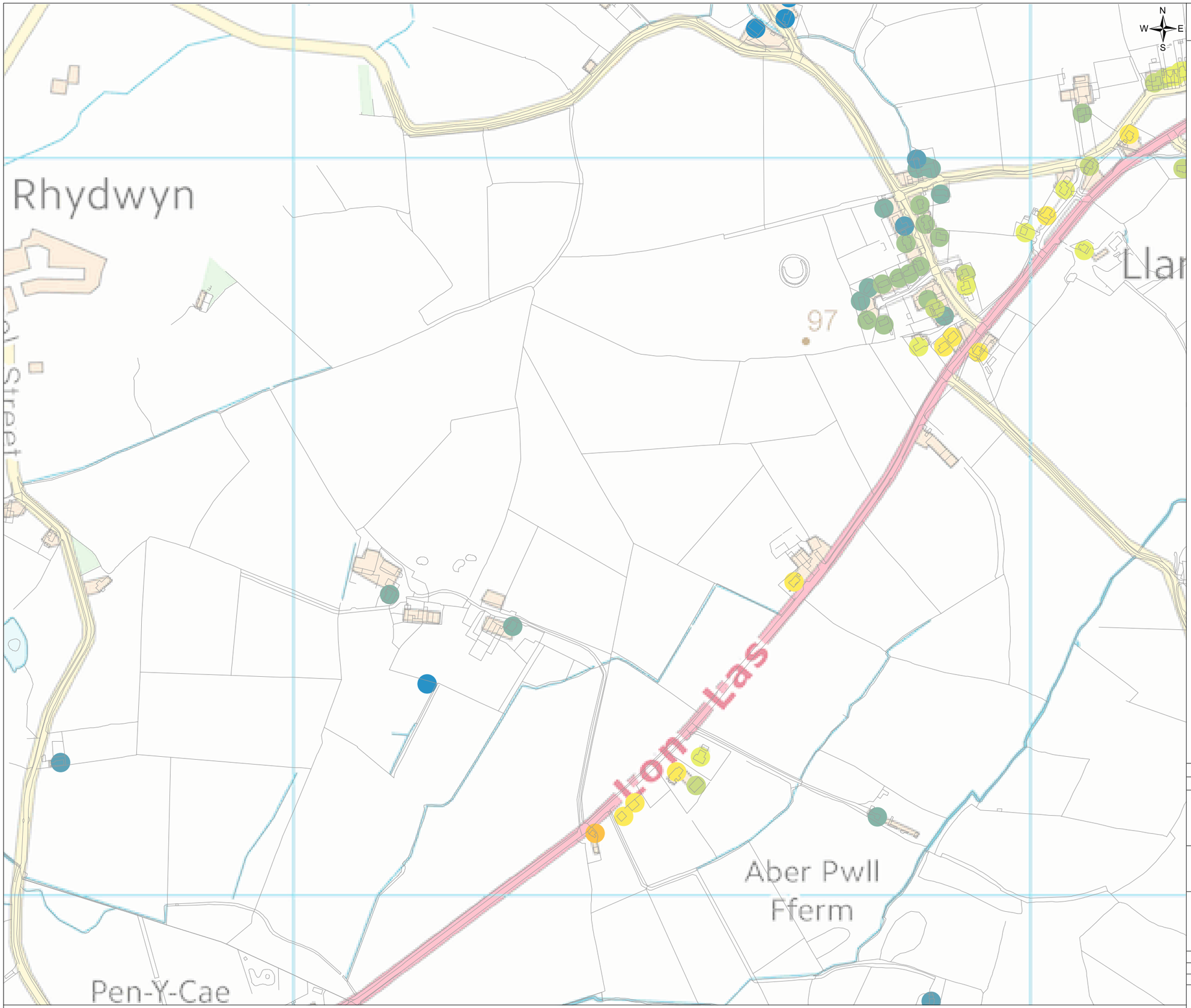
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0 125 250 500 metres

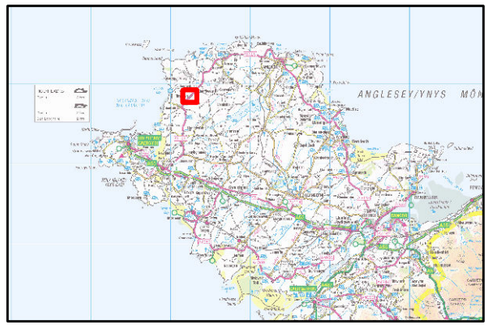
FIGURE 2-4



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

SCENARIO 1
(DCO + WEEKDAY EVENING) 2023 OFF-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 13 OF 17

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Jacobs No.	60PO80AS	
Client No.		

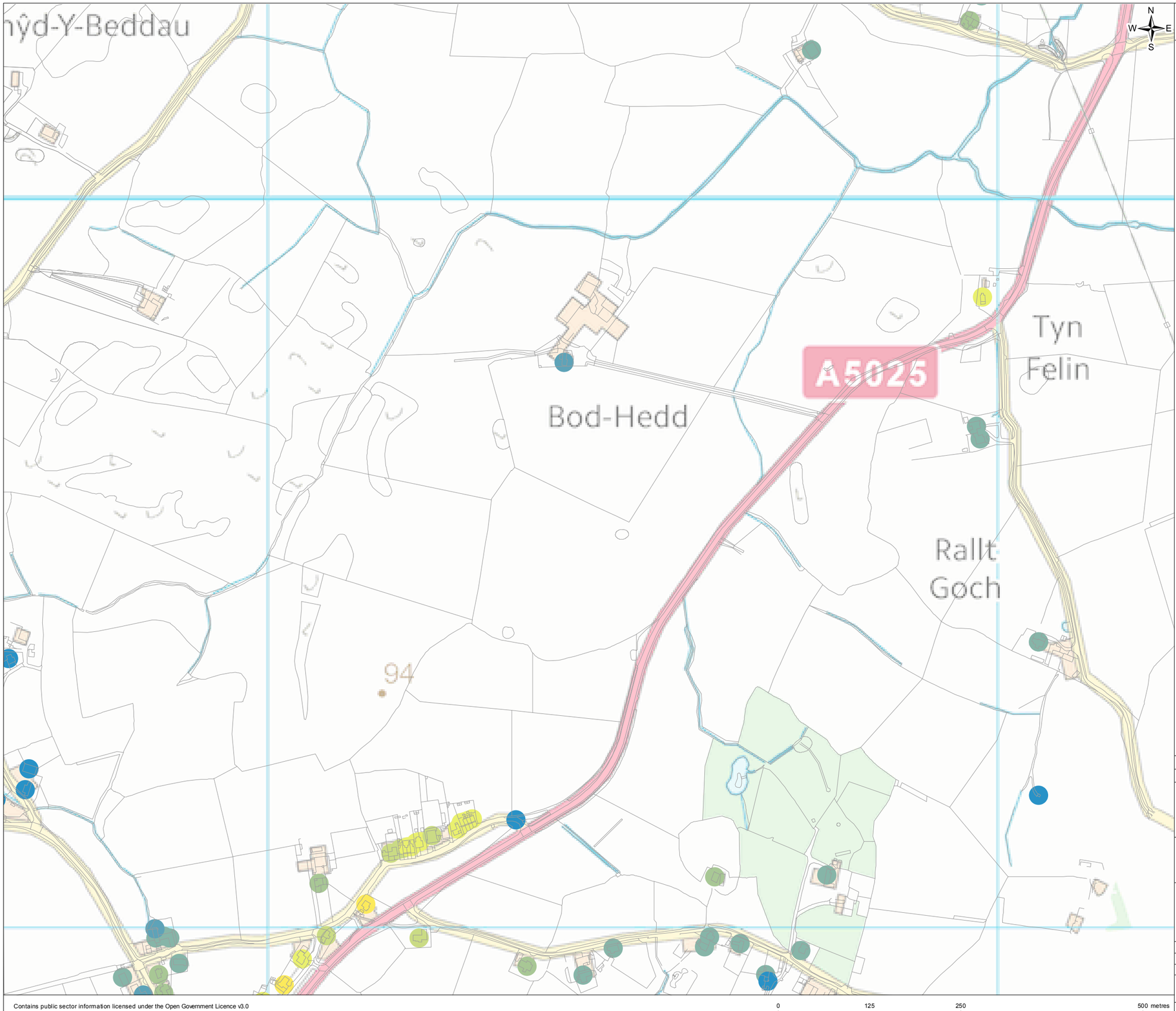
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0 125 250 500 metres



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0 125 250 500 metres

FIGURE 2-4

Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

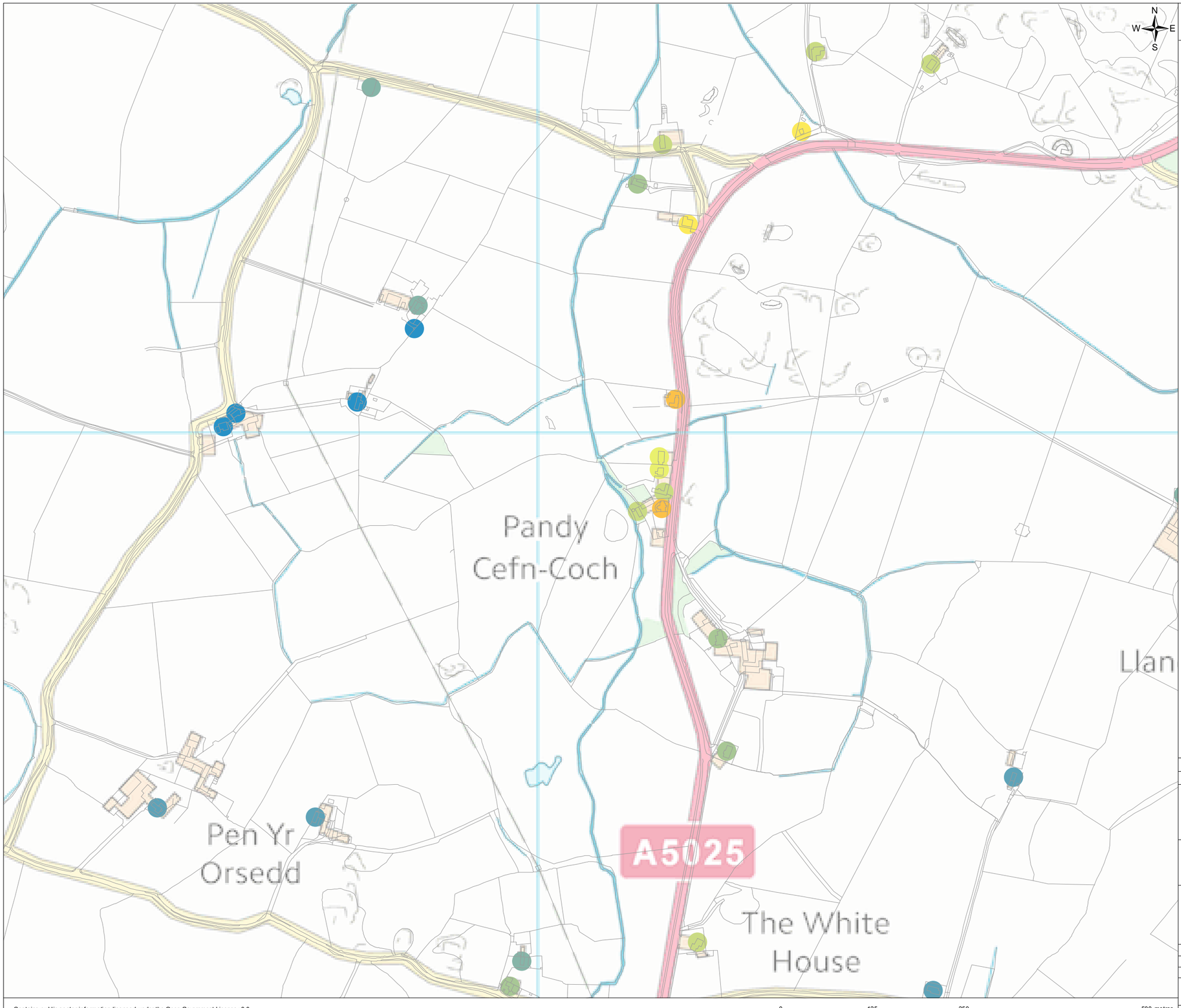
Drawing Title: SCENARIO 1
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ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 14 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

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FIGURE 2-4



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: SCENARIO 1
(DCO + WEEKDAY EVENING) 2023 OFF-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 15 OF 17

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Client No.		

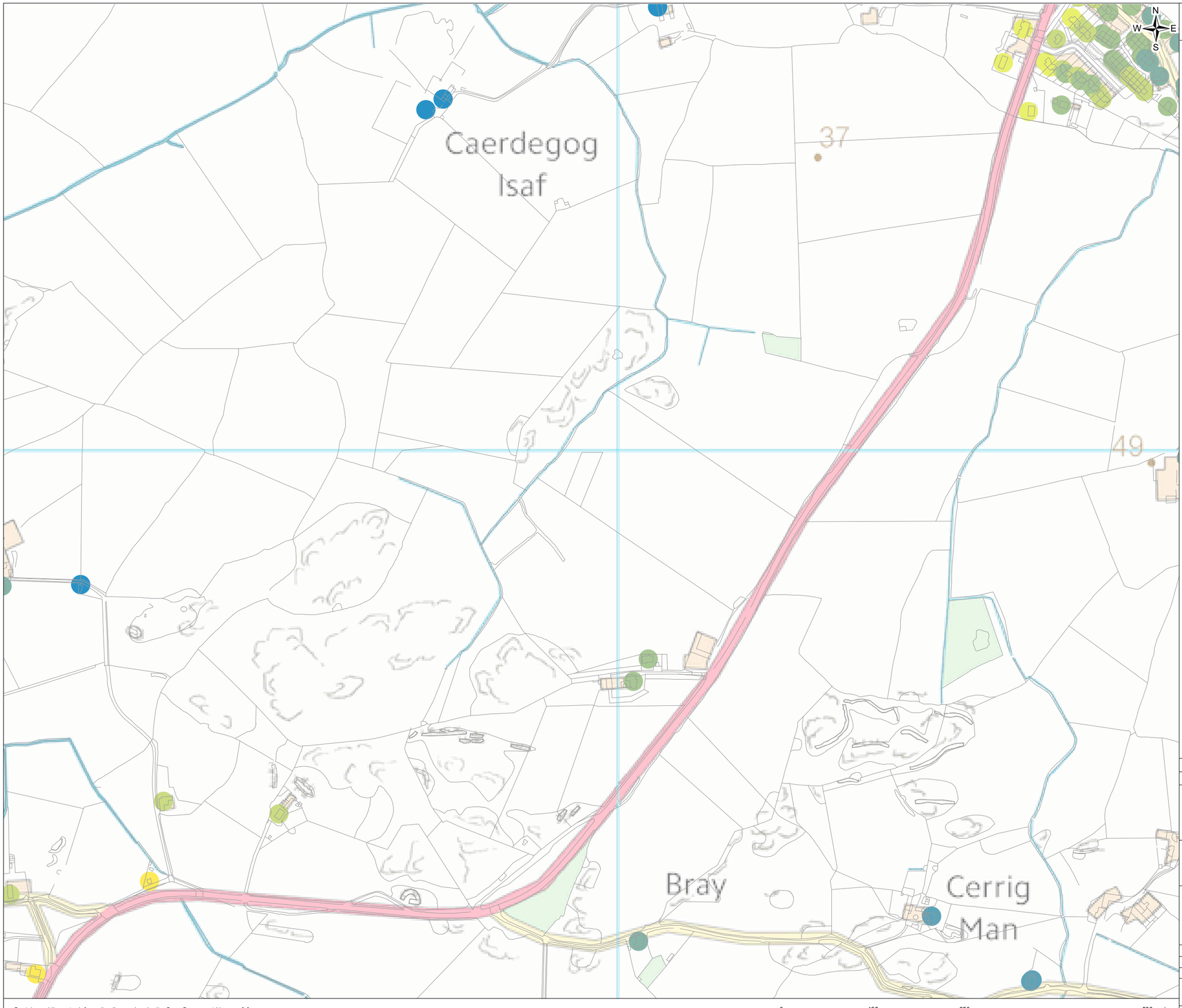
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0 125 250 500 metres

FIGURE 2-4



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: SCENARIO 1
(DCO + WEEKDAY EVENING) 2023 OFF-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 16 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

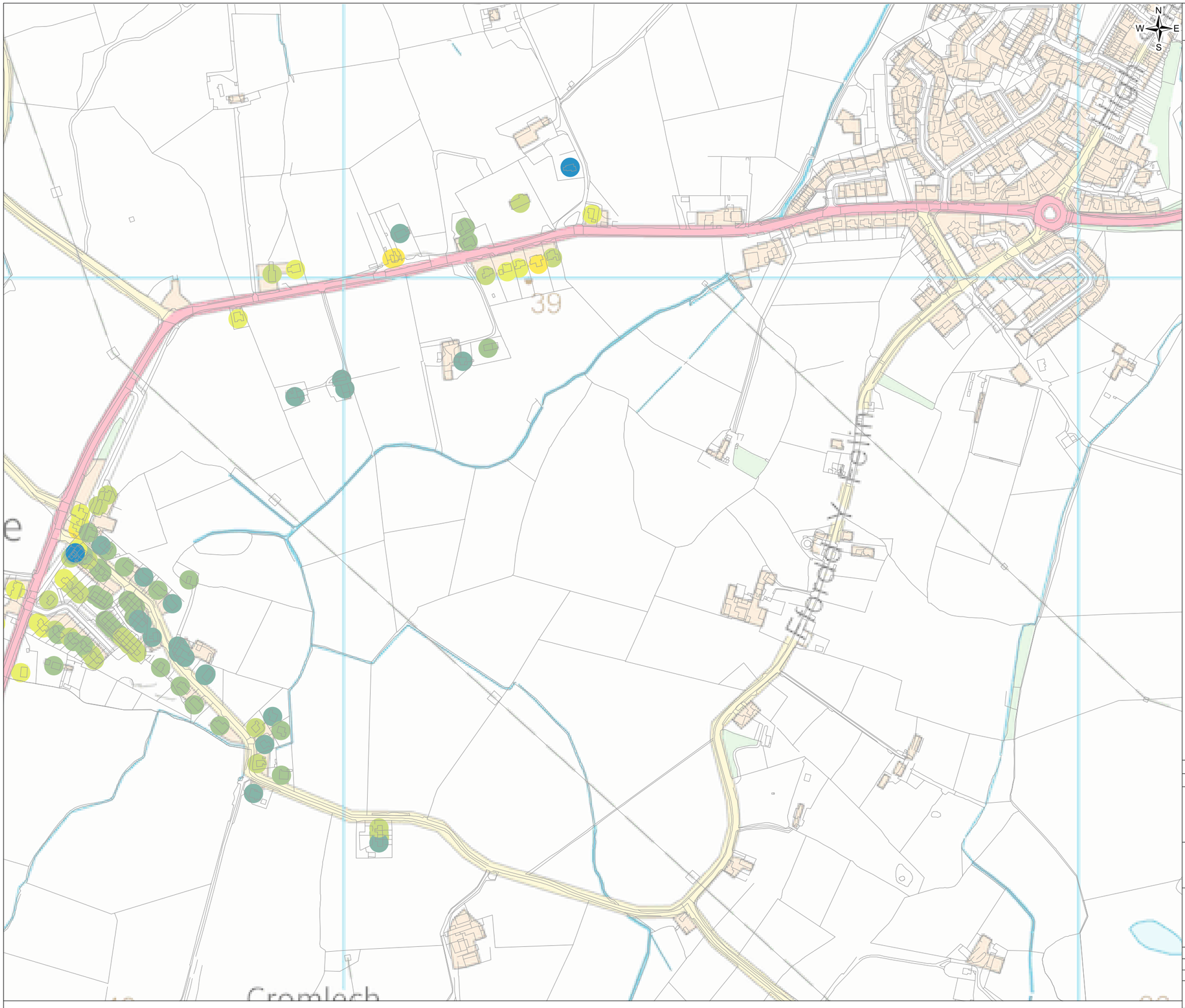
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0 125 250 500 metres

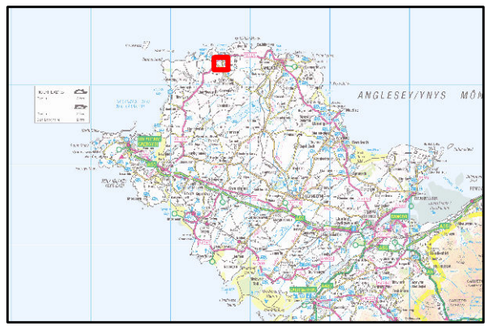
FIGURE 2-4



Legend

Noise levels dB $L_{Aeq,16hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

SCENARIO 1
(DCO + WEEKDAY EVENING) 2023 OFF-LINE
ROAD TRAFFIC NOISE LEVELS, DB LAEQ,16HR
SHEET 17 OF 17

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Client No.		

Drawing No.

60PO80AS_NOISE_A5025_OFFLINE

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0 125 250 500 metres

HORIZON NUCLEAR POWER

WYLFA NEWYDD

ENERGY WORKING FOR BRITAIN

Wylfa Newydd Project

Environmental Statement Addendum
Appendix C5-1-A
Noise and Vibration Effects of Traffic

PINS Reference Number: EN010007

25 March 2019

Revision 2.0
Examination Deadline 8

Regulation Number: 5(2)(a)

Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Horizon Internal DCRM Number: WN0902-HZDCO-PAC-REP-00314

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Contents

1 Appendix C5-1-A Operational road traffic noise input and output 1
1.1 Daytime traffic data 1
1.2 Predicted noise levels 25

List of Tables

Table 1-1 Daytime and evening Do Minimum 2020 and 2023 traffic data 2
Table 1-2 Daytime and evening Do Something 2020 and 2023 traffic data 14
Table 1-3 Predicted noise levels 26

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1 Appendix C5-1-A Operational road traffic noise input and output

1.1 Daytime traffic data

1.1.1 The daytime road traffic data used as the basis for the noise modelling and assessment for the scenarios are provided in table 1-1 and table 1-2.

1.1.2 The daytime road traffic data without the Wylfa Newydd Development Project are referred to as the 'Do Minimum' (DM) scenarios. Do Minimum traffic data is provided for 2020 and 2023 in table 1-1.

1.1.3 The daytime road traffic data including traffic associated the Wylfa Newydd Development Project are referred to as the 'Do Something' scenarios. Do Something traffic data is provided for 2020, 2023 (both for the existing A5025 alignment and with bypasses subsequent to the A5025 Offline Highway Improvements being completed) and 2033 years are provided in table 1-2.

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Table 1-1 Daytime and evening Do Minimum 2020 and 2023 traffic data

Road Network	Link Description	Direction of Flow	2020			2020 (19.00 – 23.00)			2023			2023 (19.00-23.00)		
			Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band
A55	Between Holyhead Town Centre and A55 J1 (Kingsland Road)	2-Way	10576	20%	63	1095	24%	63	7219	19%	63	1121	24%	63
A55	Between A55 J1 (Kingsland Road) and A55 J2 (Parc Cybi - A5153)	2-Way	10541	20%	63	1056	25%	63	7271	20%	63	1081	25%	63
A55	A55 J2 on-slip EB - EB	1-Way	3505	5%	63	285	3%	63	3012	4%	63	292	3%	63
A55	A55 J2 off-slip EB - EB	1-Way	3108	2%	63	288	3%	63	2869	2%	63	294	3%	63
A55	A55 J2 on-slip WB - WB	1-Way	2202	10%	63	214	4%	63	1834	10%	63	218	4%	63
A55	A55 J2 off-slip WB - WB	1-Way	3667	8%	63	304	3%	63	3053	7%	63	311	3%	63
A55	A55 J2 through WB	2-Way	7024	29%	63	709	36%	63	3915	28%	63	727	36%	63
A55	A55 J2 bridge SB	2-Way	8405	3%	63	802	2%	63	7483	3%	63	820	2%	63
A55	Between A55 J3 (Valley) and A55 J2 (Parc Cybi - A5153)	2-Way	14189	19%	97	1265	23%	97	9809	19%	97	1295	23%	97
A55	A55 J3 on-slip EB - EB	1-Way	3445	5%	97	299	5%	97	2944	5%	97	305	4%	97
A55	A55 J3 off-slip EB - EB	1-Way	872	2%	97	68	2%	97	784	2%	97	69	2%	97
A55	A55 J3 on-slip WB - WB	1-Way	764	1%	97	69	1%	97	719	1%	97	70	1%	97
A55	A55 J3 off-slip WB - WB	1-Way	2938	5%	97	282	3%	97	2479	5%	97	288	3%	97
A55	A55 J3 through WB	2-Way	12586	22%	97	1125	26%	97	8211	21%	97	1153	26%	97
A55	A55 J3 bridge SB	2-Way	5244	5%	63	490	4%	63	4445	5%	63	501	4%	63
A55	Between A55 J4 (Dalar Hir) and A55 J3 (Valley)	2-Way	19069	16%	97	1724	19%	97	13645	16%	97	1764	19%	97
A55	A55 J4 on-slip EB - EB	1-Way	1327	4%	97	114	3%	97	1100	4%	97	117	3%	97
A55	A55 J4 off-slip EB - EB	1-Way	1081	2%	97	133	2%	97	968	2%	97	136	2%	97
A55	A55 J4 on-slip WB - WB	1-Way	1163	3%	97	121	2%	97	1020	3%	97	123	2%	97
A55	A55 J4 off-slip WB - WB	1-Way	1408	4%	97	140	3%	97	1187	4%	97	143	3%	97
A55	A55 J4 through WB	2-Way	16667	19%	97	1372	23%	97	11449	19%	97	1404	23%	97
A55	A55 J4 bridge SB	2-Way	3461	5%	63	366	4%	63	2861	5%	63	374	4%	63
A55	Between A55 J5 (A4080) and A55 J4 (Dalar Hir)	2-Way	19244	18%	97	1595	21%	97	13580	17%	97	1633	21%	97
A55	A55 J5 on-slip EB - EB	1-Way	1397	5%	97	124	4%	97	1134	5%	97	127	4%	97

Road Network	Link Description	Direction of Flow	2020			2020 (19.00 – 23.00)			2023			2023 (19.00-23.00)		
			Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band
A55	A55 J5 off-slip EB - EB	1-Way	1715	4%	97	154	3%	97	1424	4%	97	158	3%	97
A55	A55 J5 on-slip WB - WB	1-Way	1782	4%	97	154	4%	97	1548	4%	97	157	4%	97
A55	A55 J5 off-slip WB - WB	1-Way	1410	5%	97	152	3%	97	1162	5%	97	156	3%	97
A55	A55 J5 through WB	2-Way	15748	21%	97	1287	26%	97	10626	20%	97	1317	25%	97
A55	A55 J5 bridge SB	2-Way	4023	6%	63	384	5%	63	3220	6%	63	394	5%	63
A55	Between A55 J6 (Llangefni) and A55 J5 (A4080)	2-Way	18647	18%	97	1615	22%	97	13042	18%	97	1653	21%	97
A55	A55 J6 on-slip EB - EB	1-Way	5504	7%	97	506	5%	97	4521	7%	97	518	5%	97
A55	A55 J6 off-slip EB - EB	1-Way	2554	4%	97	214	5%	97	2110	4%	97	220	4%	97
A55	A55 J6 on-slip WB - WB	1-Way	2534	4%	97	263	4%	97	2122	4%	97	269	4%	97
A55	A55 J6 off-slip WB - WB	1-Way	5303	7%	97	536	5%	97	4295	7%	97	549	5%	97
A55	A55 J6 through WB	2-Way	13497	26%	97	1055	32%	97	8381	26%	97	1080	31%	97
A55	A55 J6 bridge SB	2-Way	12682	7%	97	1235	6%	97	9984	7%	97	1265	6%	97
A55	Between A55 J7 (A5152) and A55 J6 (Llangefni)	2-Way	23315	19%	97	2048	20%	97	16349	18%	97	2097	19%	97
A55	A55 J7 on-slip EB - EB	1-Way	1941	10%	97	167	5%	97	1409	10%	97	171	5%	97
A55	A55 J7 off-slip EB - EB	1-Way	1284	4%	97	82	0%	97	1074	4%	97	83	0%	97
A55	A55 J7 on-slip WB - WB	1-Way	1085	4%	97	69	2%	97	924	4%	97	71	2%	97
A55	A55 J7 off-slip WB - WB	1-Way	2157	11%	97	232	3%	97	1508	11%	97	237	3%	97
A55	A55 J7 through WB	2-Way	21985	21%	97	1978	21%	97	14943	21%	97	2025	21%	97
A55	A55 J7 bridge SB	2-Way	3346	7%	63	266	3%	63	2586	7%	63	272	3%	63
A55	Between A55 J8 (Llanfairpwllgwyngyll) and A55 J7 (A5152)	2-Way	27542	20%	97	2519	18%	97	18761	19%	97	2579	17%	97
A55	A55 J8 on-slip EB - EB	1-Way	5089	4%	97	452	3%	97	4297	4%	97	463	3%	97
A55	A55 J8 off-slip EB - EB	1-Way	3116	6%	97	293	4%	97	2548	6%	97	301	4%	97
A55	A55 J8 on-slip WB - WB	1-Way	3324	5%	97	313	3%	97	2749	5%	97	321	3%	97
A55	A55 J8 off-slip WB - WB	1-Way	5462	3%	97	672	2%	97	4652	3%	97	688	2%	97
A55	A55 J8 through WB	2-Way	18630	29%	97	1628	27%	97	10969	28%	97	1667	26%	97

Road Network	Link Description	Direction of Flow	2020			2020 (19.00 – 23.00)			2023			2023 (19.00-23.00)		
			Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band
A55	A55 J8 bridge SB	2-Way	8326	4%	63	972	2%	63	7080	4%	63	996	2%	63
A55	Between A55 J8a (Holyhead Road) and A55 J8 (Llanfairpwllgwyngyll)	2-Way	27377	23%	63	2542	20%	63	17683	22%	63	2603	20%	63
A55	A55 J8a on-slip EB - EB	1-Way	5646	4%	63	538	3%	63	4839	4%	63	551	3%	63
A55	A55 J8a off-slip WB - WB	1-Way	5787	4%	63	613	2%	63	4907	4%	63	627	2%	63
A55	A55 J8a through WB	2-Way	27296	23%	63	2525	20%	63	17607	22%	63	2586	20%	63
A55	A55 J8a underpass	2-Way	8345	4%	63	916	3%	63	7325	4%	63	936	2%	63
A55	Between Britannia Bridge - A55 J9 (Parc Menai - A487) and A55 J8a (Holyhead Road)	2-Way	38729	17%	63	3676	15%	63	27354	17%	63	3764	14%	63
A55	A55 J9 on-slip EB - EB	1-Way	8640	5%	97	838	3%	97	7267	5%	97	858	3%	97
A55	A55 J9 off-slip EB - EB	1-Way	10473	5%	97	957	4%	97	8955	5%	97	979	4%	97
A55	A55 J9 on-slip WB - WB	1-Way	9732	5%	97	1039	3%	97	8151	5%	97	1064	3%	97
A55	A55 J9 off-slip WB - WB	1-Way	5546	3%	97	567	2%	97	4961	3%	97	580	2%	97
A55	A55 J9 through WB	2-Way	0	0%	97	0	0%	97	0	0%	97	0	0%	97
A55	A55 J9 underpass	2-Way	22493	4%	63	2214	3%	63	19245	4%	63	2266	3%	63
A55	Between A55 J10 (A4087) and A55 J9 (Parc Menai - A487)	2-Way	35482	18%	97	3460	16%	97	25126	17%	97	3544	15%	97
A55	A55 J10 on-slip EB - EB	1-Way	4632	4%	97	547	2%	97	4001	4%	97	559	2%	97
A55	A55 J10 off-slip EB - EB	1-Way	5562	2%	97	557	1%	97	5069	2%	97	570	1%	97
A55	A55 J10 on-slip WB - WB	1-Way	6159	2%	97	716	1%	97	5577	2%	97	732	1%	97
A55	A55 J10 off-slip WB - WB	1-Way	8108	6%	97	855	4%	97	6661	6%	97	875	4%	97
A55	A55 J10 through WB	2-Way	23761	25%	97	2188	24%	97	14481	25%	97	2242	24%	97
A55	A55 J10 underpass	2-Way	22847	3%	63	2469	2%	63	20321	3%	63	2523	2%	63
A55	Between A55 J11 (Bangor Services - A5) and A55 J10 (A4087)	2-Way	36509	18%	97	3590	16%	97	25150	18%	97	3676	16%	97
A55	A55 J11 on-slip EB - EB	1-Way	5033	9%	97	481	6%	97	3807	9%	97	494	6%	97
A55	A55 J11 off-slip EB - EB	1-Way	7063	5%	97	755	4%	97	5758	5%	97	774	4%	97
A55	A55 J11 on-slip WB - WB	1-Way	7588	5%	97	739	4%	97	6259	5%	97	757	4%	97
A55	A55 J11 off-slip WB - WB	1-Way	5165	9%	97	527	7%	97	3939	9%	97	541	7%	97

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A55	A55 J11 through WB	2-Way	31998	16%	97	3079	13%	97	23004	16%	97	3155	13%	97
A55	A55 J11 bridge SB	2-Way	14660	7%	97	1424	5%	97	11578	7%	97	1459	5%	97
A55	Between A55 J12 (Tan Y Lon) and A55 J11 (Bangor Services - A5)	2-Way	42197	14%	97	4087	11%	97	30750	14%	97	4190	11%	97
A5025	Valley to Llanghenedl (Valley to Speed Limit Change 1)	2-Way	6307	5%	63	592	3%	63	5252	5%	63	607	3%	63
A5025	Valley to Llanghenedl (Speed Limit Change 1 to Valley Bypass)	2-Way	6307	5%	97	592	3%	97	5252	5%	97	607	3%	97
A5025	Valley Bypass (Roundabout - Eastern Arm)	2-Way	0	0%	63	0	0%	63	0	0%	63	0	0%	63
A5025	Valley Bypass (Roundabout - Southern Arm)	2-Way	0	0%	63	0	0%	63	0	0%	63	0	0%	63
A5025	Valley Bypass (Roundabout - Western Arm)	2-Way	0	0%	63	0	0%	63	0	0%	63	0	0%	63
A5025	Valley Bypass (Roundabout - Northern Arm)	2-Way	0	0%	63	0	0%	63	0	0%	63	0	0%	63
A5025	Valley to Llanghenedl (Valley Bypass to Speed Limit Change 2)	2-Way	6307	5%	97	592	3%	97	5252	5%	97	607	3%	97
A5025	Valley to Llanghenedl (Speed Limit Change 2 to Llanghenedl)	2-Way	6307	5%	63	592	3%	63	5252	5%	63	607	3%	63
A5025	Llanghenedl to Llanfachraeth (S) (Llanghenedl to Speed Limit Change 1)	2-Way	6165	5%	63	572	4%	63	5112	5%	63	586	4%	63
A5025	Llanghenedl to Llanfachraeth (S) (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	6165	5%	63	572	4%	63	5112	5%	63	586	4%	63
A5025	Llanghenedl to Llanfachraeth (S) (Speed Limit Change 2 to Llanfachraeth Bypass)	2-Way	6165	5%	97	572	4%	97	5112	5%	97	586	4%	97
A5025	Llanfachraeth (S) to Llanfachraeth (N) (Via Bypass)	2-Way	0	0%	63	0	0%	63	0	0%	63	0	0%	63
A5025	Llanghenedl to Llanfachraeth (S) (Llanfachraeth Bypass (S) to llanfachraeth (S))	2-Way	6165	5%	97	572	4%	97	5112	5%	97	586	4%	97
A5025	Llanfachraeth (S) to Minffordd	2-Way	5809	5%	63	541	4%	63	4700	5%	63	554	4%	63
A5025	Minffordd to Lon Y Felin	2-Way	5780	5%	63	528	4%	63	4675	5%	63	541	4%	63
A5025	Lon Y Felin to Llanfwrog turn-off (Lon Y Felin to Speed Limit Change 1)	2-Way	5376	6%	63	484	4%	63	4444	6%	63	495	4%	63
A5025	Lon Y Felin to Llanfwrog turn-off (Speed Limit Change 1 to Llanfwrog turn-off)	2-Way	5376	6%	63	484	4%	63	4444	6%	63	495	4%	63
A5025	Llanfwrog turn-off to Llanfigael turn-off (Llanfwrog turn-off to Llanfachraeth Bypass (N))	2-Way	4873	5%	63	327	2%	63	4095	5%	63	334	2%	63
A5025	Llanfwrog turn-off to Llanfigael turn-off (Llanfachraeth Bypass (N) to Llanfigael turn-off)	2-Way	4873	5%	63	327	2%	63	4095	5%	63	334	2%	63
A5025	Llanfigael turn-off to Black Lion (Llanfigael turn-off to Speed Limit Change 1)	2-Way	4898	5%	63	328	2%	63	4096	5%	63	336	2%	63
A5025	Llanfigael turn-off to Black Lion (Speed Limit Change 1 to Llanfaethlu Bypass)	2-Way	4898	5%	97	328	2%	97	4096	5%	97	336	2%	97

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A5025	Llanfigael turn-off to Black Lion (Llanfaethlu Bypass to Black Lion)	2-Way	4898	5%	97	328	2%	97	4096	5%	97	336	2%	97
A5025	Black Lion to Llanfaethlu (Black Lion to Speed Limit Change 1)	2-Way	4665	6%	97	413	4%	97	3797	6%	97	423	4%	97
A5025	Llanfaethlu Bypass (Roundabout - Southern Arm)	2-Way	0	0%	63	0	0%	63	0	0%	63	0	0%	63
A5025	Llanfaethlu Bypass (Roundabout - Northern Arm)	2-Way	0	0%	63	0	0%	63	0	0%	63	0	0%	63
A5025	Llanfaethlu Bypass (Roundabout - Eastern Arm)	2-Way	0	0%	63	0	0%	63	0	0%	63	0	0%	63
A5025	Black Lion to Llanfaethlu (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	4665	6%	97	413	4%	97	3797	6%	97	423	4%	97
A5025	Black Lion to Llanfaethlu (Speed Limit Change 2 to Llanfaethlu)	2-Way	4665	6%	63	413	4%	63	3797	6%	63	423	4%	63
A5025	Llanfaethlu to Chapel St (Llanfaethlu to Speed Limit Change 1)	2-Way	4239	7%	63	370	5%	63	3412	7%	63	379	5%	63
A5025	Llanfaethlu to Chapel St (Speed Limit Change 1 to Chapel St)	2-Way	4239	7%	63	370	5%	63	3412	7%	63	379	5%	63
A5025	Chapel St to Llanrhyddlad (Chapel St to Speed Limit Change 1)	2-Way	3977	6%	63	293	5%	63	3346	6%	63	299	5%	63
A5025	Chapel St to Llanrhyddlad (Speed Limit Change 1 to Llanrhyddlad)	2-Way	3977	6%	97	293	5%	97	3346	6%	97	299	5%	97
A5025	Llanrhyddlad to Cylch-y-Garn (Llanrhyddlad to Cefn Coch Bypass (S))	2-Way	3546	7%	97	304	5%	97	2877	7%	97	310	5%	97
A5025	Llanrhyddlad to Cylch-y-Garn (Cefn Coch Bypass (S) to Cylch-y-Garn)	2-Way	3546	7%	97	304	5%	97	2877	7%	97	310	5%	97
A5025	Cylch-y-Garn to Llyn Llygeirian turn-off	2-Way	3560	7%	97	306	5%	97	2886	7%	97	313	5%	97
A5025	Llyn Llygeirian turn-off to Nanner Road (Llyn Llygeirian turn-off to Cefn Coch Bypass (N)	2-Way	3351	7%	97	276	5%	97	2711	7%	97	283	5%	97
A5025	Cefn Coch Bypass (S) to Llanfairynghornwy turn-off (Via Bypass)	2-Way	0	0%	97	0	0%	97	0	0%	97	0	0%	97
A5025	Llanfairynghornwy turn-off to Cefn Coch Bypass (N) (Via Bypass)	2-Way	0	0%	97	0	0%	97	0	0%	97	0	0%	97
A5025	Llyn Llygeirian turn-off to Nanner Road (Cefn Coch Bypass (N) to Nanner Road)	2-Way	3351	7%	97	276	5%	97	2711	7%	97	283	5%	97
A5025	Nanner Road to Llanfechell turn-off	2-Way	3367	7%	97	283	5%	97	2737	7%	97	289	5%	97
A5025	Llanfechell turn-off to Tregele (Lanfechell turn-off to Visitor Centre Access)	2-Way	3304	6%	97	247	5%	97	2777	6%	97	252	5%	97
A5025	Llanfechell turn-off to Tregele (Visitor Centre Access to Speed Limit Change 1)	2-Way	3779	7%	97	330	5%	97	3045	7%	97	338	4%	97
A5025	Llanfechell turn-off to Tregele (Speed Limit Change 1 to Tregele)	2-Way	3779	7%	63	330	5%	63	3045	7%	63	338	4%	63
A5025	Tregele to Site Access	2-Way	3753	7%	63	315	5%	63	2982	7%	63	322	5%	63
A5025	Site Access to Cemaes Roundabout (Site Access to Speed Limit Change 1)	2-Way	3373	4%	63	297	4%	63	2837	4%	63	304	4%	63

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A5025	Site Access to Cemaes Roundabout (Speed Limit Change 1 to Cemaes Roundabout)	2-Way	3373	4%	63	297	4%	63	2837	4%	63	304	4%	63
A5025	Cemaes Roundabout to Rhosgoch turn-off (N) (Cemaes Roundabout to Speed Limit Change 1)	2-Way	3026	3%	63	262	3%	63	2603	3%	63	268	3%	63
A5025	Cemaes Roundabout to Rhosgoch turn-off (N) (Speed Limit Change 1 to Rhosgoch turn-off (N))	2-Way	3026	3%	97	262	3%	97	2603	3%	97	268	3%	97
A5025	Rhosgoch turn-off (N) to Amlwch Town Centre (Rhosgoch turn-off (N) to Speed Limit Change 1)	2-Way	3231	4%	97	268	3%	97	2847	4%	97	273	3%	97
A5025	Rhosgoch turn-off (N) to Amlwch Town Centre (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	3231	4%	63	268	3%	63	2847	4%	63	273	3%	63
A5025	Rhosgoch turn-off (N) to Amlwch Town Centre (Speed Limit Change 3 to Amlwch Town Centre)	2-Way	3857	3%	63	382	3%	63	3265	3%	63	391	3%	63
A5025	Rhosgoch turn-off (N) to Amlwch Town Centre (Speed Limit Change 3 to Amlwch Town Centre)	2-Way	3857	3%	63	382	3%	63	3265	3%	63	391	3%	63
A5025	Amlwch Town Centre to Amlwch (S) (Amlwch Town Centre to Amlwch Madyn Farm Access)	2-Way	5431	4%	63	543	4%	63	4506	4%	63	556	4%	63
A5025	Amlwch Town Centre to Amlwch (S) (Amlwch Madyn Farm Access to Amlwch (S))	2-Way	5443	4%	63	543	4%	63	4534	4%	63	556	4%	63
A5025	Amlwch (S) to Llaneilian turn-off (Amlwch (S) to (proposed) Amlwch TWA Car Park Access)	2-Way	3916	5%	63	407	4%	63	3262	4%	63	417	4%	63
A5025	Amlwch (S) to Llaneilian turn-off ((proposed) Amlwch TWA Car Park Access to Speed Limit Change 1)	2-Way	5069	5%	97	534	4%	97	4278	5%	97	546	4%	97
A5025	Amlwch (S) to Llaneilian turn-off (Speed Limit Change 1 to Llaneilian turn-off)	2-Way	5069	5%	97	534	4%	97	4278	5%	97	546	4%	97
A5025	Llaneilian turn-off to Rhoslligwy turn-off (Llaneilian turn-off to Speed Limit Change 1)	2-Way	5120	5%	63	533	4%	63	4293	5%	63	545	4%	63
A5025	Llaneilian turn-off to Rhoslligwy turn-off (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	5120	5%	63	533	4%	63	4293	5%	63	545	4%	63
A5025	Llaneilian turn-off to Rhoslligwy turn-off (Speed Limit Change 2 to Llaneilian turn-off)	2-Way	5120	5%	63	533	4%	63	4293	5%	63	545	4%	63
A5025	Rhoslligwy turn-off to Moelfre turn-off (Rhoslligwy turn-off to Speed Limit Change 1)	2-Way	5214	5%	97	551	4%	97	4401	5%	97	564	4%	97
A5025	Rhoslligwy turn-off to Moelfre turn-off (Speed Limit Change 1 to Moelfre turn-off)	2-Way	5214	5%	63	551	4%	63	4401	5%	63	564	4%	63
A5025	Moelfre turn-off to Marian-glas turn-off (Moelfre turn-off to Speed Limit Change 1)	2-Way	7880	4%	63	900	3%	63	6830	4%	63	920	3%	63
A5025	Moelfre turn-off to Marian-glas turn-off (Speed Limit Change 1 to Marian-glas turn-off)	2-Way	7880	4%	63	900	3%	63	6830	4%	63	920	3%	63
A5025	Marian-glas turn-off to Benllech (Marian-glas turn-off to Speed Limit Change 1)	2-Way	8197	3%	63	930	3%	63	7224	3%	63	951	3%	63
A5025	Marian-glas turn-off to Benllech (Speed Limit Change 1 to Benllech)	2-Way	8197	3%	63	930	3%	63	7224	3%	63	951	3%	63

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A5025	Benllech to Pentraeth (Benllech to Speed Limit Change 1)	2-Way	10965	4%	63	1206	3%	63	9503	4%	63	1234	3%	63
A5025	Benllech to Pentraeth (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	10965	4%	63	1206	3%	63	9503	4%	63	1234	3%	63
A5025	Benllech to Pentraeth (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	10965	4%	97	1206	3%	97	9503	4%	97	1234	3%	97
A5025	Benllech to Pentraeth (Speed Limit Change 2 to Speed Limit Change 3)	2-Way	10965	4%	63	1206	3%	63	9503	4%	63	1234	3%	63
A5025	Benllech to Pentraeth (Speed Limit Change 3 to Pentraeth)	2-Way	10965	4%	63	1206	3%	63	9503	4%	63	1234	3%	63
A5025	Pentraeth to Menai Bridge turn-off (Pentraeth to Speed Limit Change 1)	2-Way	12629	4%	63	1350	3%	63	10780	4%	63	1382	3%	63
A5025	Pentraeth to Menai Bridge turn-off (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	12629	4%	63	1350	3%	63	10780	4%	63	1382	3%	63
A5025	Pentraeth to Menai Bridge turn-off (Speed Limit Change 2 to Speed Limit Change 3)	2-Way	12629	4%	97	1350	3%	97	10780	4%	97	1382	3%	97
A5025	Pentraeth to Menai Bridge turn-off (Speed Limit Change 3 to Menai Bridge turn-off)	2-Way	12629	4%	63	1350	3%	63	10780	4%	63	1382	3%	63
A5025	Menai Bridge turn-off to A55 J8 (Menai Bridge turn-off to Speed Limit Change 1)	2-Way	17109	4%	63	1755	3%	63	14278	4%	63	1798	3%	63
A5025	Menai Bridge turn-off to A55 J8 (Speed Limit Change 1 to A55 J8)	2-Way	17109	4%	63	1755	3%	63	14278	4%	63	1798	3%	63
A5	Penrhos Industrial Estate to Valley Crossroads (Penrhos Industrial Estate to Penrhos (Land & Lakes) Access)	2-Way	8162	3%	97	834	2%	97	7298	2%	97	852	2%	97
A5	Penrhos Industrial Estate to Valley Crossroads (Penrhos (Land & Lakes) Access to Speed Limit Change 1)	2-Way	8930	2%	97	875	2%	97	8066	2%	97	894	2%	97
A5	Penrhos Industrial Estate to Valley Crossroads (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	8930	2%	97	875	2%	97	8066	2%	97	894	2%	97
A5	Penrhos Industrial Estate to Valley Crossroads (Speed Limit Change 2 to Valley Crossroads)	2-Way	8930	2%	63	875	2%	63	8066	2%	63	894	2%	63
A5	Valley Crossroads to A55 J3	2-Way	8919	5%	97	816	4%	97	7555	5%	97	834	4%	97
A5	A55 J4 to Dalar Hir P&R Car Exit	2-Way	1564	9%	63	161	7%	63	1255	8%	63	164	7%	63
A5	Rhostrehwfa turn-off to A55 J6	2-Way	5351	8%	97	568	5%	97	4377	8%	97	581	5%	97
A5	A55 J6 to Gaerwen (W) (A55 J6 to Speed Limit Change 1)	2-Way	6392	8%	97	580	7%	97	4703	8%	97	595	7%	97
A5	A55 J6 to Gaerwen (W) (Speed Limit Change 1 to Gaerwen (W))	2-Way	6392	8%	63	580	7%	63	4703	8%	63	595	7%	63
A5	Gaerwen (W) to Gaerwen (E) (Gaerwen (W) to Speed Limit Change 1)	2-Way	7389	8%	63	754	7%	63	5578	8%	63	773	7%	63
A5	Gaerwen (W) to Gaerwen (E) (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	7389	8%	63	754	7%	63	5578	8%	63	773	7%	63
A5	Gaerwen (W) to Gaerwen (E) (Speed Limit Change 2 to Gaerwen (E))	2-Way	7389	8%	97	754	7%	97	5578	8%	97	773	7%	97

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A5	Gaerwen (E) to A55 J8a (Gaerwen (E) to Speed Limit Change 1)	2-Way	4500	5%	63	450	4%	63	3775	5%	63	460	4%	63
A5	Llanfairpwllgwyngyll (W) to Llanfairpwllgwyngyll (E)	2-Way	4500	5%	63	450	4%	63	3775	5%	63	460	4%	63
A5	Gaerwen (E) to A55 J8a (Speed Limit Change 2 to A55 J8a)	2-Way	13400	4%	63	1370	3%	63	11746	4%	63	1399	3%	63
A5	A55 J8a to Menai Bridge	2-Way	9936	4%	97	1071	3%	97	8669	4%	97	1094	3%	97
A5	A55 J11 (Roundabout - Northern Arm)	2-Way	15878	7%	97	1513	5%	97	12577	7%	97	1550	5%	97
A5	A55 J11 (Roundabout - Southern Arm)	2-Way	25757	7%	63	2657	5%	63	20715	6%	63	2722	5%	63
A5	Menai Bridge (N) to Menai Bridge	2-Way	11782	1%	63	1212	0%	63	10997	1%	63	1237	0%	63
A5	Menai Bridge to Menai Bridge (S)	2-Way	15761	2%	63	1722	1%	63	14361	2%	63	1756	1%	63
A5	A487 to Bangor	2-Way	12444	2%	63	1315	1%	63	11331	2%	63	1341	1%	63
A5	Dalar Hir P&R Car Exit to Bryngwran	2-Way	1564	9%	97	161	7%	97	1255	8%	97	164	7%	97
A5	A55 J4 off-slip SB to Caergeiliog (E)	2-Way	1027	7%	97	106	7%	97	825	6%	97	108	7%	97
A5	Caergeiliog (W) to Caergeiliog (E)	2-Way	1936	6%	63	268	5%	63	1619	6%	63	274	5%	63
A5	Caergeiliog (W) to A55 J3 off-slip NB	2-Way	2491	5%	63	245	4%	63	2162	4%	63	251	4%	63
Access Roads	A5025 turn-off to Simultor Building Access	2-Way	2021	8%	20	145	6%	20	1532	8%	20	149	6%	20
Access Roads	Simulator Building Access to Main Site Access	2-Way	2021	8%	20	145	6%	20	1532	8%	20	149	6%	20
Access Roads	Main Site Access Junction	2-Way	1512	10%	20	113	8%	20	1125	10%	20	115	7%	20
Access Roads	Main Site Access Junction to On-Site Accommodation Access	2-Way	60	9%	20	5	8%	20	44	9%	20	5	7%	20
Access Roads	Parc Cybi & Cae Glas (Land & Lakes) Access Junction	2-Way	1903	19%	20	3	0%	20	1359	19%	20	3	0%	20
Access Roads	AECC/ESL Access Junction	2-Way	0	0%	20	0	0%	20	0	0%	20	0	0%	20
Access Roads	Simulator Building Access Junction	2-Way	0	0%	20	0	0%	20	0	0%	20	0	0%	20
Access Roads	New Site Access & Visitor Centre Access Junction	2-Way	0	0%	20	0	0%	20	0	0%	20	0	0%	20
Access Roads	(proposed) Amlwch TWA Bus Pickup Access Junction	2-Way	0	0%	20	0	0%	20	0	0%	20	0	0%	20
Access Roads	(proposed) Amlwch TWA Car Park (1) Access Junction	2-Way	0	0%	20	0	0%	20	0	0%	20	0	0%	20
Access Roads	(proposed) Amlwch TWA Car Park (2) Access Junction	2-Way	0	0%	20	0	0%	20	0	0%	20	0	0%	20
Access Roads	Amwlch Madyn Farm Access Junction	2-Way	0	0%	20	0	0%	20	0	0%	20	0	0%	20

Road Network	Link Description	Direction of Flow	2020			2020 (19.00 – 23.00)			2023			2023 (19.00-23.00)		
			Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band
Access Roads	Rhosgoch TWA Access Junction	2-Way	0	0%	20	0	0%	20	0	0%	20	0	0%	20
Access Roads	P&R Entrance (N)	2-Way	0	0%	20	0	0%	20	0	0%	20	0	0%	20
Access Roads	P&R Car Exit	2-Way	0	0%	20	0	0%	20	0	0%	20	0	0%	20
Access Roads	P&R Entrance & Bus Exit	2-Way	0	0%	20	0	0%	20	0	0%	20	0	0%	20
Access Roads	MEEG Access Junction	2-Way	0	0%	20	0	0%	20	0	0%	20	0	0%	20
Access Roads	Dalar Hir P&R Access Junction	2-Way	0	0%	20	0	0%	20	0	0%	20	0	0%	20
Access Roads	Kingsland (Land & Lakes) Access Junction	2-Way	0	0%	20	0	0%	20	0	0%	20	0	0%	20
Access Roads	Penrhos (Land & Lakes) Access Junction	2-Way	1042	0%	20	67	0%	20	1042	0%	20	67	0%	20
Other Roads	A487 (S) to A55 J9 Roundabout	2-Way	21813	6%	97	2083	4%	97	17808	6%	97	2134	4%	97
Other Roads	A487 (N) to A55 J9 Roundabout	2-Way	12966	2%	97	1311	2%	97	11558	2%	97	1340	2%	97
Other Roads	A487 (S) to Y Felinheli Bypass	2-Way	10306	4%	97	1209	2%	97	8995	3%	97	1235	2%	97
Other Roads	Bryngwran turn-off to A55 J5	2-Way	3486	7%	97	330	6%	97	2686	7%	97	338	5%	97
Other Roads	A4080 to LlanfairPG (A4080 to Speed Limit Change 1)	2-Way	5165	3%	63	529	3%	63	4617	3%	63	540	3%	63
Other Roads	A4080 to LlanfairPG (Speed Limit Change 1 LlanfairPG)	2-Way	5165	3%	63	529	3%	63	4617	3%	63	540	3%	63
Other Roads	A4087 to A55 J10	2-Way	33041	3%	63	3573	2%	63	29391	3%	63	3652	2%	63
Other Roads	Llangefni to A55 J6 (Llangefni to Speed Limit Change 1)	2-Way	15799	6%	63	1509	5%	63	13081	5%	63	1544	5%	63
Other Roads	Llangefni to A55 J6 (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	15799	6%	63	1509	5%	63	13081	5%	63	1544	5%	63
Other Roads	Llangefni to A55 J6 (Speed Limit Change 2 to A55 J6)	2-Way	15799	6%	97	1509	5%	97	13081	5%	97	1544	5%	97
Other Roads	A55 J7 to Gaerwen (E)	2-Way	6536	9%	97	622	7%	97	4915	9%	97	638	7%	97
Other Roads	A55 J2 to Kingsland to Penrhos Industrial Estate	2-Way	11988	3%	63	1241	3%	63	10766	3%	63	1268	3%	63
Other Roads	A55 J2 to Kingsland & Parc Cybi/Cae Glas Accesses	2-Way	6334	7%	63	477	1%	63	5370	7%	63	487	1%	63
Other Roads	Menai Bridge to Llandegfan	2-Way	7727	4%	63	873	2%	63	6852	4%	63	889	2%	63
Other Roads	Valley Crossroads (Southern Arm)	2-Way	5385	4%	63	560	3%	63	4540	4%	63	573	3%	63
Other Roads	Brynteg to Benllech	2-Way	2345	3%	97	303	2%	97	2044	3%	97	310	2%	97
Other Roads	Llanghenedl to Trefor (Llanghenedl to Speed Limit Change 1)	2-Way	2068	5%	97	222	4%	97	1694	5%	97	227	4%	97

Road Network	Link Description	Direction of Flow	2020			2020 (19.00 – 23.00)			2023			2023 (19.00-23.00)		
			Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band
Other Roads	Llanghenedl to Trefor (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	2068	5%	97	222	4%	97	1694	5%	97	227	4%	97
Other Roads	Llanghenedl to Trefor (Speed Limit Change 2 to Trefor)	2-Way	2068	5%	63	222	4%	63	1694	5%	63	227	4%	63
Other Roads	Llangefni to Pentraeth (Llangefni to Speed Limit Change 1)	2-Way	2656	3%	63	322	2%	63	2218	3%	63	330	2%	63
Other Roads	Llangefni to Pentraeth (Speed Limit Change 1 to A5025)	2-Way	2656	3%	97	322	2%	97	2218	3%	97	330	2%	97
Other Roads	Llangefni to Pentraeth (A5025 - Pentraeth) - EB	2-Way	2519	4%	63	120	2%	63	2164	3%	63	123	2%	63
Other Roads	Bodedern to Bodedern (E)	2-Way	2296	5%	63	351	3%	63	1907	5%	63	359	3%	63
Other Roads	Bodedern (E) to Trefor	2-Way	2296	5%	97	351	3%	97	1907	5%	97	359	3%	97
Other Roads	Llangefni (N) to A5025 Marian-glas turn-off (Llangefni (N) to Speed Limit Change 1)	2-Way	2018	3%	63	236	2%	63	1761	3%	63	242	2%	63
Other Roads	Llangefni (N) to A5025 Marian-glas turn-off (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	2018	3%	63	236	2%	63	1761	3%	63	242	2%	63
Other Roads	Llangefni (N) to A5025 Marian-glas turn-off (Speed Limit Change 2 to Speed Limit Change 3)	2-Way	2018	3%	97	236	2%	97	1761	3%	97	242	2%	97
Other Roads	Llangefni (N) to A5025 Marian-glas turn-off (Speed Limit Change 3 to Speed Limit Change 4)	2-Way	2018	3%	63	236	2%	63	1761	3%	63	242	2%	63
Other Roads	Llangefni (N) to A5025 Marian-glas turn-off (Speed Limit Change 4 to Speed Limit Change 5)	2-Way	2018	3%	97	236	2%	97	1761	3%	97	242	2%	97
Other Roads	Llangefni (N) to A5025 Marian-glas turn-off (Speed Limit Change 5 to Speed Limit Change 6)	2-Way	2018	3%	63	236	2%	63	1761	3%	63	242	2%	63
Other Roads	Llangefni (N) to A5025 Marian-glas turn-off (Speed Limit Change 6 to A5025 Marian-glas turn-off)	2-Way	2018	3%	97	236	2%	97	1761	3%	97	242	2%	97
Other Roads	Llangefni to Llanerch-y-Medd (Llangefni to Llangefni (N))	2-Way	3316	5%	63	419	3%	63	2753	5%	63	430	3%	63
Other Roads	Llangefni to Llanerch-y-Medd (Llangefni (N) to Speed Limit Change 1)	2-Way	3688	4%	63	528	2%	63	3152	4%	63	541	2%	63
Other Roads	Llangefni to Llanerch-y-Medd (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	3688	4%	63	528	2%	63	3152	4%	63	541	2%	63
Other Roads	Llangefni to Llanerch-y-Medd (Speed Limit Change 2 to Speed Limit Change 3)	2-Way	3688	4%	97	528	2%	97	3152	4%	97	541	2%	97
Other Roads	Llangefni to Llanerch-y-Medd (Speed Limit Change 3 to Speed Limit Change 4)	2-Way	4327	4%	97	613	2%	97	3614	4%	97	628	2%	97
Other Roads	Llangefni to Llanerch-y-Medd (Speed Limit Change 4 to Llanerch-y-Medd)	2-Way	4263	5%	63	420	4%	63	3441	5%	63	430	4%	63
Other Roads	Llangefni town centre to A5114	2-Way	1631	5%	63	223	3%	63	1360	5%	63	228	3%	63
Other Roads	Llanerch-y-Medd to Rhosgoch turn-off (S) (Llanerch-y-Medd to Speed Limit Change 1)	2-Way	4272	5%	63	391	4%	63	3438	5%	63	401	4%	63
Other Roads	Llanerch-y-Medd to Rhosgoch turn-off (S) (Speed Limit Change 1 to Rhosgoch turn-off (S))	2-Way	4272	5%	97	391	4%	97	3438	5%	97	401	4%	97

Road Network	Link Description	Direction of Flow	2020			2020 (19.00 – 23.00)			2023			2023 (19.00-23.00)		
			Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band
Other Roads	Rhosgoch turn-off (S) to Amlwch (S) (Rhosgoch turn-off (S) to Speed Limit Change 1)	2-Way	2799	5%	97	262	4%	97	2297	5%	97	268	3%	97
Other Roads	Rhosgoch turn-off (S) to Amlwch (S) (Speed Limit Change 1 to Rhosybol)	2-Way	2799	5%	63	262	4%	63	2297	5%	63	268	3%	63
Other Roads	Rhosgoch turn-off (S) to Amlwch (S) (Rhosybol to Speed Limit Change 2)	2-Way	2799	5%	63	262	4%	63	2297	5%	63	268	3%	63
Other Roads	Rhosgoch turn-off (S) to Amlwch (S) (Speed Limit Change 2 to (proposed) Amlwch TWA Car Park (1) Access)	2-Way	2799	5%	97	262	4%	97	2297	5%	97	268	3%	97
Other Roads	Rhosgoch turn-off (S) to Amlwch (S) ((proposed) Amlwch TWA Car Park (1) Access to (proposed) Amlwch TWA Bus Pickup Access)	2-Way	2585	3%	97	256	3%	97	2185	3%	97	262	3%	97
Other Roads	Rhosgoch turn-off (S) to Amlwch (S) ((proposed) Amlwch TWA Bus Pickup Access to Amlwch (S))	2-Way	2585	3%	63	256	3%	63	2185	3%	63	262	3%	63
Other Roads	Bryngwran turn-off to Llanerch-y-Medd (Bryngwran turn-off to Speed Limit Change 1)	2-Way	1328	7%	97	104	8%	97	988	7%	97	107	8%	97
Other Roads	Bryngwran turn-off to Llanerch-y-Medd (Speed Limit Change 1 - Speed Limit Change 2)	2-Way	1328	7%	97	104	8%	97	988	7%	97	107	8%	97
Other Roads	Bryngwran turn-off to Llanerch-y-Medd (Speed Limit Change 2 to Llanerch-y-Medd)	2-Way	1328	7%	63	104	8%	63	988	7%	63	107	8%	63
Other Roads	Llangefni to Menai Bridge (N) (Llangefni to B5109 turn-off)	2-Way	6659	3%	63	771	2%	63	5627	3%	63	790	2%	63
Other Roads	Llangefni to Menai Bridge (N) (B5109 turn-off to Speed Limit Change 1)	2-Way	4042	4%	63	451	2%	63	3444	3%	63	462	2%	63
Other Roads	Llangefni to Menai Bridge (N) (Speed Limit Change 1 to Menai Bridge (N))	2-Way	4042	4%	97	451	2%	97	3444	3%	97	462	2%	97
Other Roads	Menai Bridge (N) to Menai Bridge	2-Way	11636	3%	63	1212	0%	63	10240	3%	63	1237	0%	63
Other Roads	A5114 Llangefni town centre to Llangefni (E)	2-Way	11787	3%	63	1808	2%	63	10260	3%	63	1849	2%	63
Local Roads	A55 J4 to Dalar Hir P&R Access	2-Way	1110	4%	63	127	3%	63	933	4%	63	130	3%	63
Local Roads	Rhosgoch turn-off (S) to Rhosgoch turn-off (N) (Rhosgoch turn-off (S) to Speed Limit Change 1)	2-Way	1069	5%	97	100	3%	97	865	5%	97	103	3%	97
Local Roads	Rhosgoch turn-off (S) to Rhosgoch turn-off (N) (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	1069	5%	97	100	3%	97	865	5%	97	103	3%	97
Local Roads	Rhosgoch turn-off (S) to Rhosgoch turn-off (N) (Speed Limit Change 2 to Stad Gwynfryn)	2-Way	1069	5%	63	100	3%	63	865	5%	63	103	3%	63
Local Roads	Rhosgoch turn-off (S) to Rhosgoch turn-off (N) (Stad Gwynfryn to Speed limit Change 3)	2-Way	358	3%	63	27	3%	63	307	3%	63	28	3%	63
Local Roads	Rhosgoch turn-off (S) to Rhosgoch turn-off (N) (Speed limit Change 3 to Rhosgoch TWA Access)	2-Way	358	3%	97	27	3%	97	307	3%	97	28	3%	97
Local Roads	Rhosgoch turn-off (S) to Rhosgoch turn-off (N) (Rhosgoch TWA Access Rhosgoch turn-off (N))	2-Way	358	3%	97	27	3%	97	307	3%	97	28	3%	97
Local Roads	Amlwch (E) to A5025 Amlwch Town Centre (Parys Road to Queen Street)	2-Way	3219	1%	63	348	1%	63	2899	1%	63	355	1%	63

Road Network	Link Description	Direction of Flow	2020			2020 (19.00 – 23.00)			2023			2023 (19.00-23.00)		
			Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band
Local Roads	Amlwch (E) to A5025 Amlwch Town Centre (Queen Street to A5025 Amlwch Town Centre)	2-Way	3849	2%	63	393	2%	63	3454	1%	63	402	2%	63
Local Roads	Llanfaethlu Turn Off	2-Way	1462	3%	63	124	3%	63	1243	3%	63	127	3%	63
Local Roads	Dalar Hir P&R Access to Bodedern	2-Way	2261	4%	97	237	3%	97	1904	4%	97	242	3%	97
Local Roads	Bodedern (S) to Bodedern (N)	2-Way	2446	7%	63	361	4%	63	1970	7%	63	370	4%	63
Local Roads	A5025 Llanfaethlu to B5112 Llanerch-y-Medd	2-Way	357	7%	97	34	5%	97	267	7%	97	35	5%	97
Local Roads	Rhosgoch turn-off (S) to Rhosybol	2-Way	1111	5%	97	167	3%	97	919	4%	97	171	3%	97
Local Roads	Rhosgoch turn-off (S) to Llanfechell (E)	2-Way	1458	6%	97	210	4%	97	1195	6%	97	215	4%	97
Local Roads	Llanfechell (E) to Llanfechell (W)	2-Way	1458	6%	63	210	4%	63	1195	6%	63	215	4%	63
Local Roads	Llanfechell (W) to Cemaes	2-Way	2414	4%	97	235	3%	97	2052	4%	97	240	3%	97
Local Roads	Llanfechell (W) to A5025	2-Way	137	2%	97	12	2%	97	115	2%	97	12	2%	97
Local Roads	Llanfechell to Tregele - EB	2-Way	900	6%	63	42	4%	63	731	6%	63	43	4%	63
Local Roads	Llanfechell to Cemaes	2-Way	1514	2%	63	146	3%	63	1320	2%	63	149	3%	63
Local Roads	Llanerch-y-Medd (E) to Brynteg	2-Way	2345	3%	97	303	2%	97	2044	3%	97	310	2%	97

Table 1-2 Daytime and evening Do Something 2020 and 2023 traffic data

Road Network	Link Description	Direction of Flow	2020			2020 (19.00 - 23.00)			2023			2023 (19.00 - 23.00)		
			Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band
A55	A55 J4 on-slip EB - EB	1-Way	1555	6%	97	116	3%	97	1628	3%	97	133	2%	97
A55	A55 J4 off-slip EB - EB	1-Way	1168	4%	97	133	2%	97	1235	4%	97	136	2%	97
A55	A55 J4 on-slip WB - WB	1-Way	1234	4%	97	121	2%	97	1300	5%	97	126	2%	97
A55	A55 J4 off-slip WB - WB	1-Way	1697	6%	97	140	3%	97	1750	3%	97	143	3%	97
A55	A55 J4 through WB	2-Way	17690	20%	97	1438	25%	97	18547	19%	97	1509	24%	97
A55	A55 J4 bridge SB	2-Way	3820	7%	63	366	4%	63	3962	6%	63	377	4%	63
A55	Between A55 J5 (A4080) and A55 J4 (Dalar Hir)	2-Way	20782	18%	97	1663	22%	97	21761	17%	97	1754	22%	97
A55	A55 J5 on-slip EB - EB	1-Way	1399	5%	97	125	4%	97	1440	5%	97	128	4%	97
A55	A55 J5 off-slip EB - EB	1-Way	1742	4%	97	154	3%	97	1798	4%	97	159	3%	97
A55	A55 J5 on-slip WB - WB	1-Way	1813	4%	97	154	4%	97	1877	4%	97	158	4%	97
A55	A55 J5 off-slip WB - WB	1-Way	1410	5%	97	152	3%	97	1448	5%	97	156	3%	97
A55	A55 J5 through WB	2-Way	17229	21%	97	1314	25%	97	18085	20%	97	1396	24%	97
A55	A55 J5 bridge SB	2-Way	4049	6%	63	386	5%	63	4176	6%	63	397	5%	63
A55	Between A55 J6 (Llangefni) and A55 J5 (A4080)	2-Way	20128	19%	97	1643	21%	97	21064	18%	97	1733	20%	97
A55	A55 J6 on-slip EB - EB	1-Way	5506	7%	97	507	5%	97	5657	7%	97	520	5%	97
A55	A55 J6 off-slip EB - EB	1-Way	2612	4%	97	215	4%	97	2713	4%	97	222	4%	97
A55	A55 J6 on-slip WB - WB	1-Way	2608	4%	97	264	4%	97	2722	4%	97	270	4%	97
A55	A55 J6 off-slip WB - WB	1-Way	5303	7%	97	536	5%	97	5447	7%	97	549	5%	97
A55	A55 J6 through WB	2-Way	14847	26%	97	1082	31%	97	15566	24%	97	1157	29%	97
A55	A55 J6 bridge SB	2-Way	12751	7%	97	1235	6%	97	13143	7%	97	1267	6%	97
A55	Between A55 J7 (A5152) and A55 J6 (Llangefni)	2-Way	24667	19%	97	2075	19%	97	25641	18%	97	2176	19%	97
A55	A55 J7 on-slip EB - EB	1-Way	1941	10%	97	167	5%	97	2000	10%	97	171	5%	97
A55	A55 J7 off-slip EB - EB	1-Way	1284	4%	97	82	0%	97	1319	4%	97	83	0%	97
A55	A55 J7 on-slip WB - WB	1-Way	1085	4%	97	69	2%	97	1114	4%	97	71	2%	97

Road Network	Link Description	Direction of Flow	2020			2020 (19.00 - 23.00)			2023			2023 (19.00 - 23.00)		
			Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band
A55	A55 J7 off-slip WB - WB	1-Way	2157	11%	97	232	3%	97	2224	11%	97	237	3%	97
A55	A55 J7 through WB	2-Way	23336	21%	97	2005	21%	97	24276	20%	97	2105	20%	97
A55	A55 J7 bridge SB	2-Way	3346	7%	63	266	3%	63	3442	7%	63	272	3%	63
A55	Between A55 J8 (Llanfairpwllgwyngyll) and A55 J7 (A5152)	2-Way	28894	20%	97	2547	18%	97	29996	19%	97	2659	17%	97
A55	A55 J8 on-slip EB - EB	1-Way	5104	4%	97	460	3%	97	5272	4%	97	479	3%	97
A55	A55 J8 off-slip EB - EB	1-Way	3154	6%	97	294	4%	97	3265	5%	97	303	4%	97
A55	A55 J8 on-slip WB - WB	1-Way	3374	5%	97	313	3%	97	3501	4%	97	321	3%	97
A55	A55 J8 off-slip WB - WB	1-Way	5465	3%	97	672	2%	97	5607	3%	97	688	2%	97
A55	A55 J8 through WB	2-Way	19894	29%	97	1655	26%	97	20687	27%	97	1745	25%	97
A55	A55 J8 bridge SB	2-Way	8342	4%	63	973	2%	63	8563	4%	63	996	2%	63
A55	Between A55 J8a (Holyhead Road) and A55 J8 (Llanfairpwllgwyngyll)	2-Way	28659	23%	63	2577	20%	63	29712	22%	63	2697	19%	63
A55	A55 J8a on-slip EB - EB	1-Way	5646	4%	63	538	3%	63	5792	4%	63	551	3%	63
A55	A55 J8a off-slip WB - WB	1-Way	5787	4%	63	613	2%	63	5939	4%	63	627	2%	63
A55	A55 J8a through WB	2-Way	28578	23%	63	2560	20%	63	29629	22%	63	2680	19%	63
A55	A55 J8a underpass	2-Way	8345	4%	63	916	3%	63	8546	4%	63	936	2%	63
A55	Between Britannia Bridge - A55 J9 (Parc Menai - A487) and A55 J8a (Holyhead Road)	2-Way	40011	17%	63	3711	14%	63	41360	17%	63	3858	14%	63
A55	A55 J9 on-slip EB - EB	1-Way	8643	5%	97	840	3%	97	8875	5%	97	863	3%	97
A55	A55 J9 off-slip EB - EB	1-Way	10627	5%	97	962	4%	97	10919	5%	97	990	4%	97
A55	A55 J9 on-slip WB - WB	1-Way	9916	5%	97	1039	3%	97	10179	5%	97	1064	3%	97
A55	A55 J9 off-slip WB - WB	1-Way	5546	3%	97	567	2%	97	5683	3%	97	580	2%	97
A55	A55 J9 through WB	2-Way	0	0%	97	0	0%	97	0	0%	97	0	0%	97
A55	A55 J9 underpass	2-Way	22519	4%	63	2218	3%	63	23108	4%	63	2273	3%	63
A55	Between A55 J10 (A4087) and A55 J9 (Parc Menai - A487)	2-Way	36428	18%	97	3493	15%	97	37659	17%	97	3632	15%	97
A55	A55 J10 on-slip EB - EB	1-Way	4635	4%	97	549	2%	97	4759	4%	97	564	2%	97
A55	A55 J10 off-slip EB - EB	1-Way	5633	3%	97	557	1%	97	5772	2%	97	572	1%	97

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A55	A55 J10 on-slip WB - WB	1-Way	6237	2%	97	716	1%	97	6396	2%	97	732	1%	97
A55	A55 J10 off-slip WB - WB	1-Way	8108	6%	97	855	4%	97	8325	6%	97	875	4%	97
A55	A55 J10 through WB	2-Way	24559	26%	97	2220	24%	97	25490	25%	97	2328	23%	97
A55	A55 J10 underpass	2-Way	22925	3%	63	2470	2%	63	23497	3%	63	2524	2%	63
A55	Between A55 J11 (Bangor Services - A5) and A55 J10 (A4087)	2-Way	37309	19%	97	3624	16%	97	38584	18%	97	3767	15%	97
A55	A55 J11 on-slip EB - EB	1-Way	5033	9%	97	481	6%	97	5176	9%	97	494	6%	97
A55	A55 J11 off-slip EB - EB	1-Way	7110	5%	97	759	4%	97	7323	5%	97	781	4%	97
A55	A55 J11 on-slip WB - WB	1-Way	7637	5%	97	739	4%	97	7851	5%	97	757	4%	97
A55	A55 J11 off-slip WB - WB	1-Way	5165	9%	97	527	7%	97	5311	9%	97	541	7%	97
A55	A55 J11 through WB	2-Way	32703	16%	97	3110	13%	97	33852	16%	97	3238	13%	97
A55	A55 J11 bridge SB	2-Way	14660	7%	97	1424	5%	97	15060	7%	97	1459	5%	97
A55	Between A55 J12 (Tan Y Lon) and A55 J11 (Bangor Services - A5)	2-Way	42901	14%	97	4118	11%	97	44339	14%	97	4273	11%	97
A5025	Valley to Llanghenedl (Valley to Speed Limit Change 1)	2-Way	7384	8%	63	616	4%	63	0	0%	63	0	0%	63
A5025	Valley to Llanghenedl (Speed Limit Change 1 to Valley Bypass)	2-Way	7384	8%	97	616	4%	97	0	0%	97	0	0%	97
A5025	Valley Bypass (Roundabout - Eastern Arm)	2-Way	0	0%	63	40	100%	63	10972	7%	63	939	8%	63
A5025	Valley Bypass (Roundabout - Southern Arm)	2-Way	0	0%	63	0	0%	63	0	0%	63	0	0%	63
A5025	Valley Bypass (Roundabout - Western Arm)	2-Way	0	0%	63	0	0%	63	11339	3%	63	1073	3%	63
A5025	Valley Bypass (Roundabout - Northern Arm)	2-Way	0	0%	63	40	100%	63	8302	8%	63	712	9%	63
A5025	Valley to Llanghenedl (Valley Bypass to Speed Limit Change 2)	2-Way	7384	8%	97	656	9%	97	8302	8%	97	712	9%	97
A5025	Valley to Llanghenedl (Speed Limit Change 2 to Llanghenedl)	2-Way	7384	8%	63	656	9%	63	8302	8%	63	712	9%	63
A5025	Llanghenedl to Llanfachraeth (S) (Llanghenedl to Speed Limit Change 1)	2-Way	7250	8%	63	623	10%	63	8160	8%	63	669	9%	63
A5025	Llanghenedl to Llanfachraeth (S) (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	7250	8%	63	623	10%	63	8160	8%	63	669	9%	63
A5025	Llanghenedl to Llanfachraeth (S) (Speed Limit Change 2 to Llanfachraeth Bypass)	2-Way	7250	8%	97	623	10%	97	8160	8%	97	669	9%	97
A5025	Llanfachraeth (S) to Llanfachraeth (N) (Via Bypass)	2-Way	0	0%	63	40	100%	63	6258	9%	63	414	13%	63
A5025	Llanghenedl to Llanfachraeth (S) (Llanfachraeth Bypass (S) to llanfachraeth (S))	2-Way	7250	8%	97	583	4%	97	1429	4%	97	138	3%	97

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A5025	Llanfachraeth (S) to Minffordd	2-Way	6795	8%	63	550	4%	63	826	3%	63	72	1%	63
A5025	Minffordd to Lon Y Felin	2-Way	6766	8%	63	538	4%	63	1452	3%	63	118	2%	63
A5025	Lon Y Felin to Llanfwrog turn-off (Lon Y Felin to Speed Limit Change 1)	2-Way	6362	8%	63	493	4%	63	1345	3%	63	106	1%	63
A5025	Lon Y Felin to Llanfwrog turn-off (Speed Limit Change 1 to Llanfwrog turn-off)	2-Way	6362	8%	63	493	4%	63	1345	3%	63	106	1%	63
A5025	Llanfwrog turn-off to Llanfigael turn-off (Llanfwrog turn-off to Llanfachraeth Bypass (N))	2-Way	5859	8%	63	336	2%	63	366	4%	63	35	2%	63
A5025	Llanfwrog turn-off to Llanfigael turn-off (Llanfachraeth Bypass (N) to Llanfigael turn-off)	2-Way	5859	8%	63	376	13%	63	6861	9%	63	467	12%	63
A5025	Llanfigael turn-off to Black Lion (Llanfigael turn-off to Speed Limit Change 1)	2-Way	5883	8%	63	378	13%	63	6915	8%	63	418	12%	63
A5025	Llanfigael turn-off to Black Lion (Speed Limit Change 1 to Llanfaethlu Bypass)	2-Way	5883	8%	97	378	13%	97	6915	8%	97	418	12%	97
A5025	Llanfigael turn-off to Black Lion (Llanfaethlu Bypass to Black Lion)	2-Way	5883	8%	97	338	2%	97	0	0%	97	0	0%	97
A5025	Black Lion to Llanfaethlu (Black Lion to Speed Limit Change 1)	2-Way	5642	9%	97	423	4%	97	0	0%	97	0	0%	97
A5025	Llanfaethlu Bypass (Roundabout - Southern Arm)	2-Way	0	0%	63	40	100%	63	6609	9%	63	502	12%	63
A5025	Llanfaethlu Bypass (Roundabout - Northern Arm)	2-Way	0	0%	63	40	100%	63	6678	9%	63	505	12%	63
A5025	Llanfaethlu Bypass (Roundabout - Eastern Arm)	2-Way	0	0%	63	0	0%	63	369	6%	63	35	5%	63
A5025	Black Lion to Llanfaethlu (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	5642	9%	97	423	4%	97	6678	9%	97	465	4%	97
A5025	Black Lion to Llanfaethlu (Speed Limit Change 2 to Llanfaethlu)	2-Way	5642	9%	63	463	13%	63	6678	9%	63	505	12%	63
A5025	Llanfaethlu to Chapel St (Llanfaethlu to Speed Limit Change 1)	2-Way	5218	10%	63	420	14%	63	6243	10%	63	461	13%	63
A5025	Llanfaethlu to Chapel St (Speed Limit Change 1 to Chapel St)	2-Way	5218	10%	63	420	14%	63	6176	10%	63	461	13%	63
A5025	Chapel St to Llanrhyddlad (Chapel St to Speed Limit Change 1)	2-Way	4957	10%	63	342	16%	63	5903	10%	63	381	14%	63
A5025	Chapel St to Llanrhyddlad (Speed Limit Change 1 to Llanrhyddlad)	2-Way	4957	10%	97	342	16%	97	5903	10%	97	381	14%	97
A5025	Llanrhyddlad to Cylch-y-Garn (Llanrhyddlad to Cefn Coch Bypass (S))	2-Way	4437	10%	97	353	16%	97	5448	10%	97	345	15%	97
A5025	Llanrhyddlad to Cylch-y-Garn (Cefn Coch Bypass (S) to Cylch-y-Garn)	2-Way	4437	10%	97	313	5%	97	296	9%	97	29	6%	97
A5025	Cylch-y-Garn to Llyn Llygeirian turn-off	2-Way	4451	10%	97	315	5%	97	138	8%	97	13	6%	97
A5025	Llyn Llygeirian turn-off to Nanner Road (Llyn Llygeirian turn-off to Cefn Coch Bypass (N)	2-Way	4239	10%	97	286	5%	97	66	1%	97	5	6%	97
A5025	Cefn Coch Bypass (S) to Llanfairynghornwy turn-off (Via Bypass)	2-Way	0	0%	97	40	100%	97	5188	11%	97	354	15%	97
A5025	Llanfairynghornwy turn-off to Cefn Coch Bypass (N) (Via Bypass)	2-Way	0	0%	97	40	100%	97	5157	11%	97	355	15%	97

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A5025	Llyn Llygeirian turn-off to Nanner Road (Cefn Coch Bypass (N) to Nanner Road)	2-Way	4239	10%	97	326	17%	97	5256	11%	97	364	15%	97
A5025	Nanner Road to Llanfechell turn-off	2-Way	4254	10%	97	332	16%	97	5283	11%	97	371	15%	97
A5025	Llanfechell turn-off to Tregele (Lanfechell turn-off to Visitor Centre Access)	2-Way	4192	10%	97	296	18%	97	5215	11%	97	334	16%	97
A5025	Llanfechell turn-off to Tregele (Visitor Centre Access to Speed Limit Change 1)	2-Way	4429	8%	97	337	5%	97	5060	6%	97	362	4%	97
A5025	Llanfechell turn-off to Tregele (Speed Limit Change 1 to Tregele)	2-Way	4429	8%	63	337	5%	63	5060	6%	63	362	4%	63
A5025	Tregele to Site Access	2-Way	4373	8%	63	321	5%	63	4980	7%	63	344	5%	63
A5025	Site Access to Cemaes Roundabout (Site Access to Speed Limit Change 1)	2-Way	3655	5%	63	302	4%	63	3996	4%	63	321	3%	63
A5025	Site Access to Cemaes Roundabout (Speed Limit Change 1 to Cemaes Roundabout)	2-Way	3655	5%	63	302	4%	63	3996	4%	63	321	3%	63
A5025	Cemaes Roundabout to Rhosgoch turn-off (N) (Cemaes Roundabout to Speed Limit Change 1)	2-Way	3201	4%	63	264	3%	63	3447	4%	63	276	3%	63
A5025	Cemaes Roundabout to Rhosgoch turn-off (N) (Speed Limit Change 1 to Rhosgoch turn-off (N))	2-Way	3201	4%	97	264	3%	97	3447	4%	97	276	3%	97
A5025	Rhosgoch turn-off (N) to Amlwch Town Centre (Rhosgoch turn-off (N) to Speed Limit Change 1)	2-Way	3422	4%	97	269	3%	97	3674	4%	97	281	3%	97
A5025	Rhosgoch turn-off (N) to Amlwch Town Centre (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	3422	4%	63	269	3%	63	3674	4%	63	281	3%	63
A5025	Rhosgoch turn-off (N) to Amlwch Town Centre (Speed Limit Change 3 to Amlwch Town Centre)	2-Way	4044	4%	63	383	3%	63	4305	4%	63	399	3%	63
A5025	Rhosgoch turn-off (N) to Amlwch Town Centre (Speed Limit Change 3 to Amlwch Town Centre)	2-Way	4044	4%	63	383	3%	63	4305	4%	63	399	3%	63
A5025	Amlwch Town Centre to Amlwch (S) (Amlwch Town Centre to Amlwch Madyn Farm Access)	2-Way	5529	4%	63	546	4%	63	5749	4%	63	564	4%	63
A5025	Amlwch Town Centre to Amlwch (S) (Amlwch Madyn Farm Access to Amlwch (S))	2-Way	5542	4%	63	546	4%	63	5777	4%	63	564	4%	63
A5025	Amlwch (S) to Llaneilian turn-off (Amlwch (S) to (proposed) Amlwch TWA Car Park Access)	2-Way	3998	5%	63	410	4%	63	4202	4%	63	425	4%	63
A5025	Amlwch (S) to Llaneilian turn-off ((proposed) Amlwch TWA Car Park Access to Speed Limit Change 1)	2-Way	5151	5%	97	537	4%	97	5379	5%	97	554	4%	97
A5025	Amlwch (S) to Llaneilian turn-off (Speed Limit Change 1 to Llaneilian turn-off)	2-Way	5151	5%	97	537	4%	97	5379	5%	97	554	4%	97
A5025	Llaneilian turn-off to Rhoslligwy turn-off (Llaneilian turn-off to Speed Limit Change 1)	2-Way	5201	5%	63	536	4%	63	5433	5%	63	553	4%	63
A5025	Llaneilian turn-off to Rhoslligwy turn-off (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	5201	5%	63	536	4%	63	5433	5%	63	553	4%	63
A5025	Llaneilian turn-off to Rhoslligwy turn-off (Speed Limit Change 2 to Llaneilian turn-off)	2-Way	5201	5%	63	536	4%	63	5433	5%	63	553	4%	63
A5025	Rhoslligwy turn-off to Moelfre turn-off (Rhoslligwy turn-off to Speed Limit Change 1)	2-Way	5296	5%	97	554	4%	97	5534	5%	97	572	4%	97
A5025	Rhoslligwy turn-off to Moelfre turn-off (Speed Limit Change 1 to Moelfre turn-off)	2-Way	5296	5%	63	554	4%	63	5534	5%	63	572	4%	63
A5025	Moelfre turn-off to Marian-glas turn-off (Moelfre turn-off to Speed Limit Change 1)	2-Way	7948	4%	63	904	3%	63	8219	4%	63	931	3%	63

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A5025	Moelfre turn-off to Marian-glas turn-off (Speed Limit Change 1 to Marian-glas turn-off)	2-Way	7948	4%	63	904	3%	63	8219	4%	63	931	3%	63
A5025	Marian-glas turn-off to Benllech (Marian-glas turn-off to Speed Limit Change 1)	2-Way	8270	3%	63	937	3%	63	8554	3%	63	966	3%	63
A5025	Marian-glas turn-off to Benllech (Speed Limit Change 1 to Benllech)	2-Way	8270	3%	63	937	3%	63	8554	3%	63	966	3%	63
A5025	Benllech to Pentraeth (Benllech to Speed Limit Change 1)	2-Way	10990	4%	63	1213	3%	63	11291	4%	63	1248	3%	63
A5025	Benllech to Pentraeth (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	10990	4%	63	1213	3%	63	11291	4%	63	1248	3%	63
A5025	Benllech to Pentraeth (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	10990	4%	97	1213	3%	97	11291	4%	97	1248	3%	97
A5025	Benllech to Pentraeth (Speed Limit Change 2 to Speed Limit Change 3)	2-Way	10990	4%	63	1213	3%	63	11291	4%	63	1248	3%	63
A5025	Benllech to Pentraeth (Speed Limit Change 3 to Pentraeth)	2-Way	10990	4%	63	1213	3%	63	11291	4%	63	1248	3%	63
A5025	Pentraeth to Menai Bridge turn-off (Pentraeth to Speed Limit Change 1)	2-Way	12645	4%	63	1357	3%	63	12996	4%	63	1395	3%	63
A5025	Pentraeth to Menai Bridge turn-off (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	12645	4%	63	1357	3%	63	12996	4%	63	1395	3%	63
A5025	Pentraeth to Menai Bridge turn-off (Speed Limit Change 2 to Speed Limit Change 3)	2-Way	12645	4%	97	1357	3%	97	12996	4%	97	1395	3%	97
A5025	Pentraeth to Menai Bridge turn-off (Speed Limit Change 3 to Menai Bridge turn-off)	2-Way	12645	4%	63	1357	3%	63	12996	4%	63	1395	3%	63
A5025	Menai Bridge turn-off to A55 J8 (Menai Bridge turn-off to Speed Limit Change 1)	2-Way	17187	4%	63	1763	3%	63	17717	4%	63	1814	3%	63
A5025	Menai Bridge turn-off to A55 J8 (Speed Limit Change 1 to A55 J8)	2-Way	17187	4%	63	1763	3%	63	17717	4%	63	1814	3%	63
A5	Penrhos Industrial Estate to Valley Crossroads (Penrhos Industrial Estate to Penrhos (Land & Lakes) Access)	2-Way	8162	3%	97	834	2%	97	8357	2%	97	852	2%	97
A5	Penrhos Industrial Estate to Valley Crossroads (Penrhos (Land & Lakes) Access to Speed Limit Change 1)	2-Way	8932	2%	97	875	2%	97	9125	2%	97	894	2%	97
A5	Penrhos Industrial Estate to Valley Crossroads (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	8932	2%	97	875	2%	97	9125	2%	97	894	2%	97
A5	Penrhos Industrial Estate to Valley Crossroads (Speed Limit Change 2 to Valley Crossroads)	2-Way	8932	2%	63	875	2%	63	9125	2%	63	894	2%	63
A5	Valley Crossroads to A55 J3	2-Way	10030	7%	97	840	4%	97	0	0%	97	0	0%	97
A5	A55 J4 to Dalar Hir P&R Car Exit	2-Way	1754	8%	63	163	7%	63	1945	7%	63	183	6%	63
A5	Rhostrehwfa turn-off to A55 J6	2-Way	5351	8%	97	568	5%	97	5488	8%	97	581	5%	97
A5	A55 J6 to Gaerwen (W) (A55 J6 to Speed Limit Change 1)	2-Way	6433	8%	97	580	7%	97	6652	8%	97	596	7%	97
A5	A55 J6 to Gaerwen (W) (Speed Limit Change 1 to Gaerwen (W))	2-Way	6433	8%	63	580	7%	63	6652	8%	63	596	7%	63
A5	Gaerwen (W) to Gaerwen (E) (Gaerwen (W) to Speed Limit Change 1)	2-Way	7390	8%	63	755	7%	63	7603	8%	63	774	7%	63
A5	Gaerwen (W) to Gaerwen (E) (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	7390	8%	63	755	7%	63	7603	8%	63	774	7%	63

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A5	Gaerwen (W) to Gaerwen (E) (Speed Limit Change 2 to Gaerwen (E))	2-Way	7390	8%	97	755	7%	97	7603	8%	97	774	7%	97
A5	Gaerwen (E) to A55 J8a (Gaerwen (E) to Speed Limit Change 1)	2-Way	4500	5%	63	450	4%	63	4617	5%	63	460	4%	63
A5	Llanfairpwllgwyngyll (W) to Llanfairpwllgwyngyll (E)	2-Way	4500	5%	63	450	4%	63	4617	5%	63	460	4%	63
A5	Gaerwen (E) to A55 J8a (Speed Limit Change 2 to A55 J8a)	2-Way	13400	4%	63	1370	3%	63	13727	4%	63	1399	3%	63
A5	A55 J8a to Menai Bridge	2-Way	9936	4%	97	1071	3%	97	10178	4%	97	1094	3%	97
A5	A55 J11 (Roundabout - Northern Arm)	2-Way	15878	7%	97	1513	5%	97	16310	7%	97	1550	5%	97
A5	A55 J11 (Roundabout - Southern Arm)	2-Way	25853	7%	63	2661	5%	63	26578	7%	63	2730	5%	63
A5	Menai Bridge (N) to Menai Bridge	2-Way	11782	1%	63	1212	0%	63	12060	1%	63	1237	0%	63
A5	Menai Bridge to Menai Bridge (S)	2-Way	15761	2%	63	1722	1%	63	16129	2%	63	1756	1%	63
A5	A487 to Bangor	2-Way	12489	2%	63	1316	1%	63	12788	2%	63	1344	1%	63
A5	Dalar Hir P&R Car Exit to Bryngwran	2-Way	1754	8%	97	163	7%	97	1945	7%	97	183	6%	97
A5	A55 J4 off-slip SB to Caergeiliog (E)	2-Way	1027	7%	97	106	7%	97	1053	6%	97	108	7%	97
A5	Caergeiliog (W) to Caergeiliog (E)	2-Way	1936	6%	63	268	5%	63	1983	6%	63	274	5%	63
A5	Caergeiliog (W) to A55 J3 off-slip NB	2-Way	2491	5%	63	245	4%	63	2550	4%	63	251	4%	63
Access Roads	A5025 turn-off to Simultor Building Access	2-Way	2431	9%	20	146	6%	20	2800	7%	20	153	6%	20
Access Roads	Simulator Building Access to Main Site Access	2-Way	2431	9%	20	146	6%	20	2800	7%	20	153	6%	20
Access Roads	Main Site Access Junction	2-Way	1922	11%	20	114	8%	20	2275	8%	20	119	7%	20
Access Roads	Main Site Access Junction to On-Site Accommodation Access	2-Way	60	9%	20	5	8%	20	61	9%	20	5	7%	20
Access Roads	Parc Cybi & Cae Glas (Land & Lakes) Access Junction	2-Way	2173	23%	20	43	94%	20	2193	26%	20	43	94%	20
Access Roads	AECC/ESL Access Junction	2-Way	0	0%	20	0	0%	20	0	0%	20	0	0%	20
Access Roads	Simulator Building Access Junction	2-Way	0	0%	20	0	0%	20	0	0%	20	0	0%	20
Access Roads	New Site Access & Visitor Centre Access Junction	2-Way	654	25%	20	48	83%	20	1646	22%	20	85	47%	20
Access Roads	(proposed) Amlwch TWA Bus Pickup Access Junction	2-Way	1	100%	20	0	0%	20	1	100%	20	0	0%	20
Access Roads	(proposed) Amlwch TWA Car Park (1) Access Junction	2-Way	0	0%	20	0	0%	20	0	0%	20	0	0%	20
Access Roads	(proposed) Amlwch TWA Car Park (2) Access Junction	2-Way	0	0%	20	0	0%	20	0	0%	20	0	0%	20

Road Network	Link Description	Direction of Flow	2020			2020 (19.00 - 23.00)			2023			2023 (19.00 - 23.00)		
			Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band
Access Roads	Amwlch Madyn Farm Access Junction	2-Way	0	0%	20	0	0%	20	0	0%	20	0	0%	20
Access Roads	Rhosgoch TWA Access Junction	2-Way	0	0%	20	0	0%	20	0	0%	20	0	0%	20
Access Roads	P&R Entrance (N)	2-Way	20	0%	20	0	0%	20	27	0%	20	0	0%	20
Access Roads	P&R Car Exit	2-Way	190	0%	20	2	0%	20	343	0%	20	19	0%	20
Access Roads	P&R Entrance & Bus Exit	2-Way	494	28%	20	0	0%	20	478	13%	20	0	0%	20
Access Roads	MEEG Access Junction	2-Way	0	0%	20	0	0%	20	101	0%	20	0	0%	20
Access Roads	Dalar Hir P&R Access Junction	2-Way	190	0%	20	2	0%	20	343	0%	20	19	0%	20
Access Roads	Kingsland (Land & Lakes) Access Junction	2-Way	0	0%	20	0	0%	20	0	0%	20	0	0%	20
Access Roads	Penrhos (Land & Lakes) Access Junction	2-Way	1044	0%	20	67	0%	20	1042	0%	20	67	0%	20
Other Roads	A487 (S) to A55 J9 Roundabout	2-Way	22109	6%	97	2089	4%	97	22730	5%	97	2147	4%	97
Other Roads	A487 (N) to A55 J9 Roundabout	2-Way	13011	2%	97	1312	2%	97	13337	2%	97	1343	2%	97
Other Roads	A487 (S) to Y Felinheli Bypass	2-Way	10306	4%	97	1209	2%	97	10558	3%	97	1235	2%	97
Other Roads	Bryngwran turn-off to A55 J5	2-Way	3499	7%	97	330	6%	97	3588	7%	97	339	6%	97
Other Roads	A4080 to LlanfairPG (A4080 to Speed Limit Change 1)	2-Way	5165	3%	63	529	3%	63	5289	3%	63	540	3%	63
Other Roads	A4080 to LlanfairPG (Speed Limit Change 1 LlanfairPG)	2-Way	5165	3%	63	529	3%	63	5289	3%	63	540	3%	63
Other Roads	A4087 to A55 J10	2-Way	33192	3%	63	3576	2%	63	34029	3%	63	3660	2%	63
Other Roads	Llangefni to A55 J6 (Llangefni to Speed Limit Change 1)	2-Way	15893	5%	63	1511	5%	63	16363	5%	63	1549	5%	63
Other Roads	Llangefni to A55 J6 (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	15893	5%	63	1511	5%	63	16363	5%	63	1549	5%	63
Other Roads	Llangefni to A55 J6 (Speed Limit Change 2 to A55 J6)	2-Way	15893	5%	97	1511	5%	97	16363	5%	97	1549	5%	97
Other Roads	A55 J7 to Gaerwen (E)	2-Way	6537	9%	97	622	7%	97	6728	9%	97	639	7%	97
Other Roads	A55 J2 to Kingsland to Penrhos Industrial Estate	2-Way	11988	3%	63	1241	3%	63	12274	3%	63	1268	3%	63
Other Roads	A55 J2 to Kingsland & Parc Cybi/Cae Glas Accesses	2-Way	6603	9%	63	517	9%	63	6732	10%	63	527	9%	63
Other Roads	Menai Bridge to Llandegfan	2-Way	7727	4%	63	873	2%	63	7903	4%	63	889	2%	63
Other Roads	Valley Crossroads (Southern Arm)	2-Way	5625	5%	63	562	3%	63	5754	4%	63	579	3%	63
Other Roads	Brynteg to Benllech	2-Way	2382	3%	97	303	2%	97	2451	3%	97	310	2%	97

Road Network	Link Description	Direction of Flow	2020			2020 (19.00 - 23.00)			2023			2023 (19.00 - 23.00)		
			Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band
Other Roads	Llanghenedl to Trefor (Llanghenedl to Speed Limit Change 1)	2-Way	2074	5%	97	222	4%	97	2124	5%	97	227	4%	97
Other Roads	Llanghenedl to Trefor (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	2074	5%	97	222	4%	97	2124	5%	97	227	4%	97
Other Roads	Llanghenedl to Trefor (Speed Limit Change 2 to Trefor)	2-Way	2074	5%	63	222	4%	63	2124	5%	63	227	4%	63
Other Roads	Llangefni to Pentraeth (Llangefni to Speed Limit Change 1)	2-Way	2656	3%	63	322	2%	63	2728	3%	63	330	2%	63
Other Roads	Llangefni to Pentraeth (Speed Limit Change 1 to A5025)	2-Way	2656	3%	97	322	2%	97	2728	3%	97	330	2%	97
Other Roads	Llangefni to Pentraeth (A5025 - Pentraeth) - EB	2-Way	2519	4%	63	120	2%	63	2584	3%	63	123	2%	63
Other Roads	Bodedern to Bodedern (E)	2-Way	2337	5%	63	351	3%	63	2403	5%	63	359	3%	63
Other Roads	Bodedern (E) to Trefor	2-Way	2337	5%	97	351	3%	97	2403	5%	97	359	3%	97
Other Roads	Llangefni (N) to A5025 Marian-glas turn-off (Llangefni (N) to Speed Limit Change 1)	2-Way	2022	3%	63	237	2%	63	2070	3%	63	242	2%	63
Other Roads	Llangefni (N) to A5025 Marian-glas turn-off (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	2022	3%	63	237	2%	63	2070	3%	63	242	2%	63
Other Roads	Llangefni (N) to A5025 Marian-glas turn-off (Speed Limit Change 2 to Speed Limit Change 3)	2-Way	2022	3%	97	237	2%	97	2070	3%	97	242	2%	97
Other Roads	Llangefni (N) to A5025 Marian-glas turn-off (Speed Limit Change 3 to Speed Limit Change 4)	2-Way	2022	3%	63	237	2%	63	2070	3%	63	242	2%	63
Other Roads	Llangefni (N) to A5025 Marian-glas turn-off (Speed Limit Change 4 to Speed Limit Change 5)	2-Way	2022	3%	97	237	2%	97	2070	3%	97	242	2%	97
Other Roads	Llangefni (N) to A5025 Marian-glas turn-off (Speed Limit Change 5 to Speed Limit Change 6)	2-Way	2022	3%	63	237	2%	63	2070	3%	63	242	2%	63
Other Roads	Llangefni (N) to A5025 Marian-glas turn-off (Speed Limit Change 6 to A5025 Marian-glas turn-off)	2-Way	2022	3%	97	237	2%	97	2070	3%	97	242	2%	97
Other Roads	Llangefni to Llanerch-y-Medd (Llangefni to Llangefni (N))	2-Way	3320	5%	63	420	3%	63	3405	5%	63	430	3%	63
Other Roads	Llangefni to Llanerch-y-Medd (Llangefni (N) to Speed Limit Change 1)	2-Way	3689	4%	63	529	2%	63	3787	4%	63	542	2%	63
Other Roads	Llangefni to Llanerch-y-Medd (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	3689	4%	63	529	2%	63	3787	4%	63	542	2%	63
Other Roads	Llangefni to Llanerch-y-Medd (Speed Limit Change 2 to Speed Limit Change 3)	2-Way	3689	4%	97	529	2%	97	3787	4%	97	542	2%	97
Other Roads	Llangefni to Llanerch-y-Medd (Speed Limit Change 3 to Speed Limit Change 4)	2-Way	4328	4%	97	613	2%	97	4447	4%	97	629	2%	97
Other Roads	Llangefni to Llanerch-y-Medd (Speed Limit Change 4 to Llanerch-y-Medd)	2-Way	4332	5%	63	421	4%	63	4487	5%	63	432	4%	63
Other Roads	Llangefni town centre to A5114	2-Way	1633	5%	63	223	3%	63	1674	5%	63	229	3%	63
Other Roads	Llanerch-y-Medd to Rhosgoch turn-off (S) (Llanerch-y-Medd to Speed Limit Change 1)	2-Way	4314	5%	63	392	4%	63	4457	5%	63	403	4%	63
Other Roads	Llanerch-y-Medd to Rhosgoch turn-off (S) (Speed Limit Change 1 to Rhosgoch turn-off (S))	2-Way	4314	5%	97	392	4%	97	4457	5%	97	403	4%	97
Other Roads	Rhosgoch turn-off (S) to Amlwch (S) (Rhosgoch turn-off (S) to Speed Limit Change 1)	2-Way	2816	5%	97	263	4%	97	2884	5%	97	269	4%	97

Road Network	Link Description	Direction of Flow	2020			2020 (19.00 - 23.00)			2023			2023 (19.00 - 23.00)		
			Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band
Other Roads	Rhosgoch turn-off (S) to Amlwch (S) (Speed Limit Change 1 to Rhosybol)	2-Way	2816	5%	63	263	4%	63	2884	5%	63	269	4%	63
Other Roads	Rhosgoch turn-off (S) to Amlwch (S) (Rhosybol to Speed Limit Change 2)	2-Way	2816	5%	63	263	4%	63	2884	5%	63	269	4%	63
Other Roads	Rhosgoch turn-off (S) to Amlwch (S) (Speed Limit Change 2 to (proposed) Amlwch TWA Car Park (1) Access)	2-Way	2816	5%	97	263	4%	97	2884	5%	97	269	4%	97
Other Roads	Rhosgoch turn-off (S) to Amlwch (S) ((proposed) Amlwch TWA Car Park (1) Access to (proposed) Amlwch TWA Bus Pickup Access)	2-Way	2602	3%	97	256	3%	97	2663	3%	97	263	3%	97
Other Roads	Rhosgoch turn-off (S) to Amlwch (S) ((proposed) Amlwch TWA Bus Pickup Access to Amlwch (S))	2-Way	2601	3%	63	256	3%	63	2662	3%	63	263	3%	63
Other Roads	Bryngwran turn-off to Llanerch-y-Medd (Bryngwran turn-off to Speed Limit Change 1)	2-Way	1341	7%	97	105	8%	97	1371	7%	97	108	8%	97
Other Roads	Bryngwran turn-off to Llanerch-y-Medd (Speed Limit Change 1 - Speed Limit Change 2)	2-Way	1341	7%	97	105	8%	97	1371	7%	97	108	8%	97
Other Roads	Bryngwran turn-off to Llanerch-y-Medd (Speed Limit Change 2 to Llanerch-y-Medd)	2-Way	1341	7%	63	105	8%	63	1371	7%	63	108	8%	63
Other Roads	Llangefni to Menai Bridge (N) (Llangefni to B5109 turn-off)	2-Way	6659	3%	63	771	2%	63	6837	3%	63	790	2%	63
Other Roads	Llangefni to Menai Bridge (N) (B5109 turn-off to Speed Limit Change 1)	2-Way	4042	4%	63	451	2%	63	4148	3%	63	462	2%	63
Other Roads	Llangefni to Menai Bridge (N) (Speed Limit Change 1 to Menai Bridge (N))	2-Way	4042	4%	97	451	2%	97	4148	3%	97	462	2%	97
Other Roads	Menai Bridge (N) to Menai Bridge	2-Way	11698	3%	63	1212	0%	63	12035	3%	63	1237	0%	63
Other Roads	A5114 Llangefni town centre to Llangefni (E)	2-Way	11840	3%	63	1810	2%	63	12169	3%	63	1852	2%	63
Local Roads	A55 J4 to Dalar Hir P&R Access	2-Way	1126	4%	63	127	3%	63	1159	3%	63	130	3%	63
Local Roads	Rhosgoch turn-off (S) to Rhosgoch turn-off (N) (Rhosgoch turn-off (S) to Speed Limit Change 1)	2-Way	1093	5%	97	101	3%	97	1155	4%	97	104	3%	97
Local Roads	Rhosgoch turn-off (S) to Rhosgoch turn-off (N) (Speed Limit Change 1 to Speed Limit Change 2)	2-Way	1093	5%	97	101	3%	97	1155	4%	97	104	3%	97
Local Roads	Rhosgoch turn-off (S) to Rhosgoch turn-off (N) (Speed Limit Change 2 to Stad Gwynfryn)	2-Way	1093	5%	63	101	3%	63	1155	4%	63	104	3%	63
Local Roads	Rhosgoch turn-off (S) to Rhosgoch turn-off (N) (Stad Gwynfryn to Speed limit Change 3)	2-Way	358	3%	63	27	3%	63	367	3%	63	28	3%	63
Local Roads	Rhosgoch turn-off (S) to Rhosgoch turn-off (N) (Speed limit Change 3 to Rhosgoch TWA Access)	2-Way	358	3%	97	27	3%	97	367	3%	97	28	3%	97
Local Roads	Rhosgoch turn-off (S) to Rhosgoch turn-off (N) (Rhosgoch TWA Access Rhosgoch turn-off (N))	2-Way	358	3%	97	27	3%	97	367	3%	97	28	3%	97
Local Roads	Amlwch (E) to A5025 Amlwch Town Centre (Parys Road to Queen Street)	2-Way	3219	1%	63	348	1%	63	3299	1%	63	355	1%	63
Local Roads	Amlwch (E) to A5025 Amlwch Town Centre (Queen Street to A5025 Amlwch Town Centre)	2-Way	3980	2%	63	397	2%	63	4178	2%	63	413	2%	63
Local Roads	Llanfaethlu Turn Off	2-Way	1465	3%	63	124	3%	63	1499	3%	63	127	3%	63
Local Roads	Dalar Hir P&R Access to Bodedern	2-Way	2297	4%	97	237	3%	97	2368	4%	97	242	3%	97
Local Roads	Bodedern (S) to Bodedern (N)	2-Way	2482	7%	63	361	4%	63	2557	7%	63	370	4%	63

Road Network	Link Description	Direction of Flow	2020			2020 (19.00 - 23.00)			2023			2023 (19.00 - 23.00)		
			Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/18h)	Rounded HGV%	Noise Speed Band	Rounded Total (veh/4h)	Rounded HGV%	Noise Speed Band
Local Roads	A5025 Llanfaethlu to B5112 Llanerch-y-Medd	2-Way	476	17%	97	34	5%	97	369	6%	97	35	5%	97
Local Roads	Rhosgoch turn-off (S) to Rhosybol	2-Way	1137	5%	97	167	3%	97	1198	4%	97	172	3%	97
Local Roads	Rhosgoch turn-off (S) to Llanfechell (E)	2-Way	1484	6%	97	211	4%	97	1554	5%	97	217	4%	97
Local Roads	Llanfechell (E) to Llanfechell (W)	2-Way	1484	6%	63	211	4%	63	1554	5%	63	217	4%	63
Local Roads	Llanfechell (W) to Cemaes	2-Way	2440	4%	97	235	3%	97	2538	4%	97	242	3%	97
Local Roads	Llanfechell (W) to A5025	2-Way	137	2%	97	12	2%	97	140	2%	97	12	2%	97
Local Roads	Llanfechell to Tregele - EB	2-Way	926	6%	63	42	4%	63	985	6%	63	45	4%	63
Local Roads	Llanfechell to Cemaes	2-Way	1514	2%	63	146	3%	63	1553	2%	63	149	3%	63
Local Roads	Llanerch-y-Medd (E) to Brynteg	2-Way	2382	3%	97	303	2%	97	2451	3%	97	310	2%	97

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1.2 Predicted noise levels

1.2.1 Table 1-3 below sets out the predicted road traffic noise levels at each receptor which form the basis of assessment. Scenarios without the Wylfa Newydd Development Project (and therefore also without the A5025 Highway Improvements) are referred to as 'Do Minimum' scenarios which are abbreviated to 'DM' followed by the year of the forecast. Scenarios with the Wylfa Newydd Development Project are referred to as 'Do Something' scenarios which are abbreviated to 'DS' followed by the year of the forecast. For the Do Something scenarios "Without Bypasses" refers to the existing A5025 alignment prior to the A5025 Highway Improvement Scheme.

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Table 1-3 Predicted noise levels

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
13789	2 CROMLECH TERRACE, LL67 0DP	Residential	53.1	53.4	0.3	53.1	53.6	0.5	48.6	48.9	0.3	48.6	49.1	0.5	48.5	49.5	1.0	48.5	49.5	1.0
13789	3 CROMLECH TERRACE, LL67 0DP	Residential	53.9	54.2	0.3	54.0	54.5	0.5	49.4	49.7	0.3	49.5	50.0	0.5	49.5	49.5	0.0	49.5	50.5	1.0
13860	4 CROMLECH TERRACE, LL67 0DP	Residential	47.7	48.2	0.5	47.6	48.2	0.6	43.4	43.9	0.5	43.3	43.9	0.6	43.5	44.5	1.0	43.5	44.5	1.0
13861	1 CROMLECH TERRACE, LL67 0DP	Residential	58	58.2	0.2	56.3	56.7	0.4	53.4	53.6	0.2	51.7	52.1	0.4	53.5	53.5	0	51.5	52.5	1
14996	POWER STATION, LL67 0DH	Industrial	26.3	27.6	1.3	25.7	26.8	1.1	22.6	23.9	1.3	22.1	23.1	1.1	23.5	24.5	1	22.5	23.5	1
20001	LLANFACHRAETH PRIMARY SCHOOL	School	70	71.2	1.2	50.3	48.6	-1.7	65	66.2	1.2	45.9	44.3	-1.6	64.5	66.5	2	46.5	44.5	-2
18300029	LLANRHYDDLAD PRIMARY SCHOOL	School	52.1	53.7	1.6	51.6	54.1	2.5	47.7	49.2	1.6	47.2	49.6	2.4	47.5	49.5	2	47.5	49.5	2
18300221	1 NANT Y FELIN HOLYHEAD LL65 2TQ	Residential	46.8	47	0.2	43.3	43.7	0.4	42.5	42.7	0.2	39.1	39.5	0.4	42.5	42.5	0	39.5	39.5	0
10013457648	2 NANT Y FELIN HOLYHEAD LL65 2TQ	Residential	47	47.2	0.2	46.3	46.7	0.4	42.7	42.9	0.2	42	42.4	0.4	42.5	43.5	1	42.5	42.5	0
10013457649	3 NANT Y FELIN HOLYHEAD LL65 2TQ	Residential	44.8	45	0.2	42.8	43.2	0.4	40.6	40.8	0.2	38.6	39	0.4	40.5	41.5	1	38.5	39.5	1
10013457650	4 NANT Y FELIN HOLYHEAD LL65 2TQ	Residential	47.3	47.5	0.2	47.3	47.7	0.4	43	43.2	0.2	43	43.4	0.4	43.5	43.5	0	43.5	43.5	0
10013457651	5 NANT Y FELIN HOLYHEAD LL65 2TQ	Residential	44.9	45.1	0.2	41.8	42.2	0.4	40.7	40.9	0.2	37.7	38.1	0.4	40.5	41.5	1	38.5	38.5	0
10013457652	6 NANT Y FELIN HOLYHEAD LL65 2TQ	Residential	43.5	43.7	0.2	43.5	43.9	0.4	39.3	39.5	0.2	39.3	39.7	0.4	39.5	39.5	0	39.5	40.5	1
10013457653	7 NANT Y FELIN HOLYHEAD LL65 2TQ	Residential	41.5	41.7	0.2	42.7	43.1	0.4	37.4	37.6	0.2	38.5	38.9	0.4	37.5	37.5	0	38.5	39.5	1
10013457654	8 NANT Y FELIN HOLYHEAD LL65 2TQ	Residential	41.5	41.7	0.2	42.4	42.7	0.3	37.4	37.6	0.2	38.3	38.5	0.3	37.5	37.5	0	38.5	38.5	0
10013457655	9 NANT Y FELIN HOLYHEAD LL65 2TQ	Residential	41.8	42	0.2	41.8	42.2	0.4	37.7	37.9	0.2	37.7	38.1	0.4	38.5	38.5	0	38.5	38.5	0
10013457656	10 NANT Y FELIN HOLYHEAD LL65 2TQ	Residential	40.2	40.4	0.2	42.4	42.7	0.3	36.1	36.3	0.2	38.3	38.5	0.3	36.5	36.5	0	38.5	38.5	0
10013457657	11 NANT Y FELIN HOLYHEAD LL65 2TQ	Residential	40.5	40.7	0.2	43.2	43.6	0.4	36.4	36.6	0.2	39	39.4	0.4	36.5	36.5	0	39.5	39.5	0
10013457658	12 NANT Y FELIN HOLYHEAD LL65 2TQ	Residential	41.8	42	0.2	41.2	41.6	0.4	37.7	37.9	0.2	37.1	37.5	0.4	38.5	38.5	0	37.5	37.5	0
10013457659	13 NANT Y FELIN HOLYHEAD LL65 2TQ	Residential	43.8	44	0.2	42.4	42.8	0.4	39.6	39.8	0.2	38.3	38.6	0.4	39.5	40.5	1	38.5	38.5	0
10013457660	15 NANT Y FELIN HOLYHEAD LL65 2TQ	Residential	43.5	43.7	0.2	44.7	45.1	0.4	39.3	39.5	0.2	40.5	40.9	0.4	39.5	39.5	0	40.5	41.5	1
10013457662	16 BRYN AKASNANT Y FELIN HOLYHEAD LL65	Residential	44.9	45.1	0.2	42.3	42.7	0.4	40.7	40.9	0.2	38.2	38.5	0.4	40.5	41.5	1	38.5	38.5	0
10013457663	17 NANT Y FELIN HOLYHEAD LL65 2TQ	Residential	45.3	45.5	0.2	45.3	45.7	0.4	41.1	41.3	0.2	41.1	41.5	0.4	41.5	41.5	0	41.5	41.5	0
10013457664	18 NANT Y FELIN HOLYHEAD LL65 2TQ	Residential	45.4	45.6	0.2	42.8	43.2	0.4	41.2	41.4	0.2	38.6	39	0.4	41.5	41.5	0	38.5	39.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013457665	19 NANT Y FELIN HOLYHEAD LL65 2TQ	Residential	46.3	46.5	0.2	42.5	42.9	0.4	42	42.2	0.2	38.4	38.7	0.4	42.5	42.5	0	38.5	39.5	1
10013457666	20 NANT Y FELIN HOLYHEAD LL65 2TQ	Residential	46.4	46.6	0.2	45.4	45.8	0.4	42.1	42.3	0.2	41.2	41.6	0.4	42.5	42.5	0	41.5	41.5	0
10013457667	21 NANT Y FELIN HOLYHEAD LL65 2TQ	Residential	46.8	47	0.2	46.8	47.2	0.4	42.5	42.7	0.2	42.5	42.9	0.4	42.5	42.5	0	42.5	43.5	1
10013457668	22 NANT Y FELIN HOLYHEAD LL65 2TQ	Residential	47.9	48.1	0.2	47.9	48.3	0.4	43.6	43.8	0.2	43.6	44	0.4	43.5	44.5	1	43.5	44.5	1
10013457669	23 NANT Y FELIN HOLYHEAD LL65 2TQ	Residential	48.9	49.2	0.3	49	49.4	0.4	44.6	44.9	0.3	44.7	45	0.4	44.5	45.5	1	44.5	45.5	1
10013457670	24 NANT Y FELIN HOLYHEAD LL65 2TQ	Residential	49.8	50.1	0.3	49.9	50.3	0.4	45.4	45.7	0.3	45.5	45.9	0.4	45.5	45.5	0	45.5	46.5	1
10013457671	BRON WYLFA CEMAES BAY LL67 0DA	Residential	51.5	52.2	0.7	48.3	49.1	0.8	47.1	47.8	0.7	44	44.8	0.8	47.5	47.5	0	44.5	44.5	0
10013457743	BRYN ELEN HOLYHEAD LL65 3DX	Residential	56.5	57	0.5	56	56.5	0.5	51.9	52.4	0.5	51.5	51.9	0.5	52.5	52.5	0	51.5	52.5	1
10013457843	VALLEY PRECINCTSTATION ROAD VALLEY HOLY	Commercial	57.5	58.1	0.6	65.7	66	0.3	52.9	53.5	0.6	60.9	61.2	0.3	52.5	53.5	1	60.5	61.5	1
10013457955	VALLEY PRECINCT VALLEY HOLYHEAD LL65 3E	Commercial	54.3	55	0.7	54.3	54.2	-0.1	49.8	50.5	0.7	49.8	49.7	-0.1	49.5	50.5	1	49.5	49.5	0
10013457956	VALLEY PRECINCTSTATION ROAD VALLEY HOLY	Commercial	50.7	51.5	0.8	54.6	54.9	0.3	46.3	47.1	0.8	50.1	50.4	0.3	46.5	47.5	1	50.5	50.5	0
10013457957	VALLEY PRECINCTSTATION ROAD VALLEY HOLY	Commercial	56.6	57.3	0.7	54.6	54.9	0.3	52	52.7	0.7	50.1	50.4	0.3	52.5	52.5	0	50.5	50.5	0
10013457958	VALLEY PRECINCTSTATION ROAD VALLEY HOLY	Commercial	55.4	56.1	0.7	55.4	55.3	-0.1	50.9	51.5	0.7	50.9	50.8	-0.1	50.5	51.5	1	50.5	50.5	0
10013457959	VALLEY PRECINCTSTATION ROAD VALLEY HOLY	Commercial	54.8	55.5	0.7	53.3	53.6	0.3	50.3	51	0.7	48.8	49.1	0.3	50.5	51.5	1	48.5	49.5	1
10013457960	GORWELGRAYSTONES VALLEY HOLYHEAD LL65 3	Residential	63.9	64.4	0.5	63.9	64.2	0.3	59.1	59.6	0.5	59.1	59.4	0.3	59.5	59.5	0	59.5	59.5	0
10013457962	GRAYSTONES VALLEY HOLYHEAD LL65 3EW	Residential	69	69.5	0.5	60.4	60.7	0.3	64.1	64.5	0.5	55.7	56	0.3	63.5	64.5	1	55.5	56.5	1
10013457963	AMBOSELI VALLEY HOLYHEAD LL65 3EL	Residential	63.7	64.2	0.5	57.8	58.1	0.3	58.9	59.4	0.5	53.2	53.5	0.3	58.5	59.5	1	53.5	53.5	0
10013457964	GLASFRYN LLANFACHRAETH HOLYHEAD LL65 4U	Residential	71.8	73.2	1.4	50.7	46.1	-4.6	66.8	68.1	1.4	46.3	41.8	-4.5	66.5	67.5	1	46.5	42.5	-4
10013457992	TRIGFA LLANFACHRAETH HOLYHEAD LL65 4UP	Residential	71.8	73.2	1.4	50.2	45.7	-4.5	66.8	68.1	1.4	45.8	41.5	-4.4	66.5	67.5	1	46.5	41.5	-5
10013457993	2 MAES ALAWMAES ALAW LLANFACHRAETH HOLY	Residential	67.5	68.9	1.4	55.3	51	-4.3	62.6	64	1.4	50.8	46.6	-4.2	62.5	63.5	1	50.5	46.5	-4
10013458133	4 MAES ALAWMAES ALAW LLANFACHRAETH HOLY	Residential	68.5	69.9	1.4	50.2	50.9	0.7	63.6	64.9	1.4	45.8	46.5	0.7	63.5	64.5	1	46.5	46.5	0
10013458134	6 MAES ALAWMAES ALAW LLANFACHRAETH HOLY	Residential	63.8	65.2	1.4	50.2	50.8	0.6	59	60.4	1.4	45.8	46.4	0.6	58.5	60.5	2	46.5	46.5	0
10013458136	TURNPIKE LLANYNGHENEDL HOLYHEAD LL65 3D	Residential	62.2	63.6	1.4	63.4	65.1	1.7	57.5	58.8	1.4	58.6	60.3	1.6	57.5	58.5	1	58.5	60.5	2
10013458174	PRESWYLFA LLANYNGHENEDL HOLYHEAD LL65 3	Residential	68.3	69.8	1.5	60.4	58.4	-2	63.4	64.8	1.5	55.7	53.8	-1.9	63.5	64.5	1	55.5	53.5	-2

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013458318	GLYN VILLA LLANYNGHENEDL HOLYHEAD LL65	Residential	68.5	70	1.5	60.1	56.7	-3.4	63.6	65	1.5	55.4	52.1	-3.3	63.5	64.5	1	55.5	52.5	-3
10013458319	CLEIFIOG FAWR VALLEY HOLYHEAD LL65 3BS	Residential	50.9	51.6	0.7	47.2	47.9	0.7	46.5	47.2	0.7	42.9	43.6	0.7	46.5	47.5	1	43.5	43.5	0
10013458320	GLYN AFON LLANYNGHENEDL HOLYHEAD LL65 3	Residential	70.5	71.9	1.4	58.1	60.1	2	65.5	66.9	1.4	53.5	55.4	1.9	65.5	66.5	1	53.5	55.5	2
10013458322	BRYN REFAIL LLANYNGHENEDL HOLYHEAD LL65	Residential	67	68.4	1.4	67	68.9	1.9	62.1	63.5	1.4	62.1	64	1.8	62.5	63.5	1	62.5	63.5	1
10013458324	ISGRAIG LLANYNGHENEDL HOLYHEAD LL65 3DD	Residential	52.8	54.2	1.4	64	65.9	1.9	48.3	49.7	1.4	59.2	61.1	1.8	48.5	49.5	1	59.5	60.5	1
10013458325	LON DEG LLANYNGHENEDL HOLYHEAD LL65 3DD	Residential	68.5	69.9	1.4	67.2	69.2	2	63.6	64.9	1.4	62.3	64.3	1.9	63.5	64.5	1	62.5	64.5	2
10013458326	PENCRAIG LLANYNGHENEDL HOLYHEAD LL65 3D	Residential	46.9	48.1	1.2	45.1	46.6	1.5	42.6	43.8	1.2	40.9	42.3	1.5	42.5	44.5	2	41.5	42.5	1
10013458327	TY HEN LLANYNGHENEDL HOLYHEAD LL65 3PZ	Residential	47.8	48.8	1	47.7	49.1	1.4	43.5	44.5	1	43.4	44.8	1.4	43.5	44.5	1	43.5	44.5	1
10013458328	PENTERFYN LLANYNGHENEDL HOLYHEAD LL65 3	Residential	71.3	72.5	1.2	71.3	73.1	1.8	66.3	67.5	1.2	66.3	68	1.7	66.5	67.5	1	66.5	67.5	1
10013458329	BRONALLT LLANYNGHENEDL HOLYHEAD LL65 3P	Residential	60.6	61.8	1.2	61.3	63	1.7	55.9	57.1	1.2	56.6	58.2	1.6	55.5	57.5	2	56.5	58.5	2
10013458330	CLEIFIOG ISAF LLANYNGHENEDL HOLYHEAD LL	Residential	48.6	49.5	0.9	48.5	49.8	1.3	44.3	45.1	0.9	44.2	45.4	1.3	44.5	45.5	1	44.5	45.5	1
10013458331	TYDDYN GOF LLANYNGHENEDL HOLYHEAD LL65	Residential	70.7	71.9	1.2	70.7	72.4	1.7	65.7	66.9	1.2	65.7	67.4	1.6	65.5	66.5	1	65.5	67.5	2
10013458332	TYDDYN GOF LLANYNGHENEDL HOLYHEAD LL65	Residential	70.8	72	1.2	57.8	59.7	1.9	65.8	67	1.2	53.2	55	1.8	65.5	66.5	1	53.5	55.5	2
10013458333	TRYGARN HOUSE LLANFACHRAETH HOLYHEAD LL	Residential	70.8	72.2	1.4	55.1	50.3	-4.8	65.8	67.2	1.4	50.6	45.9	-4.7	65.5	66.5	1	50.5	46.5	-4
10013458384	GRAIG LWYD LLANFACHRAETH HOLYHEAD LL65	Residential	71.5	72.9	1.4	52.8	49.5	-3.3	66.5	67.8	1.4	48.3	45.1	-3.2	66.5	67.5	1	48.5	45.5	-3
10013458385	CARREG FAWR LLANFACHRAETH HOLYHEAD LL65	Residential	63.5	64.9	1.4	50.4	47.9	-2.5	58.7	60.1	1.4	46	43.6	-2.4	58.5	60.5	2	46.5	43.5	-3
10013458386	GWENFA LLANFACHRAETH HOLYHEAD LL65 4UT	Residential	55.8	57.2	1.4	48.3	48.6	0.3	51.3	52.6	1.4	44	44.3	0.3	51.5	52.5	1	44.5	44.5	0
10013458387	DOLYDD LLANFACHRAETH HOLYHEAD LL65 4UT	Residential	57.1	58.5	1.4	47.9	48.6	0.7	52.5	53.9	1.4	43.6	44.3	0.7	52.5	53.5	1	43.5	44.5	1
10013458388	PEN Y GRAIG LLANFACHRAETH HOLYHEAD LL65	Residential	52.8	54.2	1.4	45.3	42.3	-3	48.3	49.7	1.4	41.1	38.2	-2.9	48.5	49.5	1	41.5	38.5	-3
10013458389	CROSS KEYS LLANFACHRAETH HOLYHEAD LL65	Residential	60.6	62	1.4	52.4	47	-5.4	55.9	57.3	1.4	48	42.7	-5.2	55.5	57.5	2	48.5	42.5	-6
10013458390	CARTREFLE LLANFACHRAETH HOLYHEAD LL65 4	Residential	72.5	73.9	1.4	51.6	46.4	-5.2	67.5	68.8	1.4	47.2	42.1	-5	67.5	68.5	1	47.5	42.5	-5
10013458391	PRESTON HOUSE LLANFACHRAETH HOLYHEAD LL	Residential	72.5	73.9	1.4	51.1	46.5	-4.6	67.5	68.8	1.4	46.7	42.2	-4.5	67.5	68.5	1	46.5	42.5	-4

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			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013458392	TWR CELYN LLANFACHRAETH HOLYHEAD LL65 4	Residential	50.5	51.9	1.4	50.9	46.3	-4.6	46.1	47.5	1.4	46.5	42	-4.5	46.5	47.5	1	46.5	42.5	-4
10013458393	BRYN CELYN LLANFACHRAETH HOLYHEAD LL65	Residential	71.6	73	1.4	51.8	47.5	-4.3	66.6	67.9	1.4	47.4	43.2	-4.2	66.5	67.5	1	47.5	43.5	-4
10013458394	CYBI HOUSE LLANFACHRAETH HOLYHEAD LL65	Residential	56.8	58.2	1.4	51	46.5	-4.5	52.2	53.6	1.4	46.6	42.2	-4.4	52.5	53.5	1	46.5	42.5	-4
10013458395	TYR ARDD LLANFACHRAETH HOLYHEAD LL65 4U	Residential	68.8	70.2	1.4	51.4	46.9	-4.5	63.9	65.2	1.4	47	42.6	-4.4	63.5	65.5	2	47.5	42.5	-5
10013458396	GOEDEN GRON LLANFACHRAETH HOLYHEAD LL65	Residential	72.1	73.5	1.4	54.9	51.2	-3.7	67.1	68.4	1.4	50.4	46.8	-3.6	66.5	68.5	2	50.5	46.5	-4
10013458397	GREYSTONES LLANFACHRAETH HOLYHEAD LL65	Residential	67.8	69.2	1.4	51	49.6	-1.4	62.9	64.3	1.4	46.6	45.2	-1.4	62.5	64.5	2	46.5	45.5	-1
10013458398	RHIWEN LLANFACHRAETH HOLYHEAD LL65 4UT	Residential	67.6	69	1.4	50.5	49.5	-1	62.7	64.1	1.4	46.1	45.1	-1	62.5	63.5	1	46.5	45.5	-1
10013458399	RHIANFA LLANFACHRAETH HOLYHEAD LL65 4UT	Residential	69.5	70.9	1.4	51.6	49	-2.6	64.5	65.9	1.4	47.2	44.7	-2.5	64.5	65.5	1	47.5	44.5	-3
10013458400	BRYN SIRIOL LLANFACHRAETH HOLYHEAD LL65	Residential	71	72.4	1.4	51.1	49.2	-1.9	66	67.4	1.4	46.7	44.9	-1.8	65.5	67.5	2	46.5	45.5	-1
10013458401	BRYN GLAS LLANFACHRAETH HOLYHEAD LL65 4	Residential	70.8	72.2	1.4	51.3	48.2	-3.1	65.8	67.2	1.4	46.9	43.9	-3	65.5	66.5	1	47.5	44.5	-3
10013458402	FURNESS LLANFACHRAETH HOLYHEAD LL65 4UT	Residential	68.6	70	1.4	51.4	49.1	-2.3	63.7	65	1.4	47	44.8	-2.2	63.5	64.5	1	47.5	44.5	-3
10013458403	BONT LLWYD LLANFACHRAETH HOLYHEAD LL65	Residential	70.8	72.2	1.4	56.6	51.6	-5	65.8	67.2	1.4	52	47.2	-4.9	65.5	66.5	1	52.5	47.5	-5
10013458404	BONT LLWYD LLANFACHRAETH HOLYHEAD LL65	Residential	71	72.4	1.4	58.9	53.4	-5.5	66	67.4	1.4	54.3	48.9	-5.3	65.5	67.5	2	54.5	49.5	-5
10013458405	VICTORIA HOUSE LLANFACHRAETH HOLYHEAD L	Residential	71.1	72.5	1.4	50.6	47.9	-2.7	66.1	67.5	1.4	46.2	43.6	-2.6	65.5	67.5	2	46.5	43.5	-3
10013458407	MACHRAETH VIEW LLANFACHRAETH HOLYHEAD L	Residential	67.5	68.9	1.4	53.4	48.9	-4.5	62.6	64	1.4	48.9	44.6	-4.4	62.5	63.5	1	49.5	44.5	-5
10013458408	HOLLAND HOTEL LLANFACHRAETH HOLYHEAD LL	Residential	71.5	72.9	1.4	50.2	46.6	-3.6	66.5	67.8	1.4	45.8	42.3	-3.5	66.5	67.5	1	46.5	42.5	-4
10013458409	ROE BUCK LLANFACHRAETH HOLYHEAD LL65 4U	Residential	71.3	72.7	1.4	51.2	48.3	-2.9	66.3	67.6	1.4	46.8	44	-2.8	66.5	67.5	1	46.5	44.5	-2
10013458410	TY GWYN LLANFACHRAETH HOLYHEAD LL65 4UW	Residential	71	72.4	1.4	50	48.8	-1.2	66	67.4	1.4	45.6	44.5	-1.2	65.5	67.5	2	45.5	44.5	-1
10013458411	HEN EFAIL LLANFACHRAETH HOLYHEAD LL65 4	Residential	67	68.4	1.4	51.5	47.8	-3.7	62.1	63.5	1.4	47.1	43.5	-3.6	62.5	63.5	1	47.5	43.5	-4
10013458412	BERTH LLANFACHRAETH HOLYHEAD LL65 4UP	Residential	70.3	71.7	1.4	49.8	46.2	-3.6	65.3	66.7	1.4	45.4	41.9	-3.5	65.5	66.5	1	45.5	42.5	-3
10013458413	Y BWTHYN LLANFACHRAETH HOLYHEAD LL65 4U	Residential	71.3	72.7	1.4	50.2	45.2	-5	66.3	67.6	1.4	45.8	41	-4.9	66.5	67.5	1	46.5	41.5	-5
10013458414	ROSE PLACE LLANFACHRAETH HOLYHEAD LL65	Residential	60.7	62.1	1.4	50.4	45.9	-4.5	56	57.4	1.4	46	41.7	-4.4	56.5	57.5	1	46.5	41.5	-5

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013458423	ROSE PLACE LLANFACHRAETH HOLYHEAD LL65	Residential	71.8	73.2	1.4	51	46.8	-4.2	66.8	68.1	1.4	46.6	42.5	-4.1	66.5	67.5	1	46.5	42.5	-4
10013458424	ROSE PLACE LLANFACHRAETH HOLYHEAD LL65	Residential	72	73.4	1.4	50.9	46.4	-4.5	67	68.3	1.4	46.5	42.1	-4.4	66.5	68.5	2	46.5	42.5	-4
10013458425	ROSE PLACE LLANFACHRAETH HOLYHEAD LL65	Residential	72.1	73.5	1.4	53.2	48.1	-5.1	67.1	68.4	1.4	48.7	43.8	-4.9	66.5	68.5	2	48.5	44.5	-4
10013458426	ARDRO LLANFACHRAETH HOLYHEAD LL65 4UN	Residential	71.5	72.9	1.4	50.3	46.1	-4.2	66.5	67.8	1.4	45.9	41.8	-4.1	66.5	67.5	1	46.5	42.5	-4
10013458427	MONA TERRACE LLANFACHRAETH HOLYHEAD LL6	Residential	71.5	72.9	1.4	49	44.9	-4.1	66.5	67.8	1.4	44.7	40.7	-4	66.5	67.5	1	44.5	40.5	-4
10013458432	MONA TERRACE LLANFACHRAETH HOLYHEAD LL6	Residential	71.3	72.7	1.4	50	45.9	-4.1	66.3	67.6	1.4	45.6	41.7	-4	66.5	67.5	1	45.5	41.5	-4
10013458433	MONA TERRACE LLANFACHRAETH HOLYHEAD LL6	Residential	71.3	72.7	1.4	50.1	45.9	-4.2	66.3	67.6	1.4	45.7	41.7	-4.1	66.5	67.5	1	45.5	41.5	-4
10013458434	CEMLYNMONA TERRACE LLANFACHRAETH HOLYHE	Residential	71.6	73	1.4	50.8	46.3	-4.5	66.6	67.9	1.4	46.4	42	-4.4	66.5	67.5	1	46.5	42.5	-4
10013458435	GLAN ABER LLANFACHRAETH HOLYHEAD LL65 4	Residential	55.8	57.2	1.4	47.9	50.7	2.8	51.3	52.6	1.4	43.6	46.3	2.7	51.5	52.5	1	43.5	46.5	3
10013458436	LLOYDS BLINDSELIM STORES LLANFACHRAETH	Commercial	64.8	66.2	1.4	45.9	42.8	-3.1	60	61.3	1.4	41.7	38.6	-3	59.5	61.5	2	41.5	38.5	-3
10013458438	WYNNSTAY GROUPELIM STORES LLANFACHRAETH	Commercial	64.8	66.2	1.4	45.9	42.8	-3.1	60	61.3	1.4	41.7	38.6	-3	59.5	61.5	2	41.5	38.5	-3
10013458439	TEGFAN LLANFACHRAETH HOLYHEAD LL65 3DF	Residential	64.3	65.7	1.4	64.2	66	1.8	59.5	60.9	1.4	59.4	61.2	1.7	59.5	60.5	1	59.5	61.5	2
10013458440	TAN Y FYNWENT LLANFACHRAETH HOLYHEAD LL	Residential	57.7	59	1.3	57.4	59	1.6	53.1	54.4	1.3	52.8	54.4	1.6	53.5	54.5	1	52.5	54.5	2
10013458441	SHOP FARM LLANFACHRAETH HOLYHEAD LL65 3	Residential	51	52.3	1.3	51.2	52.8	1.6	46.6	47.9	1.3	46.8	48.3	1.6	46.5	48.5	2	46.5	48.5	2
10013458442	TYDDYN HIRION LLANFACHRAETH HOLYHEAD LL	Residential	48.8	50	1.2	47.8	49.2	1.4	44.5	45.6	1.2	43.5	44.9	1.4	44.5	45.5	1	43.5	45.5	2
10013458443	TYN Y FFYNNON LLANFACHRAETH HOLYHEAD LL	Residential	56.2	57.5	1.3	68.8	70.4	1.6	51.6	52.9	1.3	63.9	65.4	1.6	51.5	52.5	1	63.5	65.5	2
10013458444	ERW FAWR LLANFACHRAETH HOLYHEAD LL65 3H	Residential	49.8	51.1	1.3	42.6	40.6	-2	45.4	46.7	1.3	38.5	36.5	-1.9	45.5	46.5	1	38.5	36.5	-2
10013458445	ERW GOCH COTTAGE LLANFACHRAETH HOLYHEAD	Residential	59.3	60.6	1.3	54.1	53.6	-0.5	54.7	55.9	1.3	49.6	49.1	-0.5	54.5	55.5	1	49.5	49.5	0
10013458446	ERW GOCH LLANFACHRAETH HOLYHEAD LL65 3H	Residential	54.8	56.2	1.4	54.8	53.8	-1	50.3	51.6	1.4	50.3	49.3	-1	50.5	51.5	1	50.5	49.5	-1
10013458447	TY CAPEL LLANFACHRAETH HOLYHEAD LL65 4U	Residential	58.7	60.1	1.4	49.9	46.5	-3.4	54.1	55.4	1.4	45.5	42.2	-3.3	54.5	55.5	1	45.5	42.5	-3
10013458448	TYN GAMDDA LLANFACHRAETH HOLYHEAD LL65	Residential	71.8	73.2	1.4	53.2	50.7	-2.5	66.8	68.1	1.4	48.7	46.3	-2.4	66.5	67.5	1	48.5	46.5	-2
10013458449	AWEL Y RHYD HOLYHEAD LL65 4NL	Residential	49.9	51.3	1.4	52.5	49.4	-3.1	45.5	46.9	1.4	48.1	45	-3	45.5	47.5	2	48.5	45.5	-3
10013458453	SIOP SOAR HOLYHEAD LL65 4NL	Residential	51.7	53.1	1.4	52.9	49.3	-3.6	47.3	48.6	1.4	48.4	45	-3.5	47.5	48.5	1	48.5	45.5	-3

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013458454	TY CAPEL SOAR HOLYHEAD LL65 4NL	Residential	68.6	69.9	1.3	54.9	52.4	-2.5	63.7	64.9	1.3	50.4	48	-2.4	63.5	64.5	1	50.5	48.5	-2
10013458455	TYN LLECH HOLYHEAD LL65 4NL	Residential	71.6	72.9	1.3	61.2	60.1	-1.1	66.6	67.8	1.3	56.5	55.4	-1.1	66.5	67.5	1	56.5	55.5	-1
10013458456	MOUNTAIN VIEW HOLYHEAD LL65 4NL	Residential	70.1	71.4	1.3	64.4	66.5	2.1	65.1	66.4	1.3	59.6	61.6	2	64.5	66.5	2	59.5	61.5	2
10013458457	FADOG LWYD FARM HOLYHEAD LL65 4NL	Residential	45.8	47.2	1.4	47.5	49.2	1.7	41.6	42.9	1.4	43.2	44.9	1.6	41.5	43.5	2	43.5	45.5	2
10013458458	GRAENFA HOLYHEAD LL65 4NL	Residential	65.1	66.4	1.3	68	70	2	60.3	61.5	1.3	63.1	65	1.9	60.5	61.5	1	62.5	64.5	2
10013458459	PLAS NEWYDD HOLYHEAD LL65 4NL	Residential	54.1	55.4	1.3	52.1	54.1	2	49.6	50.9	1.3	47.7	49.6	1.9	49.5	50.5	1	47.5	49.5	2
10013458460	HILL CREST HOLYHEAD LL65 4NL	Residential	69	70.3	1.3	68.9	70.9	2	64.1	65.3	1.3	64	65.9	1.9	63.5	65.5	2	63.5	65.5	2
10013458461	BRYNTIRION ISAF HOLYHEAD LL65 4NL	Residential	73.6	74.9	1.3	63.4	65.4	2	68.5	69.8	1.3	58.6	60.6	1.9	68.5	69.5	1	58.5	60.5	2
10013458462	FRONALLTCOUNCIL HOUSES HOLYHEAD LL65 4	Residential	70.1	71.4	1.3	64.6	66.7	2.1	65.1	66.4	1.3	59.8	61.8	2	64.5	66.5	2	59.5	61.5	2
10013458464	FRONCOUNCIL HOUSES HOLYHEAD LL65 4NL	Residential	70.3	71.6	1.3	70.3	72.3	2	65.3	66.6	1.3	65.3	67.3	1.9	65.5	66.5	1	65.5	67.5	2
10013458465	BRON DERWYNCOUNCIL HOUSES HOLYHEAD LL6	Residential	70.5	71.8	1.3	70.4	72.5	2.1	65.5	66.8	1.3	65.4	67.5	2	65.5	66.5	1	65.5	67.5	2
10013458466	FRON HAULCOUNCIL HOUSES HOLYHEAD LL65	Residential	70.6	71.9	1.3	65.3	67.4	2.1	65.6	66.9	1.3	60.5	62.5	2	65.5	66.5	1	60.5	62.5	2
10013458467	TAN Y FELIN HOLYHEAD LL65 4UY	Residential	58.3	59.7	1.4	50.8	45.7	-5.1	53.7	55	1.4	46.4	41.5	-4.9	53.5	55.5	2	46.5	41.5	-5
10013458469	BODFARDDEN WEN HOLYHEAD LL65 4NH	Residential	47.9	49.3	1.4	53	55.1	2.1	43.6	45	1.4	48.5	50.6	2	43.5	45.5	2	48.5	50.5	2
10013458470	GORSEDD TERFYN HOLYHEAD LL65 4NH	Residential	48.3	49.7	1.4	49.2	51.2	2	44	45.3	1.4	44.9	46.8	1.9	44.5	45.5	1	45.5	46.5	1
10013458471	BOTAN FAWR HOLYHEAD LL65 4NH	Residential	49.3	50.6	1.3	49.3	51.3	2	45	46.2	1.3	45	46.9	1.9	45.5	46.5	1	45.5	47.5	2
10013458472	BYTHEICWS HOLYHEAD LL65 4NH	Residential	62.9	64.2	1.3	62.8	64.9	2.1	58.1	59.4	1.3	58	60.1	2	58.5	59.5	1	58.5	60.5	2
10013458473	TYDDYN WAEN HOLYHEAD LL65 4NH	Residential	46.7	48.1	1.4	43	45.1	2.1	42.4	43.8	1.4	38.8	40.9	2	42.5	44.5	2	39.5	41.5	2
10013458474	RHOS Y GAER HOLYHEAD LL65 4NH	Residential	53.2	54.6	1.4	48.3	50.4	2.1	48.7	50.1	1.4	44	46	2	48.5	50.5	2	44.5	46.5	2
10013458475	DRONWY HOLYHEAD LL65 4YB	Residential	46.1	47.6	1.5	46.1	48.6	2.5	41.8	43.3	1.5	41.8	44.3	2.4	42.5	43.5	1	42.5	44.5	2
10013458476	CARTREF HOLYHEAD LL65 4UY	Residential	60	61.3	1.3	57.1	52.2	-4.9	55.3	56.6	1.3	52.5	47.8	-4.8	55.5	56.5	1	52.5	47.5	-5
10013458477	TY NEWYDD HOLYHEAD LL65 4UY	Residential	71.1	72.3	1.2	49.8	44.5	-5.3	66.1	67.3	1.2	45.4	40.3	-5.1	65.5	67.5	2	45.5	40.5	-5
10013458478	PEN Y BONT HOLYHEAD LL65 4UY	Residential	66.6	67.8	1.2	51.8	48.5	-3.3	61.7	62.9	1.2	47.4	44.2	-3.2	61.5	62.5	1	47.5	44.5	-3
10013458483	PENRHOS NEWYDD HOLYHEAD LL65 4UY	Residential	55.7	56.9	1.2	45.9	48.6	2.7	51.2	52.3	1.2	41.7	44.3	2.6	51.5	52.5	1	41.5	44.5	3
10013458484	PANT GLAS HOLYHEAD LL65 4UY	Residential	64.8	66	1.2	50.9	48.1	-2.8	60	61.2	1.2	46.5	43.8	-2.7	59.5	61.5	2	46.5	44.5	-2
10013458485	THE RECTORY HOLYHEAD LL65 4YA	Residential	63.6	64.8	1.2	47.7	45.8	-1.9	58.8	60	1.2	43.4	41.6	-1.8	58.5	59.5	1	43.5	41.5	-2

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013458486	PEN Y GROES HOLYHEAD LL65 4NF	Residential	69.5	71	1.5	65.2	68.5	3.3	64.5	66	1.5	60.4	63.6	3.2	64.5	65.5	1	60.5	63.5	3
10013458487	THE WHITE HOUSE ANGLESEY LL68 0SW	Residential	68.5	70	1.5	57.6	54.6	-3	63.6	65	1.5	53	50.1	-2.9	63.5	64.5	1	53.5	50.5	-3
10013458488	RHANDIR ANGLESEY LL68 0SW	Residential	65.8	67.3	1.5	55.9	52	-3.9	61	62.4	1.5	51.4	47.6	-3.8	60.5	62.5	2	51.5	47.5	-4
10013458489	TAN Y COED ANGLESEY LL68 0SW	Residential	63.8	65.3	1.5	61.7	64.4	2.7	59	60.5	1.5	57	59.6	2.6	58.5	60.5	2	56.5	59.5	3
10013458490	GER YR AFON ANGLESEY LL68 0SW	Residential	57.7	59.2	1.5	53.6	56	2.4	53.1	54.6	1.5	49.1	51.5	2.3	53.5	54.5	1	49.5	51.5	2
10013458491	FELIN CEFN COCH ANGLESEY LL68 0UD	Residential	51.7	53.2	1.5	51.4	53.9	2.5	47.3	48.7	1.5	47	49.4	2.4	47.5	48.5	1	47.5	49.5	2
10013458492	TYN Y MYNYDD ANGLESEY LL68 0UE	Residential	53.5	55	1.5	53.4	56	2.6	49	50.5	1.5	48.9	51.5	2.5	49.5	50.5	1	49.5	51.5	2
10013458493	GROES ANGLESEY LL68 0UG	Residential	57.6	59.3	1.7	52.5	53.4	0.9	53	54.7	1.6	48.1	48.9	0.9	53.5	54.5	1	48.5	49.5	1
10013458494	GROES FECHAN ANGLESEY LL68 0UG	Residential	55.8	57.5	1.7	52.9	53.9	1	51.3	52.9	1.6	48.4	49.4	1	51.5	52.5	1	48.5	49.5	1
10013458495	TREGELE SERVICE STATION ANGLESEY LL67	Commercial	61.3	62.2	0.9	63.6	64.7	1.1	56.6	57.5	0.9	58.8	59.9	1.1	56.5	57.5	1	58.5	59.5	1
10013458496	TALDRWST ANGLESEY LL67 0DT	Residential	58.3	59.2	0.9	52.9	54	1.1	53.7	54.6	0.9	48.4	49.5	1.1	53.5	54.5	1	48.5	49.5	1
10013458498	DRAENEN WEN ANGLESEY LL67 0DT	Residential	60.3	61.2	0.9	63.2	64.3	1.1	55.6	56.5	0.9	58.4	59.5	1.1	55.5	56.5	1	58.5	59.5	1
10013458499	TYN FELIN LLANRHYDDLAD HOLYHEAD LL65 4B	Residential	66.9	68.4	1.5	60.2	61.5	1.3	62	63.5	1.5	55.5	56.8	1.3	61.5	63.5	2	55.5	56.5	1
10013458528	BOD HEDD LLANRHYDDLAD HOLYHEAD LL65 4BL	Residential	47.7	49.2	1.5	39.6	41	1.4	43.4	44.9	1.5	35.5	36.9	1.4	43.5	45.5	2	35.5	37.5	2
10013458529	BRITANNIA TERRACE VALLEY HOLYHEAD LL65	Residential	53.6	54	0.4	52.1	52.4	0.3	49.1	49.5	0.4	47.7	48	0.3	49.5	49.5	0	47.5	48.5	1
10013458617	4 BRYN LLWYD ESTATE LLANFAETHLU HOLYHEA	Residential	56	57.5	1.5	50.7	51	0.3	51.5	52.9	1.5	46.3	46.6	0.3	51.5	52.5	1	46.5	46.5	0
10013458687	FADOG LLANFAETHLU HOLYHEAD LL65 4NN	Residential	46.3	47.7	1.4	49.1	48.9	-0.2	42	43.4	1.4	44.8	44.6	-0.2	42.5	43.5	1	44.5	44.5	0
10013458802	CAER BRYNIAU LLANFAETHLU HOLYHEAD LL65	Residential	50.6	52.1	1.5	50.1	51.1	1	46.2	47.7	1.5	45.7	46.7	1	46.5	47.5	1	45.5	46.5	1
10013458803	TAN Y BRYN LLANFAETHLU HOLYHEAD LL65 4N	Residential	49.9	51.4	1.5	55	53.7	-1.3	45.5	47	1.5	50.5	49.2	-1.3	45.5	47.5	2	50.5	49.5	-1
10013458804	RHOS TY MAWR LLANFAETHLU HOLYHEAD LL65	Residential	56.7	58.2	1.5	57.4	60.9	3.5	52.1	53.6	1.5	52.8	56.2	3.4	52.5	53.5	1	52.5	56.5	4
10013458805	AEL Y BRYN LLANFAETHLU HOLYHEAD LL65 4N	Residential	57.9	59.5	1.6	59.6	62	2.4	53.3	54.8	1.6	54.9	57.3	2.3	53.5	54.5	1	54.5	57.5	3
10013458806	TYN Y BUARTH LLANFAETHLU HOLYHEAD LL65	Residential	65.8	67.4	1.6	65.8	69.1	3.3	61	62.5	1.6	61	64.2	3.2	60.5	62.5	2	60.5	64.5	4
10013458807	TYN YR ARDD LLANFAETHLU HOLYHEAD LL65 4	Residential	59.8	61.4	1.6	67.3	70.3	3	55.1	56.7	1.6	62.4	65.3	2.9	55.5	56.5	1	62.5	65.5	3
10013458808	HEN SIOP LLANFAETHLU HOLYHEAD LL65 4NW	Residential	53.8	55.3	1.5	49	51.5	2.5	49.3	50.8	1.5	44.7	47.1	2.4	49.5	50.5	1	44.5	47.5	3

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013458814	SNOWDON VIEW LLANFAETHLU HOLYHEAD LL65	Residential	49.6	51.2	1.6	62.2	64.4	2.2	45.2	46.8	1.6	57.5	59.6	2.1	45.5	46.5	1	57.5	59.5	2
10013458815	BRO DAWEL LLANFAETHLU HOLYHEAD LL65 4NW	Residential	60.6	62.2	1.6	60.6	62.9	2.3	55.9	57.5	1.6	55.9	58.1	2.2	55.5	57.5	2	55.5	58.5	3
10013458816	BOD HALEN LLANFAETHLU HOLYHEAD LL65 4NW	Residential	62.4	64	1.6	65.4	67.7	2.3	57.7	59.2	1.6	60.6	62.8	2.2	57.5	59.5	2	60.5	62.5	2
10013458817	HAFOD Y GRAIG LLANFAETHLU HOLYHEAD LL65	Residential	67.1	68.7	1.6	67.1	69.4	2.3	62.2	63.8	1.6	62.2	64.4	2.2	62.5	63.5	1	62.5	64.5	2
10013458818	BERTH LLANFAETHLU HOLYHEAD LL65 4NW	Residential	45.6	47.2	1.6	45.6	47.7	2.1	41.4	42.9	1.6	41.4	43.4	2	41.5	43.5	2	41.5	43.5	2
10013458819	MONA STORES COTTAGE HOLYHEAD LL65 4UY	Residential	70.8	72	1.2	49.9	45.2	-4.7	65.8	67	1.2	45.5	41	-4.6	65.5	66.5	1	45.5	41.5	-4
10013458842	ELIM STORES LLANFACHRAETH HOLYHEAD LL65	Commercial	64.8	66.2	1.4	45.9	42.8	-3.1	60	61.3	1.4	41.7	38.6	-3	59.5	61.5	2	41.5	38.5	-3
10013458844	MONA COTTAGE LLANFACHRAETH HOLYHEAD LL6	Residential	49.8	51.2	1.4	49.8	46.2	-3.6	45.4	46.8	1.4	45.4	41.9	-3.5	45.5	46.5	1	45.5	42.5	-3
10013458846	MONA COTTAGE LLANFACHRAETH HOLYHEAD LL6	Residential	59.5	60.9	1.4	49.2	46.4	-2.8	54.8	56.2	1.4	44.9	42.1	-2.7	54.5	56.5	2	45.5	42.5	-3
10013458848	CEFN AMLWG LLANYNGHENEDL HOLYHEAD LL65	Residential	69.3	69.4	0.1	69.3	69.5	0.2	64.4	64.4	0.1	64.4	64.5	0.2	64.5	64.5	0	64.5	64.5	0
10013459658	BRYN COLYN LLANYNGHENEDL HOLYHEAD LL65	Residential	59.8	59.9	0.1	53	53.3	0.3	55.1	55.2	0.1	48.5	48.8	0.3	55.5	55.5	0	48.5	48.5	0
10013459659	1 ARVONIA HOUSEGREENFIELD TERRACEGREENF	Residential	48.8	48.9	0.1	48.8	49.1	0.3	44.5	44.6	0.1	44.5	44.8	0.3	44.5	44.5	0	44.5	44.5	0
10013460554	5 GREENFIELD TERRACEGREENFIELD TERRACE	Commercial	49.4	49.5	0.1	42.3	42.6	0.3	45	45.1	0.1	38.2	38.5	0.3	45.5	45.5	0	38.5	38.5	0
10013460555	4 GREENFIELD TERRACEGREENFIELD TERRACE	Residential	53	53.1	0.1	53.3	53.5	0.2	48.5	48.6	0.1	48.8	49	0.2	48.5	48.5	0	48.5	49.5	1
10013460556	2 GREENFIELD TERRACEGREENFIELD TERRACE	Residential	51.1	51.2	0.1	45	45.3	0.3	46.7	46.8	0.1	40.8	41.1	0.3	46.5	46.5	0	41.5	41.5	0
10013460557	3 GREENFIELD TERRACEGREENFIELD TERRACE	Residential	52.9	53	0.1	52.9	53.1	0.2	48.4	48.5	0.1	48.4	48.6	0.2	48.5	48.5	0	48.5	48.5	0
10013460558	15 GREENFIELD TERRACEGREENFIELD TERRACE	Residential	47.9	48	0.1	45.7	46	0.3	43.6	43.7	0.1	41.5	41.8	0.3	43.5	43.5	0	41.5	42.5	1
10013460559	16 GREENFIELD TERRACEGREENFIELD TERRACE	Residential	45.7	45.8	0.1	45.7	46	0.3	41.5	41.6	0.1	41.5	41.8	0.3	41.5	41.5	0	41.5	42.5	1
10013460560	17 BRYNGLASGREENFIELD TERRACEGREENFIELD	Residential	45.9	46	0.1	45.9	46.1	0.2	41.7	41.8	0.1	41.7	41.8	0.2	41.5	42.5	1	41.5	42.5	1
10013460561	18 GRISEDALEGREENFIELD TERRACEGREENFIEL	Residential	45.9	46	0.1	45.9	46.2	0.3	41.7	41.8	0.1	41.7	41.9	0.3	41.5	42.5	1	41.5	42.5	1
10013460562	19 LLYS Y BUGAILGREENFIELD TERRACEGREEN	Residential	46.1	46.2	0.1	54.5	54.7	0.2	41.8	41.9	0.1	50	50.2	0.2	42.5	42.5	0	50.5	50.5	0
10013460563	26 GREENFIELD TERRACEGREENFIELD TERRACE	Residential	55.6	55.7	0.1	54	54.2	0.2	51.1	51.2	0.1	49.5	49.7	0.2	51.5	51.5	0	49.5	49.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013460564	25 HEULOG FAINGREENFIELD TERRACEGREENFI	Residential	46	46.1	0.1	54	54.2	0.2	41.8	41.8	0.1	49.5	49.7	0.2	42.5	42.5	0	49.5	49.5	0
10013460565	24 BODHYFRYDGREENFIELD TERRACEGREENFIEL	Residential	49.9	50	0.1	52.5	52.7	0.2	45.5	45.6	0.1	48.1	48.2	0.2	45.5	45.5	0	48.5	48.5	0
10013460566	23 SUES CHIPPYGREENFIELD TERRACEGREENFI	Commercial	54	54.1	0.1	41.7	42	0.3	49.5	49.6	0.1	37.6	37.9	0.3	49.5	49.5	0	37.5	38.5	1
10013460567	22 HILLOCKGREENFIELD TERRACEGREENFIELD	Residential	49.4	49.5	0.1	53.8	54	0.2	45	45.1	0.1	49.3	49.5	0.2	45.5	45.5	0	49.5	49.5	0
10013460568	20 TOLLGATE HOUSEGREENFIELD TERRACEGREE	Residential	53.1	53.2	0.1	46.3	46.6	0.3	48.6	48.7	0.1	42	42.3	0.3	48.5	48.5	0	42.5	42.5	0
10013460570	7 GREENFIELD TERRACEGREENFIELD TERRACE	Residential	49	49.1	0.1	49	49.2	0.2	44.7	44.8	0.1	44.7	44.9	0.2	44.5	44.5	0	44.5	45.5	1
10013460578	6 GREENFIELD TERRACEGREENFIELD TERRACE	Residential	48	48.1	0.1	48.7	49	0.3	43.7	43.8	0.1	44.4	44.7	0.3	43.5	44.5	1	44.5	44.5	0
10013460579	1 CAPEL ULOCAPEL ULO HOLYHEAD LL65 2SR	Residential	43.8	44	0.2	47.6	48	0.4	39.6	39.8	0.2	43.3	43.7	0.4	39.5	40.5	1	43.5	43.5	0
10013460582	CAPEL ULO HOLYHEAD LL65 2SR	Residential	48	48.2	0.2	48	48.4	0.4	43.7	43.9	0.2	43.7	44.1	0.4	43.5	44.5	1	43.5	44.5	1
10013460583	4 CAPEL ULOCAPEL ULO HOLYHEAD LL65 2SR	Residential	48.8	49	0.2	48.8	49.2	0.4	44.5	44.7	0.2	44.5	44.9	0.4	44.5	44.5	0	44.5	45.5	1
10013460584	1 EBENEZER VILLASEBENEZER VILLAS HOLYH	Residential	48.1	48.3	0.2	48.1	48.5	0.4	43.8	44	0.2	43.8	44.2	0.4	44.5	44.5	0	44.5	44.5	0
10013460586	2 EBENEZER VILLASEBENEZER VILLAS HOLYH	Residential	48.3	48.5	0.2	48.3	48.7	0.4	44	44.2	0.2	44	44.4	0.4	44.5	44.5	0	44.5	44.5	0
10013460587	1 WYLFABOSTON TERRACEBOSTON TERRACE HO	Residential	48.3	48.5	0.2	48.3	48.7	0.4	44	44.2	0.2	44	44.4	0.4	44.5	44.5	0	44.5	44.5	0
10013460589	4 BOSTON TERRACEBOSTON TERRACE HOLYHEA	Residential	48.3	48.5	0.2	48.3	48.7	0.4	44	44.2	0.2	44	44.4	0.4	44.5	44.5	0	44.5	44.5	0
10013460590	5 BOSTON TERRACEBOSTON TERRACE HOLYHEA	Residential	45.3	45.5	0.2	48.6	49	0.4	41.1	41.3	0.2	44.3	44.7	0.4	41.5	41.5	0	44.5	44.5	0
10013460591	6 BOSTON TERRACEBOSTON TERRACE HOLYHEA	Residential	48.5	48.7	0.2	48.5	48.9	0.4	44.2	44.4	0.2	44.2	44.6	0.4	44.5	44.5	0	44.5	44.5	0
10013460592	PEN Y CEFN CEMAES BAY LL67 0DA	Residential	61.3	62	0.7	61.3	62.1	0.8	56.6	57.3	0.7	56.6	57.4	0.8	56.5	57.5	1	56.5	57.5	1
10013460802	TIR A MOR UCHAF CEMAES BAY LL67 0DA	Residential	56.5	57.2	0.7	56.8	57.6	0.8	51.9	52.6	0.7	52.2	53	0.8	52.5	52.5	0	52.5	53.5	1
10013460806	BRYN Y GOF CEMAES BAY LL67 0DA	Residential	55.4	56.1	0.7	51.3	52.2	0.9	50.9	51.5	0.7	46.9	47.8	0.9	50.5	51.5	1	47.5	47.5	0
10013460807	PENTREGOF CEMAES BAY LL67 0DA	Residential	50.3	51	0.7	51.4	52.2	0.8	45.9	46.6	0.7	47	47.8	0.8	46.5	46.5	0	47.5	47.5	0
10013460809	TONNIAU GWYNION CEMAES BAY LL67 0DA	Residential	58.1	58.8	0.7	57.4	58.2	0.8	53.5	54.2	0.7	52.8	53.6	0.8	53.5	54.5	1	52.5	53.5	1
10013460810	DOLWEN CEMAES BAY LL67 0DA	Residential	48.1	48.9	0.8	64.1	64.9	0.8	43.8	44.6	0.8	59.3	60.1	0.8	44.5	44.5	0	59.5	60.5	1
10013460811	RHANDIR MWYN CEMAES BAY LL67 0DA	Residential	48.9	49.6	0.7	63.7	64.5	0.8	44.6	45.2	0.7	58.9	59.7	0.8	44.5	45.5	1	58.5	59.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013460812	PEN Y GRAIG CEMAES BAY LL67 0DA	Residential	48.5	49.2	0.7	60.9	61.7	0.8	44.2	44.9	0.7	56.2	57	0.8	44.5	45.5	1	56.5	56.5	0
10013460813	BRYNIAU CEMAES BAY LL67 0DA	Residential	48.4	49.1	0.7	58.8	59.6	0.8	44.1	44.8	0.7	54.2	54.9	0.8	44.5	44.5	0	54.5	54.5	0
10013460814	GWYDDELYN FAWR CEMAES BAY LL67 0DA	Residential	46.3	47.1	0.8	47.9	48.7	0.8	42	42.8	0.8	43.6	44.4	0.8	42.5	43.5	1	43.5	44.5	1
10013460815	GWYDDELYN FACH CEMAES BAY LL67 0DA	Residential	44.9	45.7	0.8	44	45	1	40.7	41.5	0.8	39.8	40.8	1	40.5	41.5	1	40.5	41.5	1
10013460816	LLETY CEMAES BAY LL67 0DA	Residential	45.3	46.1	0.8	45.3	46.3	1	41.1	41.8	0.8	41.1	42	1	41.5	42.5	1	41.5	42.5	1
10013460817	NANT Y GOF CEMAES BAY LL67 0DA	Residential	55	55.7	0.7	58.8	59.6	0.8	50.5	51.2	0.7	54.2	54.9	0.8	50.5	51.5	1	54.5	54.5	0
10013460818	MON MANAW CEMAES BAY LL67 0DA	Residential	49.1	49.9	0.8	59.8	60.6	0.8	44.8	45.5	0.8	55.1	55.9	0.8	44.5	45.5	1	55.5	55.5	0
10013460819	MORLAIS CEMAES BAY LL67 0DA	Residential	50.8	51.7	0.9	62.8	63.6	0.8	46.4	47.3	0.9	58	58.8	0.8	46.5	47.5	1	58.5	58.5	0
10013460820	14 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	53.6	53.9	0.3	54.3	54.6	0.3	49.1	49.4	0.3	49.8	50.1	0.3	49.5	49.5	0	49.5	50.5	1
10013460965	15 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	54.9	55.2	0.3	55	55.2	0.2	50.4	50.7	0.3	50.5	50.7	0.2	50.5	50.5	0	50.5	50.5	0
10013460966	16 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	54.4	54.7	0.3	53.4	53.7	0.3	49.9	50.2	0.3	48.9	49.2	0.3	50.5	50.5	0	49.5	49.5	0
10013460967	17 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	53.6	53.9	0.3	53.8	54.1	0.3	49.1	49.4	0.3	49.3	49.6	0.3	49.5	49.5	0	49.5	49.5	0
10013460968	22 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	54.7	55	0.3	55.2	55.4	0.2	50.2	50.5	0.3	50.7	50.9	0.2	50.5	50.5	0	50.5	50.5	0
10013460969	23 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	54.5	54.9	0.4	53.8	54	0.2	50	50.4	0.4	49.3	49.5	0.2	50.5	50.5	0	49.5	49.5	0
10013460970	24 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	53.4	53.8	0.4	54.4	54.6	0.2	48.9	49.3	0.4	49.9	50.1	0.2	49.5	49.5	0	50.5	50.5	0
10013460971	25 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	54.8	55.1	0.3	54	54.2	0.2	50.3	50.6	0.3	49.5	49.7	0.2	50.5	50.5	0	49.5	49.5	0
10013460972	32 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	53.3	53.4	0.1	53.3	53.5	0.2	48.8	48.9	0.1	48.8	49	0.2	48.5	49.5	1	48.5	49.5	1
10013460973	1 HENDDU TERRACEHENDDU TERRACE HOLYHEA	Residential	45	45.1	0.1	41.7	42	0.3	40.8	40.9	0.1	37.6	37.9	0.3	41.5	41.5	0	37.5	38.5	1
10013461120	2 HENDDU TERRACEHENDDU TERRACE HOLYHEA	Residential	43.3	43.4	0.1	41.6	41.9	0.3	39.1	39.2	0.1	37.5	37.8	0.3	39.5	39.5	0	37.5	38.5	1
10013461121	3 HENDDU TERRACEHENDDU TERRACE HOLYHEA	Residential	43.3	43.4	0.1	43.3	43.6	0.3	39.1	39.2	0.1	39.1	39.4	0.3	39.5	39.5	0	39.5	39.5	0
10013461122	4 HENDDU TERRACEHENDDU TERRACE HOLYHEA	Residential	43	43.1	0.1	42.4	42.7	0.3	38.8	38.9	0.1	38.3	38.5	0.3	39.5	39.5	0	38.5	38.5	0
10013461123	5 HENDDU TERRACEHENDDU TERRACE HOLYHEA	Residential	43	43.1	0.1	41.3	41.6	0.3	38.8	38.9	0.1	37.2	37.5	0.3	39.5	39.5	0	37.5	37.5	0
10013461124	6 HENDDU TERRACEHENDDU TERRACE HOLYHEA	Residential	42	42.1	0.1	42	42.3	0.3	37.9	38	0.1	37.9	38.2	0.3	38.5	38.5	0	38.5	38.5	0
10013461125	7 HENDDU COTTAGEHENDDU TERRACEHENDDU TE	Residential	42	42.1	0.1	41.8	42.1	0.3	37.9	38	0.1	37.7	38	0.3	38.5	38.5	0	38.5	38.5	0

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			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013461126	8 Y BWTHYNHENDDU TERRACEHENDDU TERRACE	Residential	41.1	41.1	0	41.1	41.3	0.2	37	37	0	37	37.2	0.2	37.5	37.5	0	37.5	37.5	0
10013461127	14 NANT Y FELIN HOLYHEAD LL65 2TQ	Residential	41.9	42.1	0.2	41.8	42.2	0.4	37.8	38	0.2	37.7	38.1	0.4	38.5	38.5	0	38.5	38.5	0
10013461184	GLAN MORFA VALLEY HOLYHEAD LL65 3BT	Residential	44.8	45.6	0.8	50.1	51.2	1.1	40.6	41.4	0.8	45.7	46.8	1.1	40.5	41.5	1	45.5	46.5	1
10013461461	HAFOD UNOS VALLEY HOLYHEAD LL65 3BT	Residential	48.1	48.9	0.8	50	51.2	1.2	43.8	44.6	0.8	45.6	46.8	1.2	44.5	44.5	0	45.5	46.5	1
10013461462	BRYN TEG VALLEY HOLYHEAD LL65 3BT	Residential	47.5	48.4	0.9	46.7	47.7	1	43.2	44.1	0.9	42.4	43.4	1	43.5	44.5	1	42.5	43.5	1
10013461465	RALLT FARM VALLEY HOLYHEAD LL65 3BT	Residential	44.5	45.5	1	48	49.1	1.1	40.3	41.3	1	43.7	44.8	1.1	40.5	41.5	1	43.5	44.5	1
10013461466	ERW UCHAF VALLEY HOLYHEAD LL65 3BT	Residential	53.4	54.5	1.1	51.3	52.9	1.6	48.9	50	1.1	46.9	48.4	1.6	49.5	50.5	1	47.5	48.5	1
10013461467	TY NEWYDD VALLEY HOLYHEAD LL65 3BT	Residential	49.9	51	1.1	49.9	51.4	1.5	45.5	46.6	1.1	45.5	47	1.5	45.5	46.5	1	45.5	47.5	2
10013461468	TY MAWR VALLEY HOLYHEAD LL65 3DA	Residential	53.3	54.5	1.2	53.3	55	1.7	48.8	50	1.2	48.8	50.5	1.6	48.5	50.5	2	48.5	50.5	2
10013461469	TAWELFAN VALLEY HOLYHEAD LL65 3DA	Residential	52.8	53.9	1.1	49.5	51.1	1.6	48.3	49.4	1.1	45.1	46.7	1.6	48.5	49.5	1	45.5	46.5	1
10013461470	GWAELOD MAWR CAERGEILIOG HOLYHEAD LL65	Residential	59.4	59.7	0.3	59.5	60	0.5	54.7	55	0.3	54.8	55.3	0.5	54.5	55.5	1	54.5	55.5	1
10013461566	HEULFRE CAERGEILIOG HOLYHEAD LL65 3YL	Residential	70.1	70.4	0.3	72	72.5	0.5	65.1	65.4	0.3	67	67.5	0.5	64.5	65.5	1	66.5	67.5	1
10013461567	Y BWTHYN CAERGEILIOG HOLYHEAD LL65 3YL	Residential	62	62.4	0.4	65.2	65.7	0.5	57.3	57.7	0.4	60.4	60.9	0.5	57.5	57.5	0	60.5	60.5	0
10013461568	GWAELOD BACH CAERGEILIOG HOLYHEAD LL65	Residential	64	64.2	0.2	61.3	61.6	0.3	59.2	59.4	0.2	56.6	56.9	0.3	59.5	59.5	0	56.5	56.5	0
10013461569	CERRIG BABAN HOLYHEAD ROAD LL65 3YL	Residential	59.3	59.7	0.4	59.3	59.8	0.5	54.7	55	0.4	54.7	55.1	0.5	54.5	55.5	1	54.5	55.5	1
10013461570	HAFAN DEG CAERGEILIOG HOLYHEAD LL65 3YD	Residential	56.5	56.8	0.3	54.1	54.6	0.5	51.9	52.2	0.3	49.6	50.1	0.5	52.5	52.5	0	49.5	50.5	1
10013461607	COEDLYS CAERGEILIOG HOLYHEAD LL65 3YD	Residential	54.5	54.9	0.4	55.2	55.7	0.5	50	50.4	0.4	50.7	51.2	0.5	50.5	50.5	0	50.5	51.5	1
10013461608	FRON DEG CAERGEILIOG HOLYHEAD LL65 3YD	Residential	55.3	55.7	0.4	55.4	55.9	0.5	50.8	51.2	0.4	50.9	51.4	0.5	50.5	51.5	1	50.5	51.5	1
10013461610	TWROG HOUSE CAERGEILIOG HOLYHEAD LL65 3	Residential	51.5	51.7	0.2	51.5	51.9	0.4	47.1	47.3	0.2	47.1	47.5	0.4	47.5	47.5	0	47.5	47.5	0
10013461611	PENRHYN COTTAGE CAERGEILIOG HOLYHEAD LL	Residential	50.8	51.1	0.3	50.8	51.2	0.4	46.4	46.7	0.3	46.4	46.8	0.4	46.5	46.5	0	46.5	46.5	0
10013461612	TYN FFYNNON CAERGEILIOG HOLYHEAD LL65 3	Residential	50.8	51.1	0.3	50.8	51.2	0.4	46.4	46.7	0.3	46.4	46.8	0.4	46.5	46.5	0	46.5	46.5	0
10013461613	SPORTSMANS INN CAERGEILIOG HOLYHEAD LL6	Commercial	53.4	53.7	0.3	53.4	53.9	0.5	48.9	49.2	0.3	48.9	49.4	0.5	49.5	49.5	0	49.5	49.5	0
10013461615	RHIANFA ANNEXE CAERGEILIOG HOLYHEAD LL6	Residential	52.9	53.2	0.3	55.1	55.6	0.5	48.4	48.7	0.3	50.6	51.1	0.5	48.5	48.5	0	50.5	51.5	1
10013461617	LEES GARDENRHIANFA ANNEXE CAERGEILIOG H	Commercial	54.3	54.6	0.3	54	54.5	0.5	49.8	50.1	0.3	49.5	50	0.5	49.5	50.5	1	49.5	50.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013461618	GORDON OWEN LTDRHIANFA ANNEXE CAERGEILI	Commercial	54.3	54.6	0.3	54	54.5	0.5	49.8	50.1	0.3	49.5	50	0.5	49.5	50.5	1	49.5	50.5	1
10013461619	CROESO CAERGEILIOG HOLYHEAD LL65 3YD	Residential	54.9	55.2	0.3	54.9	55.4	0.5	50.4	50.7	0.3	50.4	50.9	0.5	50.5	50.5	0	50.5	50.5	0
10013461620	YSGOLDY CAERGEILIOG HOLYHEAD LL65 3YD	Residential	55.6	55.9	0.3	55.6	56	0.4	51.1	51.4	0.3	51.1	51.5	0.4	51.5	51.5	0	51.5	51.5	0
10013461621	TANYFRON CAERGEILIOG HOLYHEAD LL65 3YA	Residential	54.3	54.6	0.3	54.3	54.7	0.4	49.8	50.1	0.3	49.8	50.2	0.4	49.5	50.5	1	49.5	50.5	1
10013461622	THE POPLARS CAERGEILIOG HOLYHEAD LL65 3	Residential	51.4	51.6	0.2	51.4	51.7	0.3	47	47.2	0.2	47	47.3	0.3	47.5	47.5	0	47.5	47.5	0
10013461623	RHOSGAER CAERGEILIOG HOLYHEAD LL65 3YD	Residential	50.3	50.5	0.2	50.6	51	0.4	45.9	46.1	0.2	46.2	46.6	0.4	46.5	46.5	0	46.5	46.5	0
10013461624	DERWYN CAERGEILIOG HOLYHEAD LL65 3YD	Residential	55	55.2	0.2	53.9	54.2	0.3	50.5	50.7	0.2	49.4	49.7	0.3	50.5	50.5	0	49.5	49.5	0
10013461625	LA CASATHE POPLARS CAERGEILIOG HOLYHEAD	Residential	52.8	53	0.2	52.8	53.1	0.3	48.3	48.5	0.2	48.3	48.6	0.3	48.5	48.5	0	48.5	48.5	0
10013461626	EDELWEISSTHE POPLARS CAERGEILIOG HOLYHE	Residential	51.1	51.4	0.3	51.1	51.5	0.4	46.7	47	0.3	46.7	47.1	0.4	46.5	47.5	1	46.5	47.5	1
10013461627	KOH I NOORTHE POPLARS CAERGEILIOG HOLYH	Residential	51.2	51.4	0.2	56.3	56.6	0.3	46.8	47	0.2	51.7	52	0.3	46.5	47.5	1	51.5	52.5	1
10013461628	FRON GAER CAERGEILIOG HOLYHEAD LL65 3YD	Residential	51.8	52	0.2	50.9	51.3	0.4	47.4	47.6	0.2	46.5	46.9	0.4	47.5	47.5	0	46.5	47.5	1
10013461629	TOLLGATE CAERGEILIOG HOLYHEAD LL65 3HW	Residential	57.5	57.7	0.2	57.5	57.8	0.3	52.9	53.1	0.2	52.9	53.2	0.3	52.5	53.5	1	52.5	53.5	1
10013461630	PENDREF CAERGEILIOG HOLYHEAD LL65 3HW	Residential	51.3	51.6	0.3	51.3	51.7	0.4	46.9	47.2	0.3	46.9	47.3	0.4	47.5	47.5	0	47.5	47.5	0
10013461632	PENDREF CAERGEILIOG HOLYHEAD LL65 3HW	Residential	51.8	52.1	0.3	51.8	52.2	0.4	47.4	47.7	0.3	47.4	47.8	0.4	47.5	47.5	0	47.5	47.5	0
10013461633	TREIFAN CAERGEILIOG HOLYHEAD LL65 3HP	Residential	58.9	59.2	0.3	58.8	59.2	0.4	54.3	54.6	0.3	54.2	54.6	0.4	54.5	54.5	0	54.5	54.5	0
10013461634	CRAIG EITHEN CAERGEILIOG HOLYHEAD LL65	Residential	62.3	62.7	0.4	62.5	63	0.5	57.6	57.9	0.4	57.8	58.2	0.5	57.5	57.5	0	57.5	58.5	1
10013461635	OR DIWEDD CAERGEILIOG HOLYHEAD LL65 3HR	Residential	63.9	64.3	0.4	63.9	64.4	0.5	59.1	59.5	0.4	59.1	59.6	0.5	59.5	59.5	0	59.5	59.5	0
10013461636	PRESWYLFA CAERGEILIOG HOLYHEAD LL65 3HR	Residential	62.8	63.2	0.4	62.8	63.3	0.5	58	58.4	0.4	58	58.5	0.5	58.5	58.5	0	58.5	58.5	0
10013461637	BOD HEDD CAERGEILIOG HOLYHEAD LL65 3HR	Residential	70.6	71.1	0.5	70.7	71.2	0.5	65.6	66.1	0.5	65.7	66.2	0.5	65.5	65.5	0	65.5	66.5	1
10013461638	TY MAWR CAERGEILIOG HOLYHEAD LL65 3HH	Residential	54.5	54.9	0.4	55.7	56.1	0.4	50	50.4	0.4	51.2	51.5	0.4	50.5	50.5	0	51.5	51.5	0
10013461639	POLICE STATION VALLEY HOLYHEAD LL65 3AD	Office	60.4	60.5	0.1	58.9	59.1	0.2	55.7	55.8	0.1	54.3	54.5	0.2	55.5	55.5	0	54.5	54.5	0
10013461645	HOLYHEAD KITCHEN AND BATHROOM CENTRE VA	Commercial	59.9	61.3	1.4	61.3	61.4	0.1	55.2	56.6	1.4	56.6	56.7	0.1	55.5	56.5	1	56.5	56.5	0
10013461646	1 CLIFTON COTTAGELONDON ROADLONDON ROAD	Residential	53.9	54.1	0.2	54	54.1	0.1	49.4	49.6	0.2	49.5	49.6	0.1	49.5	49.5	0	49.5	49.5	0
10013461648	2 LONDON ROADLONDON ROAD VALLEY HOLYHEA	Residential	72.5	72.5	0	62.8	62.9	0.1	67.5	67.5	0	58	58.1	0.1	67.5	67.5	0	58.5	58.5	0
10013461649	MAESTEGBOSTON TERRACELONDON ROAD VALLEY	Residential	54.9	55.2	0.3	54.9	55.1	0.2	50.4	50.7	0.3	50.4	50.6	0.2	50.5	50.5	0	50.5	50.5	0

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			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013461650	BRYN GOLEU BRYNGWRAN HOLYHEAD LL65 3PA	Residential	63.5	64	0.5	63.5	64	0.5	58.7	59.2	0.5	58.7	59.2	0.5	58.5	59.5	1	58.5	59.5	1
10013461720	GERLLAN BODEDERN HOLYHEAD LL65 3SS	Residential	56.8	57	0.2	69.6	69.9	0.3	52.2	52.4	0.2	64.6	64.9	0.3	52.5	52.5	0	64.5	64.5	0
10013461813	CEFN RHOSYDD BODEDERN HOLYHEAD LL65 3SS	Residential	54.1	54.4	0.3	54.1	54.5	0.4	49.6	49.9	0.3	49.6	50	0.4	49.5	50.5	1	49.5	50.5	1
10013461814	CEFN RHOSYDD BODEDERN HOLYHEAD LL65 3SS	Residential	54.8	55	0.2	61.8	62.1	0.3	50.3	50.5	0.2	57.1	57.4	0.3	50.5	50.5	0	57.5	57.5	0
10013461815	CEFN RHOSYDD BODEDERN HOLYHEAD LL65 3SS	Residential	68.8	68.9	0.1	66.2	66.5	0.3	63.9	64	0.1	61.3	61.6	0.3	63.5	63.5	0	61.5	61.5	0
10013461816	BOD OWEN LLANRHYDDLAD HOLYHEAD LL65 4HH	Residential	59.1	60.9	1.8	59.4	62	2.6	54.5	56.2	1.7	54.7	57.3	2.5	54.5	56.5	2	54.5	57.5	3
10013461958	PEN Y CAE LLANRHYDDLAD HOLYHEAD LL65 4H	Residential	69.6	71.4	1.8	67	69.7	2.7	64.6	66.4	1.7	62.1	64.7	2.6	64.5	66.5	2	62.5	64.5	2
10013461959	POWYS LLANRHYDDLAD HOLYHEAD LL65 4HH	Residential	64.6	66.4	1.8	61.8	64.4	2.6	59.8	61.5	1.7	57.1	59.6	2.5	59.5	61.5	2	57.5	59.5	2
10013461960	TYN CAE LLANRHYDDLAD HOLYHEAD LL65 4HH	Residential	69.4	71.2	1.8	64.7	67.4	2.7	64.4	66.2	1.7	59.9	62.5	2.6	64.5	66.5	2	59.5	62.5	3
10013461961	BODWYN BELLAF LLANRHYDDLAD HOLYHEAD LL6	Residential	47.5	49.1	1.6	43	45.4	2.4	43.2	44.8	1.6	38.8	41.2	2.3	43.5	44.5	1	39.5	41.5	2
10013461962	BODWYN FAWR LLANRHYDDLAD HOLYHEAD LL65	Residential	49.6	51.2	1.6	45.8	48.2	2.4	45.2	46.8	1.6	41.6	43.9	2.3	45.5	46.5	1	41.5	44.5	3
10013461963	CNYCYN LLANRHYDDLAD HOLYHEAD LL65 4HL	Residential	39.9	41.5	1.6	39.9	42.1	2.2	35.8	37.4	1.6	35.8	38	2.1	36.5	37.5	1	36.5	38.5	2
10013461964	TY NEWYDD LLANRHYDDLAD HOLYHEAD LL65 4H	Residential	65.6	67.2	1.6	69.4	71.9	2.5	60.8	62.3	1.6	64.4	66.9	2.4	60.5	62.5	2	64.5	66.5	2
10013461965	BRYN AWEL LLANRHYDDLAD HOLYHEAD LL65 4H	Residential	66.6	68.2	1.6	66.6	69	2.4	61.7	63.3	1.6	61.7	64.1	2.3	61.5	63.5	2	61.5	63.5	2
10013461966	PRIMROSE GARAGE LLANRHYDDLAD HOLYHEAD L	Commercial	63.4	65	1.6	66.8	69.3	2.5	58.6	60.2	1.6	61.9	64.4	2.4	58.5	60.5	2	61.5	64.5	3
10013461967	ABERPWLL LLANRHYDDLAD HOLYHEAD LL65 4HL	Residential	46.9	48.5	1.6	46.3	48.7	2.4	42.6	44.2	1.6	42	44.4	2.3	42.5	44.5	2	42.5	44.5	2
10013461968	TYDDYN WAEN LLANRHYDDLAD HOLYHEAD LL65	Residential	61.8	63.4	1.6	61.7	64.2	2.5	57.1	58.6	1.6	57	59.4	2.4	57.5	58.5	1	56.5	59.5	3
10013461969	PEDAIR LLANRHYDDLAD HOLYHEAD LL65 4HP	Residential	66.3	67.9	1.6	64.3	66.8	2.5	61.4	63	1.6	59.5	61.9	2.4	61.5	62.5	1	59.5	61.5	2
10013461970	TY MAWR LLANRHYDDLAD HOLYHEAD LL65 4HL	Residential	66.3	67.9	1.6	66.4	68.9	2.5	61.4	63	1.6	61.5	64	2.4	61.5	62.5	1	61.5	63.5	2
10013461971	READE HOUSE LLANFACHRAETH HOLYHEAD LL65	Residential	71	72.4	1.4	49.7	48.8	-0.9	66	67.4	1.4	45.3	44.5	-0.9	65.5	67.5	2	45.5	44.5	-1
10013461983	LLANFACHRAETH POST OFFICE LLANFACHRAETH	Commercial	71.3	72.7	1.4	46.6	47.5	0.9	66.3	67.6	1.4	42.3	43.2	0.9	66.5	67.5	1	42.5	43.5	1
10013461984	THE FLATLLANFACHRAETH POST OFFICE LLANF	Residential	71	72.4	1.4	49.7	48.8	-0.9	66	67.4	1.4	45.3	44.5	-0.9	65.5	67.5	2	45.5	44.5	-1
10013461985	RHOS ALAW LLANFACHRAETH HOLYHEAD LL65 4	Residential	54.3	55.7	1.4	49.8	49.3	-0.5	49.8	51.2	1.4	45.4	45	-0.5	49.5	51.5	2	45.5	45.5	0

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			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013461986	CRAIG ANNEDD LLANFACHRAETH HOLYHEAD LL6	Residential	53.8	55.2	1.4	48.7	50.4	1.7	49.3	50.7	1.4	44.4	46	1.6	49.5	50.5	1	44.5	46.5	2
10013461987	AROSFA LLANFACHRAETH HOLYHEAD LL65 4UL	Residential	49.8	51.1	1.3	46.2	49.5	3.3	45.4	46.7	1.3	41.9	45.1	3.2	45.5	46.5	1	42.5	45.5	3
10013461988	BEDO LLANFACHRAETH HOLYHEAD LL65 4DH	Residential	49.1	50.4	1.3	42.6	49.3	6.7	44.8	46	1.3	38.5	45	6.5	44.5	46.5	2	38.5	45.5	7
10013461989	BRYN LLANFACHRAETH HOLYHEAD LL65 4DH	Residential	41.5	42.8	1.3	39.7	43.5	3.8	37.4	38.6	1.3	35.6	39.3	3.7	37.5	38.5	1	36.5	39.5	3
10013461990	MYNYDD YR EITHIN LLANFACHRAETH HOLYHEAD	Residential	42.3	43.6	1.3	38.6	40.8	2.2	38.2	39.4	1.3	34.6	36.7	2.1	38.5	39.5	1	34.5	37.5	3
10013461991	FRONDEG LODGE LLANFACHRAETH HOLYHEAD LL	Residential	43.3	44.5	1.2	43.3	45.3	2	39.1	40.3	1.2	39.1	41.1	1.9	39.5	40.5	1	39.5	41.5	2
10013461992	GREEN FARM LLANFACHRAETH HOLYHEAD LL65	Residential	42.6	43.9	1.3	37.2	39.3	2.1	38.5	39.7	1.3	33.2	35.3	2	38.5	40.5	2	33.5	35.5	2
10013461999	TY NEWYDD GREENEDERN TERRACE LLANFACHRA	Residential	40.4	41.7	1.3	38.5	41.1	2.6	36.3	37.6	1.3	34.5	37	2.5	36.5	37.5	1	34.5	37.5	3
10013462000	EDERN TERRACE LLANFACHRAETH HOLYHEAD LL	Residential	42.6	43.9	1.3	38.7	40.9	2.2	38.5	39.7	1.3	34.7	36.8	2.1	38.5	40.5	2	35.5	37.5	2
10013462002	PEN PARC LLANFACHRAETH HOLYHEAD LL65 4D	Residential	38.6	40	1.4	37.2	39.1	1.9	34.6	35.9	1.4	33.2	35.1	1.8	34.5	36.5	2	33.5	35.5	2
10013462003	GRAYSTONES VALLEY HOLYHEAD LL65 3EW	Residential	68.9	69.4	0.5	59.3	59.6	0.3	64	64.4	0.5	54.7	54.9	0.3	63.5	64.5	1	54.5	54.5	0
10013462080	GRAYSTONES VALLEY HOLYHEAD LL65 3EW	Residential	63.5	63.9	0.4	68.9	69.2	0.3	58.7	59.1	0.4	64	64.3	0.3	58.5	59.5	1	63.5	64.5	1
10013462081	CERRIG MAN LLANFECHELL AMLWCH LL68 0UF	Residential	39.9	41.3	1.4	41.2	41.8	0.6	35.8	37.2	1.4	37.1	37.7	0.6	36.5	37.5	1	37.5	38.5	1
10013462094	CAE MAWR BUNGALOW LLANFECHELL AMLWCH LL	Residential	44.1	45.6	1.5	40.3	40.7	0.4	39.9	41.4	1.5	36.2	36.6	0.4	40.5	41.5	1	36.5	36.5	0
10013462095	BWLCH LLANFECHELL AMLWCH LL68 0UF	Residential	43.8	45.3	1.5	42	42.3	0.3	39.6	41.1	1.5	37.9	38.2	0.3	39.5	41.5	2	38.5	38.5	0
10013462096	TY LUCY LLANFECHELL AMLWCH LL68 0UF	Residential	49.9	51.5	1.6	46	46	0	45.5	47.1	1.6	41.8	41.8	0	45.5	47.5	2	42.5	42.5	0
10013462097	CAE MAWR LLANFECHELL AMLWCH LL68 0UF	Residential	45.5	47.1	1.6	45.5	46.7	1.2	41.3	42.8	1.6	41.3	42.4	1.2	41.5	43.5	2	41.5	42.5	1
10013462098	1 STANLEY COTTAGESSTANLEY COTTAGES TREA	Residential	47.7	47.9	0.2	47.7	48.1	0.4	43.4	43.6	0.2	43.4	43.8	0.4	43.5	43.5	0	43.5	44.5	1
10013462106	2 STANLEY COTTAGESSTANLEY COTTAGES TREA	Residential	52.6	52.7	0.1	47.4	47.7	0.3	48.2	48.2	0.1	43.1	43.4	0.3	48.5	48.5	0	43.5	43.5	0
10013462107	3 STANLEY COTTAGESSTANLEY COTTAGES TREA	Residential	52.8	53	0.2	52.8	53.2	0.4	48.3	48.5	0.2	48.3	48.7	0.4	48.5	48.5	0	48.5	48.5	0
10013462108	4 STANLEY COTTAGESSTANLEY COTTAGES TREA	Residential	51.4	51.6	0.2	51.4	51.7	0.3	47	47.2	0.2	47	47.3	0.3	47.5	47.5	0	47.5	47.5	0
10013462109	5 STANLEY COTTAGESSTANLEY COTTAGES TREA	Residential	50.9	51.1	0.2	47.3	47.7	0.4	46.5	46.7	0.2	43	43.4	0.4	46.5	46.5	0	43.5	43.5	0
10013462110	6 STANLEY COTTAGESSTANLEY COTTAGES TREA	Residential	47.3	47.5	0.2	47.3	47.7	0.4	43	43.2	0.2	43	43.4	0.4	43.5	43.5	0	43.5	43.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013462111	DENBY LLANFACHRAETH HOLYHEAD LL65 4UU	Residential	63.8	65.2	1.4	50.2	45.6	-4.6	59	60.4	1.4	45.8	41.4	-4.5	58.5	60.5	2	46.5	41.5	-5
10013462130	HOLMEFIELD LLANFACHRAETH HOLYHEAD LL65	Residential	51.8	53.2	1.4	46.8	43.7	-3.1	47.4	48.7	1.4	42.5	39.5	-3	47.5	48.5	1	42.5	39.5	-3
10013462131	DWYRYD LLANFACHRAETH HOLYHEAD LL65 4UU	Residential	59.3	60.7	1.4	48	44.2	-3.8	54.7	56	1.4	43.7	40	-3.7	54.5	56.5	2	43.5	40.5	-3
10013462132	BRYN ABER LLANFACHRAETH HOLYHEAD LL65 4	Residential	60	61.3	1.3	49.2	45.2	-4	55.3	56.6	1.3	44.9	41	-3.9	55.5	56.5	1	45.5	41.5	-4
10013462134	PARLWR LLANFACHRAETH HOLYHEAD LL65 4UU	Residential	50.9	52.2	1.3	42.1	40.3	-1.8	46.5	47.8	1.3	38	36.2	-1.7	46.5	47.5	1	38.5	36.5	-2
10013462135	PEACH TREE COTTAGE LLANFACHRAETH HOLYHE	Residential	46	47.3	1.3	39	38.2	-0.8	41.8	43	1.3	35	34.2	-0.8	42.5	43.5	1	35.5	34.5	-1
10013462136	MUSHROOM COTTAGE LLANFACHRAETH HOLYHEAD	Residential	42.1	43.4	1.3	36.7	36.4	-0.3	38	39.2	1.3	32.7	32.4	-0.3	38.5	39.5	1	33.5	32.5	-1
10013462137	THE BREWERY HOUSE LLANFACHRAETH HOLYHEA	Residential	46.1	47.4	1.3	38.8	38	-0.8	41.8	43.1	1.3	34.8	34	-0.8	42.5	43.5	1	35.5	34.5	-1
10013462138	TY CROES LLANFACHRAETH HOLYHEAD LL65 4Y	Residential	45.6	46.9	1.3	38	37.6	-0.4	41.4	42.6	1.3	34	33.6	-0.4	41.5	42.5	1	34.5	34.5	0
10013462139	PENRHOS INDUSTRIAL ESTATE HOLYHEAD LL6	Industrial	52.9	53.2	0.3	52.9	53.4	0.5	48.4	48.7	0.3	48.4	48.9	0.5	48.5	48.5	0	48.5	49.5	1
10013462327	PENRHOS RETAIL PARK HOLYHEAD LL65 2UW	Commercial	56	56.1	0.1	56	56.2	0.2	51.5	51.5	0.1	51.5	51.6	0.2	51.5	51.5	0	51.5	51.5	0
10013462328	PENRHOS INDUSTRIAL ESTATE HOLYHEAD LL6	Commercial	53.8	53.9	0.1	53.8	54	0.2	49.3	49.4	0.1	49.3	49.5	0.2	49.5	49.5	0	49.5	49.5	0
10013462329	GROSS ILEGORAD ROAD VALLEY HOLYHEAD LL6	Residential	53.9	54.1	0.2	52.1	52.4	0.3	49.4	49.6	0.2	47.7	48	0.3	49.5	49.5	0	47.5	48.5	1
10013462349	FLATGROSS ILEGORAD ROAD VALLEY HOLYHEAD	Residential	53.9	54.1	0.2	52.1	52.4	0.3	49.4	49.6	0.2	47.7	48	0.3	49.5	49.5	0	47.5	48.5	1
10013462350	NEUADD WEN LLANFACHRAETH HOLYHEAD LL65	Residential	43.3	44.6	1.3	38	37.9	-0.1	39.1	40.4	1.3	34	33.9	-0.1	39.5	40.5	1	34.5	34.5	0
10013462883	BEDD Y COR LLANFACHRAETH HOLYHEAD LL65	Residential	46.3	47.7	1.4	42.8	41.3	-1.5	42	43.4	1.4	38.6	37.2	-1.5	42.5	43.5	1	38.5	37.5	-1
10013462884	TYN CAE LLANFECHELL AMLWCH LL68 0UD	Residential	45.3	46.8	1.5	45.2	47.3	2.1	41.1	42.5	1.5	41	43	2	41.5	42.5	1	41.5	43.5	2
10013462891	FELIN CEFN LLANFECHELL AMLWCH LL68 0UD	Residential	53.9	55.4	1.5	53.7	56.2	2.5	49.4	50.9	1.5	49.2	51.6	2.4	49.5	50.5	1	49.5	51.5	2
10013462892	CAERDEGOG UCHAF LLANFECHELL AMLWCH LL68	Residential	46	47.5	1.5	44.7	46.1	1.4	41.8	43.2	1.5	40.5	41.8	1.4	42.5	43.5	1	40.5	42.5	2
10013462893	CAE GWYN LLANFECHELL AMLWCH LL68 0UE	Residential	53.7	55.2	1.5	53.6	56.1	2.5	49.2	50.7	1.5	49.1	51.5	2.4	49.5	50.5	1	49.5	51.5	2
10013462894	GLAN RHYD LLANFECHELL AMLWCH LL68 0UE	Residential	64.9	66.4	1.5	64.8	67.5	2.7	60.1	61.5	1.5	60	62.6	2.6	60.5	61.5	1	59.5	62.5	3
10013462895	GAMOG HOLYHEAD LL65 4HN	Residential	39.3	41	1.7	44.7	47.2	2.5	35.3	36.9	1.6	40.5	42.9	2.4	35.5	37.5	2	40.5	43.5	3
10013463019	HAUL Y GWYNT CEMAES BAY LL67 0DE	Residential	31	31.6	0.6	33.2	34.1	0.9	27.2	27.8	0.6	29.3	30.2	0.9	27.5	28.5	1	29.5	30.5	1
10013463020	TYN Y MAES CEMAES BAY LL67 0DE	Residential	31.1	31.7	0.6	31.1	32	0.9	27.3	27.9	0.6	27.3	28.2	0.9	27.5	28.5	1	27.5	28.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013463021	TAN Y BRYN LLANFACHRAETH HOLYHEAD LL65	Residential	48.5	50	1.5	43.4	47.4	4	44.2	45.6	1.5	39.2	43.1	3.9	44.5	45.5	1	39.5	43.5	4
10013463023	PLAS ELLEN LLANFACHRAETH HOLYHEAD LL65	Residential	54.9	56.4	1.5	43.7	47.1	3.4	50.4	51.8	1.5	39.5	42.8	3.3	50.5	51.5	1	39.5	43.5	4
10013463024	CARREG GAM LLANFAIRYNGHORNWY HOLYHEAD L	Residential	55.6	57.1	1.5	46	46.2	0.2	51.1	52.5	1.5	41.8	41.9	0.2	51.5	52.5	1	42.5	42.5	0
10013463025	TY CAPEL SHILOH LLANFAIRYNGHORNWY HOLYH	Residential	53.7	55.2	1.5	47.9	49.7	1.8	49.2	50.7	1.5	43.6	45.3	1.7	49.5	50.5	1	43.5	45.5	2
10013463026	TYDDYN WAEN LLANFAIRYNGHORNWY HOLYHEAD	Residential	48.1	49.6	1.5	41.1	41.9	0.8	43.8	45.2	1.5	37	37.8	0.8	44.5	45.5	1	37.5	38.5	1
10013463048	RONITA LLANRHYDDLAD HOLYHEAD LL65 4BH	Residential	54.7	56.2	1.5	47	47.2	0.2	50.2	51.6	1.5	42.7	42.9	0.2	50.5	51.5	1	42.5	43.5	1
10013463067	RALLT GOCH LLANRHYDDLAD HOLYHEAD LL65 4	Residential	47.7	49.2	1.5	42.3	43.9	1.6	43.4	44.9	1.5	38.2	39.7	1.6	43.5	45.5	2	38.5	40.5	2
10013463071	ORSEDD ISAF LLANRHYDDLAD HOLYHEAD LL65	Residential	46	47.5	1.5	45.5	47.8	2.3	41.8	43.2	1.5	41.3	43.5	2.2	42.5	43.5	1	41.5	43.5	2
10013463075	ORSEDD UCHAF LLANRHYDDLAD HOLYHEAD LL65	Residential	43	44.6	1.6	45.3	47.6	2.3	38.8	40.4	1.6	41.1	43.3	2.2	39.5	40.5	1	41.5	43.5	2
10013463076	GRIMPAN LLANRHYDDLAD HOLYHEAD LL65 4BG	Residential	44.1	45.7	1.6	45.6	47.9	2.3	39.9	41.5	1.6	41.4	43.6	2.2	40.5	41.5	1	41.5	43.5	2
10013463077	PENRHYD LLANRHYDDLAD HOLYHEAD LL65 4BG	Residential	47	48.5	1.5	44.7	47.1	2.4	42.7	44.2	1.5	40.5	42.8	2.3	42.5	44.5	2	40.5	43.5	3
10013463078	GWELFOR LLANRHYDDLAD HOLYHEAD LL65 4BG	Residential	46	47.6	1.6	46.8	49.2	2.4	41.8	43.3	1.6	42.5	44.9	2.3	42.5	43.5	1	42.5	45.5	3
10013463079	TY BUGAIL LLANRHYDDLAD HOLYHEAD LL65 4B	Residential	57.7	59.2	1.5	46.7	47.2	0.5	53.1	54.6	1.5	42.4	42.9	0.5	53.5	54.5	1	42.5	43.5	1
10013463142	TEGFRYN LLANRHYDDLAD HOLYHEAD LL65 4BG	Residential	42.7	44.3	1.6	43.6	45.9	2.3	38.5	40.1	1.6	39.4	41.7	2.2	38.5	40.5	2	39.5	41.5	2
10013463145	ERW LLANRHYDDLAD HOLYHEAD LL65 4BG	Residential	43.5	45.1	1.6	46.3	48.7	2.4	39.3	40.9	1.6	42	44.4	2.3	39.5	41.5	2	42.5	44.5	2
10013463146	HEN BORTH LLANRHYDDLAD HOLYHEAD LL65 4B	Residential	46.5	48.1	1.6	47.6	50	2.4	42.2	43.8	1.6	43.3	45.6	2.3	42.5	44.5	2	43.5	45.5	2
10013463147	GARTH LLANRHYDDLAD HOLYHEAD LL65 4BG	Residential	58	59.6	1.6	57	59.5	2.5	53.4	54.9	1.6	52.4	54.8	2.4	53.5	54.5	1	52.5	54.5	2
10013463148	PENRHOS INDUSTRIAL ESTATE HOLYHEAD LL6	Industrial	52.8	53	0.2	52.7	53	0.3	48.3	48.5	0.2	48.2	48.5	0.3	48.5	48.5	0	48.5	48.5	0
10013463154	PENRHOS INDUSTRIAL ESTATE HOLYHEAD LL6	Industrial	53.3	53.5	0.2	52.8	53.2	0.4	48.8	49	0.2	48.3	48.7	0.4	48.5	49.5	1	48.5	48.5	0
10013463155	BROOKLYN TREGELE CEMAES BAY LL67 0DP	Residential	59.8	60	0.2	57.6	58.1	0.5	55.1	55.3	0.2	53	53.5	0.5	55.5	55.5	0	53.5	53.5	0
10013463224	TREMONT TREGELE CEMAES BAY LL67 0DP	Residential	49.8	50.1	0.3	49.8	50.4	0.6	45.4	45.7	0.3	45.4	46	0.6	45.5	45.5	0	45.5	46.5	1
10013463225	CROESO TREGELE CEMAES BAY LL67 0DP	Residential	50.8	51.6	0.8	50.8	51.6	0.8	46.4	47.2	0.8	46.4	47.2	0.8	46.5	47.5	1	46.5	47.5	1
10013463226	CARTREF TREGELE CEMAES BAY LL67 0DP	Residential	50.9	51.7	0.8	50.9	51.7	0.8	46.5	47.3	0.8	46.5	47.3	0.8	46.5	47.5	1	46.5	47.5	1
10013463227	TYN LLAN TREGELE CEMAES BAY LL67 0DP	Residential	52	52.8	0.8	52	52.9	0.9	47.6	48.3	0.8	47.6	48.4	0.9	47.5	48.5	1	47.5	48.5	1

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			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013463325	TYN LLIDIART TREGELE CEMAES BAY LL67 0D	Residential	46.5	47	0.5	46.5	47.2	0.7	42.2	42.7	0.5	42.2	42.9	0.7	42.5	42.5	0	42.5	43.5	1
10013463326	TYN LLAIN TREGELE CEMAES BAY LL67 0DP	Residential	45.9	46.6	0.7	45.8	46.7	0.9	41.7	42.3	0.7	41.6	42.4	0.9	41.5	42.5	1	41.5	42.5	1
10013463327	MEADOW VIEW TREGELE CEMAES BAY LL67 0DW	Residential	49.7	50.5	0.8	49.7	50.7	1	45.3	46.1	0.8	45.3	46.3	1	45.5	46.5	1	45.5	46.5	1
10013463328	PRESWYLFA TREGELE CEMAES BAY LL67 0DW	Residential	49.8	50.6	0.8	49.8	50.8	1	45.4	46.2	0.8	45.4	46.4	1	45.5	46.5	1	45.5	46.5	1
10013463329	HOWTH HOUSE TREGELE CEMAES BAY LL67 0DW	Residential	54.7	55.6	0.9	54.7	55.7	1	50.2	51.1	0.9	50.2	51.2	1	50.5	51.5	1	50.5	51.5	1
10013463330	WYLFOR TREGELE CEMAES BAY LL67 0DW	Residential	50.8	51.6	0.8	50.8	51.8	1	46.4	47.2	0.8	46.4	47.4	1	46.5	47.5	1	46.5	47.5	1
10013463331	GLANDWR TREGELE CEMAES BAY LL67 0DW	Residential	61.2	62.1	0.9	55	56.1	1.1	56.5	57.4	0.9	50.5	51.5	1.1	56.5	57.5	1	50.5	51.5	1
10013463332	HEULFRYN TREGELE CEMAES BAY LL67 0DW	Residential	48.5	49.2	0.7	48.5	49.4	0.9	44.2	44.9	0.7	44.2	45	0.9	44.5	45.5	1	44.5	45.5	1
10013463333	RHIANFA TREGELE CEMAES BAY LL67 0DW	Residential	46.8	47.5	0.7	46.8	47.7	0.9	42.5	43.2	0.7	42.5	43.4	0.9	42.5	43.5	1	42.5	43.5	1
10013463334	TYN REFAIL TREGELE HOLYHEAD LL67 0DN	Residential	64.1	65	0.9	64.1	65.2	1.1	59.3	60.2	0.9	59.3	60.4	1.1	59.5	60.5	1	59.5	60.5	1
10013463335	THE BUNGALOW TREGELE HOLYHEAD LL67 0DN	Residential	59.9	60.8	0.9	59.9	61	1.1	55.2	56.1	0.9	55.2	56.3	1.1	55.5	56.5	1	55.5	56.5	1
10013463336	DOUGLAS INN TREGELE HOLYHEAD LL67 0DN	Commercial	67.6	68.5	0.9	62.5	63.8	1.3	62.7	63.6	0.9	57.8	59	1.3	62.5	63.5	1	57.5	58.5	1
10013463337	OAKFIELD TREGELE HOLYHEAD LL67 0DN	Commercial	43.4	44.2	0.8	49.2	50.3	1.1	39.2	40	0.8	44.9	45.9	1.1	39.5	40.5	1	45.5	46.5	1
10013463338	PEN YR ARDD TREGELE HOLYHEAD LL67 0DN	Residential	56.8	57.7	0.9	57.1	58.4	1.3	52.2	53.1	0.9	52.5	53.8	1.3	52.5	53.5	1	52.5	53.5	1
10013463339	TROS Y FFORDD TREGELE HOLYHEAD LL67 0DN	Residential	58.1	59	0.9	57.2	58.5	1.3	53.5	54.4	0.9	52.6	53.9	1.3	53.5	54.5	1	52.5	53.5	1
10013463340	CAER GORS TREGELE CEMAES BAY LL67 0DP	Residential	48.5	49.3	0.8	48.5	49.5	1	44.2	45	0.8	44.2	45.1	1	44.5	45.5	1	44.5	45.5	1
10013463341	GORPHWYSFA TREGELE CEMAES BAY LL67 0DP	Residential	46.9	47.5	0.6	46.6	47.4	0.8	42.6	43.2	0.6	42.3	43.1	0.8	42.5	43.5	1	42.5	43.5	1
10013463901	FOEL FAWR TREGELE CEMAES BAY LL67 0DP	Residential	48.3	49.2	0.9	45.6	46.7	1.1	44	44.9	0.9	41.4	42.4	1.1	44.5	45.5	1	41.5	42.5	1
10013463902	HARBOUR RHYDWYN HOLYHEAD LL65 4EA	Residential	43.4	45	1.6	39.7	41.9	2.2	39.2	40.8	1.6	35.6	37.8	2.1	39.5	41.5	2	36.5	38.5	2
10013464474	REFAIL NEWYDD HOLYHEAD LL65 3DX	Commercial	57.8	58.3	0.5	57.8	58.3	0.5	53.2	53.7	0.5	53.2	53.7	0.5	53.5	53.5	0	53.5	53.5	0
10013464597	LLANERCH HOLYHEAD LL65 3DX	Residential	62.2	62.7	0.5	62.5	63	0.5	57.5	57.9	0.5	57.8	58.2	0.5	57.5	57.5	0	57.5	58.5	1
10013464598	CAE BYCHAN HOLYHEAD LL65 3DX	Residential	56.8	57.3	0.5	56.9	57.4	0.5	52.2	52.7	0.5	52.3	52.8	0.5	52.5	52.5	0	52.5	52.5	0
10013464599	REFAIL CAE BYCHAN HOLYHEAD LL65 3DX	Residential	56.6	57.1	0.5	56.6	57.1	0.5	52	52.5	0.5	52	52.5	0.5	52.5	52.5	0	52.5	52.5	0
10013464600	ALLTWEN DDU HOLYHEAD LL65 3DX	Residential	58.3	58.8	0.5	58.3	58.8	0.5	53.7	54.2	0.5	53.7	54.2	0.5	53.5	54.5	1	53.5	54.5	1
10013464602	BALLY GREEN HOLYHEAD LL65 3DX	Residential	57.2	57.7	0.5	57.2	57.7	0.5	52.6	53.1	0.5	52.6	53.1	0.5	52.5	53.5	1	52.5	53.5	1
10013464604	THE NOOK HOLYHEAD LL65 3HL	Residential	51.8	52.2	0.4	51.8	52.3	0.5	47.4	47.8	0.4	47.4	47.9	0.5	47.5	47.5	0	47.5	48.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013464656	TY LYCHYN HOLYHEAD LL65 3HL	Residential	54.9	55.3	0.4	52.4	52.9	0.5	50.4	50.8	0.4	48	48.4	0.5	50.5	50.5	0	48.5	48.5	0
10013464657	THE STABLES HOLYHEAD LL65 3HL	Residential	53.8	54.2	0.4	52.1	52.6	0.5	49.3	49.7	0.4	47.7	48.2	0.5	49.5	49.5	0	47.5	48.5	1
10013464658	LLAINWEN HOLYHEAD LL65 3HL	Residential	54.3	54.7	0.4	51.8	52.2	0.4	49.8	50.2	0.4	47.4	47.8	0.4	49.5	50.5	1	47.5	47.5	0
10013464659	TY MAIN HOLYHEAD LL65 3HL	Residential	54.2	54.6	0.4	51.2	51.7	0.5	49.7	50.1	0.4	46.8	47.3	0.5	49.5	50.5	1	46.5	47.5	1
10013464660	TYN LLAIN HOLYHEAD LL65 3HH	Residential	60.8	61.1	0.3	56.8	57.2	0.4	56.1	56.4	0.3	52.2	52.6	0.4	56.5	56.5	0	52.5	52.5	0
10013464661	CAE BRACDU HOLYHEAD LL65 3HH	Residential	54.8	55.1	0.3	54.9	55.2	0.3	50.3	50.6	0.3	50.4	50.7	0.3	50.5	50.5	0	50.5	50.5	0
10013464662	CRIGLAS HOLYHEAD LL65 3HE	Residential	60.3	60.6	0.3	61.9	62.2	0.3	55.6	55.9	0.3	57.2	57.5	0.3	55.5	55.5	0	57.5	57.5	0
10013464663	LLANLLIBO FAWR LLANFACHRAETH HOLYHEAD L	Residential	40.4	41.6	1.2	44.5	45.2	0.7	36.3	37.5	1.2	40.3	41	0.7	36.5	37.5	1	40.5	41.5	1
10013464851	TYDDYN LLAWES YARD HOLYHEAD LL65 4HU	Commercial	37.5	39.1	1.6	35.3	37.7	2.4	33.5	35.1	1.6	31.4	33.7	2.3	33.5	35.5	2	31.5	34.5	3
10013465178	SISAL Y NANT HOLYHEAD LL65 4DY	Residential	39.4	40.9	1.5	39.4	40.1	0.7	35.3	36.8	1.5	35.3	36	0.7	35.5	37.5	2	35.5	36.5	1
10013465424	RHYD GOCH HOLYHEAD LL65 4DY	Residential	41.8	43.2	1.4	41.8	41.8	0	37.7	39	1.4	37.7	37.7	0	38.5	39.5	1	38.5	38.5	0
10013465425	RALLT GOCH HOLYHEAD LL65 4DY	Residential	42.8	44.2	1.4	42.8	42.8	0	38.6	40	1.4	38.6	38.6	0	38.5	40.5	2	38.5	38.5	0
10013465426	TYDDYN LLAWES HOLYHEAD LL65 4HU	Residential	38.9	40.5	1.6	38.4	40.7	2.3	34.9	36.4	1.6	34.4	36.6	2.2	35.5	36.5	1	34.5	36.5	2
10013465516	PORTOBELLO LLANFACHRAETH HOLYHEAD LL65	Residential	57	58.5	1.5	56.1	58.8	2.7	52.4	53.9	1.5	51.5	54.2	2.6	52.5	53.5	1	51.5	54.5	3
10013465529	TAN YR ALLT LLANFACHRAETH HOLYHEAD LL65	Residential	54.5	56	1.5	54.8	57.3	2.5	50	51.5	1.5	50.3	52.7	2.4	50.5	51.5	1	50.5	52.5	2
10013465530	TYN Y FELIN LLANFACHRAETH HOLYHEAD LL65	Residential	44.8	46.2	1.4	41.9	44.4	2.5	40.6	41.9	1.4	37.8	40.2	2.4	40.5	42.5	2	38.5	40.5	2
10013465531	CEFN GWYN CEMAES BAY LL68 0SR	Residential	47.7	49.2	1.5	38.5	39.4	0.9	43.4	44.9	1.5	34.5	35.3	0.9	43.5	45.5	2	34.5	35.5	1
10013465854	PEN Y CEFN CEMAES BAY LL68 0SR	Residential	48.9	50.4	1.5	46.5	48.5	2	44.6	46	1.5	42.2	44.2	1.9	44.5	46.5	2	42.5	44.5	2
10013465855	GARREG LWYD LODGE LLANFAETHLU HOLYHEAD	Residential	45.9	46.3	0.4	45.9	46.3	0.4	41.7	42	0.4	41.7	42	0.4	41.5	42.5	1	41.5	42.5	1
10013465967	WESTERN HEIGHTS LLANFAETHLU HOLYHEAD LL	Residential	43.9	44.5	0.6	53.1	53.4	0.3	39.7	40.3	0.6	48.6	48.9	0.3	40.5	40.5	0	48.5	49.5	1
10013465968	TY CAPEL EBENEZER LLANFAETHLU HOLYHEAD	Residential	51.6	53	1.4	48.6	48.7	0.1	47.2	48.5	1.4	44.3	44.4	0.1	47.5	48.5	1	44.5	44.5	0
10013465969	TELEPHONE EXCHANGE LLANFAETHLU HOLYHEAD	Industrial	60.5	62.1	1.6	51.4	51.6	0.2	55.8	57.4	1.6	47	47.2	0.2	55.5	57.5	2	47.5	47.5	0
10013465970	SHOPGRIFFITH READE HOUSE LLANFAETHLU HO	Commercial	55.5	56.7	1.2	61.2	63.6	2.4	51	52.1	1.2	56.5	58.8	2.3	51.5	52.5	1	56.5	58.5	2
10013465972	FLAT 1GRIFFITH READE HOUSE LLANFAETHLU	Residential	55.5	56.7	1.2	61.2	63.6	2.4	51	52.1	1.2	56.5	58.8	2.3	51.5	52.5	1	56.5	58.5	2
10013465973	BRYN GOLEU LLANFAETHLU HOLYHEAD LL65 4N	Residential	54.8	55.9	1.1	63	64.2	1.2	50.3	51.4	1.1	58.2	59.4	1.2	50.5	51.5	1	58.5	59.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013465974	GOLEUFRYN LLANFAETHLU HOLYHEAD LL65 4NS	Residential	48.6	49.6	1	54.8	55	0.2	44.3	45.2	1	50.3	50.5	0.2	44.5	45.5	1	50.5	50.5	0
10013465976	ARWEL LLANFAETHLU HOLYHEAD LL65 4NT	Residential	47.5	48.5	1	52.1	52.2	0.1	43.2	44.2	1	47.7	47.8	0.1	43.5	44.5	1	47.5	47.5	0
10013465977	BRYN LLWYD LLANFAETHLU HOLYHEAD LL65 4N	Residential	56.3	57	0.7	53.3	53.6	0.3	51.7	52.4	0.7	48.8	49.1	0.3	51.5	52.5	1	48.5	49.5	1
10013465978	WENALLT LLANFAETHLU HOLYHEAD LL65 4NT	Residential	47.8	48.7	0.9	58.6	58.7	0.1	43.5	44.4	0.9	54	54.1	0.1	43.5	44.5	1	54.5	54.5	0
10013465979	CAERDEGOG ISAF ANGLESEY LL67 0DU	Residential	43	44.2	1.2	38.4	39.3	0.9	38.8	40	1.2	34.4	35.3	0.9	39.5	40.5	1	34.5	35.5	1
10013466008	PEN Y GROES ARTHUR LLANFECHELL AMLWCH L	Residential	58.3	59.8	1.5	46.1	44.3	-1.8	53.7	55.1	1.5	41.8	40.1	-1.7	53.5	55.5	2	42.5	40.5	-2
10013466013	PONT Y FFRIDD LLANFECHELL AMLWCH LL68 0	Residential	42.6	44.2	1.6	42.6	42.9	0.3	38.5	40	1.6	38.5	38.7	0.3	38.5	40.5	2	38.5	39.5	1
10013466014	PLAS Y BRAIN LLANFECHELL AMLWCH LL68 0S	Residential	46.8	48.3	1.5	41	41.1	0.1	42.5	44	1.5	36.9	37	0.1	42.5	44.5	2	37.5	37.5	0
10013466015	HAUL A GWYNT HOLYHEAD LL65 4PB	Residential	49.5	50.6	1.1	44.9	45	0.1	45.1	46.2	1.1	40.7	40.8	0.1	45.5	46.5	1	40.5	41.5	1
10013466020	JERICHO HOLYHEAD LL65 4PB	Residential	47.2	48.4	1.2	43.8	44.4	0.6	42.9	44.1	1.2	39.6	40.2	0.6	43.5	44.5	1	39.5	40.5	1
10013466021	TAN Y FFYNNON HOLYHEAD LL65 4PB	Residential	45.7	47	1.3	40	40.6	0.6	41.5	42.7	1.3	35.9	36.5	0.6	41.5	42.5	1	36.5	36.5	0
10013466022	YR ORSEDD HOLYHEAD LL65 4PB	Residential	42.7	43.9	1.2	39.9	40.3	0.4	38.5	39.7	1.2	35.8	36.2	0.4	38.5	40.5	2	36.5	36.5	0
10013466023	BRYN ISEL HOLYHEAD LL65 4YB	Residential	38.9	40.3	1.4	39	40.4	1.4	34.9	36.2	1.4	35	36.3	1.4	35.5	36.5	1	35.5	36.5	1
10013466068	PENTERFYN HOLYHEAD LL65 4YB	Residential	42.1	43.4	1.3	38.3	40.2	1.9	38	39.2	1.3	34.3	36.1	1.8	38.5	39.5	1	34.5	36.5	2
10013466069	PEN Y GONGL HOLYHEAD LL65 4YD	Residential	41.6	42.9	1.3	34.9	36.1	1.2	37.5	38.7	1.3	31	32.1	1.2	37.5	39.5	2	31.5	32.5	1
10013466072	CWTRWM HOLYHEAD LL65 4YB	Residential	37.9	39.3	1.4	37.9	39.7	1.8	33.9	35.3	1.4	33.9	35.6	1.7	34.5	35.5	1	34.5	36.5	2
10013466073	TY PENTIR HOLYHEAD LL65 4YB	Residential	44.3	45.6	1.3	41.5	42.8	1.3	40.1	41.4	1.3	37.4	38.6	1.3	40.5	41.5	1	37.5	38.5	1
10013466074	PEN YR ORSEDD BUNGALOW HOLYHEAD LL65 4	Residential	44.6	46	1.4	43.1	44.8	1.7	40.4	41.8	1.4	38.9	40.6	1.6	40.5	42.5	2	39.5	40.5	1
10013466075	PEN YR ORSEDD HOLYHEAD LL65 4YB	Residential	50.3	51.7	1.4	48.6	50.8	2.2	45.9	47.3	1.4	44.3	46.4	2.1	46.5	47.5	1	44.5	46.5	2
10013466076	CASTELL BODEDERN HOLYHEAD LL65 3PB	Residential	51.8	52.2	0.4	51.1	51.6	0.5	47.4	47.8	0.4	46.7	47.2	0.5	47.5	47.5	0	46.5	47.5	1
10013466392	GWYDDFOR BODEDERN HOLYHEAD LL65 3PD	Residential	56.5	57	0.5	56.5	57	0.5	51.9	52.4	0.5	51.9	52.4	0.5	52.5	52.5	0	52.5	52.5	0
10013466393	CERRIG LLWYD VALLEY HOLYHEAD LL65 3EW	Residential	55.4	55.8	0.4	56.8	57.1	0.3	50.9	51.3	0.4	52.2	52.5	0.3	50.5	51.5	1	52.5	52.5	0
10013466972	GRAYSTONES VALLEY HOLYHEAD LL65 3EW	Residential	58.8	59.2	0.4	56.9	57.2	0.3	54.2	54.6	0.4	52.3	52.6	0.3	54.5	54.5	0	52.5	52.5	0
10013466973	GRAYSTONES VALLEY HOLYHEAD LL65 3EW	Residential	60.2	60.6	0.4	57.9	58.2	0.3	55.5	55.9	0.4	53.3	53.6	0.3	55.5	55.5	0	53.5	53.5	0
10013466974	GRAYSTONES VALLEY HOLYHEAD LL65 3EW	Residential	63.4	63.9	0.5	60.2	60.5	0.3	58.6	59.1	0.5	55.5	55.8	0.3	58.5	59.5	1	55.5	55.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013466975	BODFARDDEN DDU LLANFACHRAETH HOLYHEAD L	Residential	41.2	42.6	1.4	40.4	42.2	1.8	37.1	38.5	1.4	36.3	38.1	1.7	37.5	38.5	1	36.5	38.5	2
10013467043	TREMARFON LLANRHYDDLAD HOLYHEAD LL65 4H	Residential	59.5	61.1	1.6	57.5	60	2.5	54.8	56.4	1.6	52.9	55.3	2.4	54.5	56.5	2	52.5	55.5	3
10013467188	TY CAPEL LLANRHYDDLAD HOLYHEAD LL65 4HR	Residential	59	60.6	1.6	54.4	56.9	2.5	54.4	55.9	1.6	49.9	52.3	2.4	54.5	55.5	1	50.5	52.5	2
10013467189	GLASFRYN LLANRHYDDLAD HOLYHEAD LL65 4HR	Residential	58	59.6	1.6	57.9	60.4	2.5	53.4	54.9	1.6	53.3	55.7	2.4	53.5	54.5	1	53.5	55.5	2
10013467190	LLECYN LLANRHYDDLAD HOLYHEAD LL65 4HR	Residential	58	59.6	1.6	57.9	60.4	2.5	53.4	54.9	1.6	53.3	55.7	2.4	53.5	54.5	1	53.5	55.5	2
10013467191	CAE CRIN LLANRHYDDLAD HOLYHEAD LL65 4HP	Residential	56	57.6	1.6	56.1	58.6	2.5	51.5	53	1.6	51.5	54	2.4	51.5	53.5	2	51.5	54.5	3
10013467192	BRYN REFAIL LLANRHYDDLAD HOLYHEAD LL65	Residential	63.8	65.4	1.6	62.5	65	2.5	59	60.6	1.6	57.8	60.2	2.4	58.5	60.5	2	57.5	60.5	3
10013467193	CATHERINE TERRACE LLANRHYDDLAD HOLYHEAD	Residential	56.5	58.1	1.6	56.2	58.7	2.5	51.9	53.5	1.6	51.6	54.1	2.4	52.5	53.5	1	51.5	54.5	3
10013467195	CATHERINE TERRACE LLANRHYDDLAD HOLYHEAD	Residential	57	58.6	1.6	56.9	59.4	2.5	52.4	54	1.6	52.3	54.7	2.4	52.5	54.5	2	52.5	54.5	2
10013467196	CATHERINE TERRACE LLANRHYDDLAD HOLYHEAD	Residential	57.4	59	1.6	57.3	59.8	2.5	52.8	54.4	1.6	52.7	55.1	2.4	52.5	54.5	2	52.5	55.5	3
10013467197	CATHERINE TERRACE LLANRHYDDLAD HOLYHEAD	Residential	58	59.6	1.6	58.2	60.6	2.4	53.4	54.9	1.6	53.6	55.9	2.3	53.5	54.5	1	53.5	55.5	2
10013467198	BRYN GLAS LLANRHYDDLAD HOLYHEAD LL65 4H	Residential	52.8	54.4	1.6	51.1	53.6	2.5	48.3	49.9	1.6	46.7	49.1	2.4	48.5	50.5	2	46.5	49.5	3
10013467199	TYN GONGL LLANRHYDDLAD HOLYHEAD LL65 4H	Residential	62.1	63.7	1.6	57.1	59.6	2.5	57.4	58.9	1.6	52.5	54.9	2.4	57.5	58.5	1	52.5	54.5	2
10013467200	RHIANGWYN LLANRHYDDLAD HOLYHEAD LL65 4H	Residential	63.3	64.9	1.6	58.2	60.7	2.5	58.5	60.1	1.6	53.6	56	2.4	58.5	60.5	2	53.5	56.5	3
10013467201	BWTHYN LLANRHYDDLAD HOLYHEAD LL65 4HP	Residential	64.8	66.4	1.6	64.7	67.2	2.5	60	61.5	1.6	59.9	62.3	2.4	59.5	61.5	2	59.5	62.5	3
10013467202	BODFAIR LLANRHYDDLAD HOLYHEAD LL65 4HP	Residential	61.3	62.9	1.6	60	62.5	2.5	56.6	58.1	1.6	55.3	57.8	2.4	56.5	58.5	2	55.5	57.5	2
10013467203	SWN Y NANT LLANRHYDDLAD HOLYHEAD LL65 4	Residential	44	45.6	1.6	42.3	44.7	2.4	39.8	41.4	1.6	38.2	40.5	2.3	40.5	41.5	1	38.5	40.5	2
10013467204	SIN NOMBRE LLANRHYDDLAD HOLYHEAD LL65 4	Residential	45.8	47.4	1.6	45.8	48.2	2.4	41.6	43.1	1.6	41.6	43.9	2.3	41.5	43.5	2	41.5	44.5	3
10013467205	HAFOD LAS LLANRHYDDLAD HOLYHEAD LL65 4H	Residential	46.1	47.7	1.6	42.3	44.7	2.4	41.8	43.4	1.6	38.2	40.5	2.3	42.5	43.5	1	38.5	40.5	2
10013467206	TYN LON LLANRHYDDLAD HOLYHEAD LL65 4HT	Residential	47.1	48.7	1.6	47	49.4	2.4	42.8	44.4	1.6	42.7	45	2.3	43.5	44.5	1	42.5	45.5	3
10013467207	NYHAVN LLANRHYDDLAD HOLYHEAD LL65 4HT	Residential	47.5	49.1	1.6	46.8	49.2	2.4	43.2	44.8	1.6	42.5	44.9	2.3	43.5	44.5	1	42.5	45.5	3
10013467208	BRYN COED LLANRHYDDLAD HOLYHEAD LL65 4H	Residential	46.6	48.2	1.6	41.3	43.7	2.4	42.3	43.9	1.6	37.2	39.5	2.3	42.5	44.5	2	37.5	39.5	2
10013467209	GODRER GARN LLANRHYDDLAD HOLYHEAD LL65	Residential	47.9	49.5	1.6	47.8	50.2	2.4	43.6	45.1	1.6	43.5	45.8	2.3	43.5	45.5	2	43.5	46.5	3

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013467210	TYR YSGOL LLANRHYDDLAD HOLYHEAD LL65 4H	Residential	55	56.6	1.6	53.8	56.3	2.5	50.5	52	1.6	49.3	51.7	2.4	50.5	52.5	2	49.5	51.5	2
10013467212	FRON DEG LLANRHYDDLAD HOLYHEAD LL65 4HT	Residential	58.4	60	1.6	45.2	47.7	2.5	53.8	55.3	1.6	41	43.4	2.4	53.5	55.5	2	41.5	43.5	2
10013467213	YSGOLDY PEDAIR LLANRHYDDLAD HOLYHEAD LL	Residential	58.6	60.2	1.6	57.4	59.9	2.5	54	55.5	1.6	52.8	55.2	2.4	54.5	55.5	1	52.5	55.5	3
10013467214	TY CAPEL ABARIM LLANFACHRAETH HOLYHEAD	Residential	54.3	55.7	1.4	49.7	46.1	-3.6	49.8	51.2	1.4	45.3	41.8	-3.5	49.5	51.5	2	45.5	42.5	-3
10013467304	PENHESGYN HOLYHEAD LL65 4NL	Residential	49.9	51.2	1.3	49.4	51.4	2	45.5	46.8	1.3	45	47	1.9	45.5	46.5	1	45.5	47.5	2
10013467307	PENMYNYDD BODEDERN HOLYHEAD LL65 3YL	Residential	65	65.4	0.4	65.2	65.7	0.5	60.2	60.6	0.4	60.4	60.9	0.5	60.5	60.5	0	60.5	60.5	0
10013467320	SHOP UCHAF TREGELE CEMAES BAY LL67 0DW	Residential	53	53.9	0.9	53	54	1	48.5	49.4	0.9	48.5	49.5	1	48.5	49.5	1	48.5	49.5	1
10013467361	BRANTANOPENRHOS INDUSTRIAL ESTATE HOLY	Industrial	51	51.2	0.2	52.3	52.5	0.2	46.6	46.8	0.2	47.9	48.1	0.2	46.5	46.5	0	48.5	48.5	0
10013467394	CARPET RIGHTPENRHOS INDUSTRIAL ESTATE	Commercial	53.5	53.7	0.2	53.3	53.6	0.3	49	49.2	0.2	48.8	49.1	0.3	49.5	49.5	0	48.5	49.5	1
10013467395	NEW LOOKPENRHOS INDUSTRIAL ESTATE HOLY	Commercial	53.5	53.7	0.2	53.5	53.8	0.3	49	49.2	0.2	49	49.3	0.3	49.5	49.5	0	49.5	49.5	0
10013467396	PEN Y GORS TREGELE CEMAES BAY LL67 0DW	Residential	48.8	49.5	0.7	48.4	49.4	1	44.5	45.1	0.7	44.1	45	1	44.5	45.5	1	44.5	45.5	1
10013849047	PENRHOS INDUSTRIAL ESTATE HOLYHEAD LL6	Industrial	51.9	52.2	0.3	52.1	52.5	0.4	47.5	47.8	0.3	47.7	48.1	0.4	47.5	47.5	0	47.5	48.5	1
10013849198	BONDS UK LTDPARC BUSNES PENRHOS HOLYHE	Industrial	52.3	52.6	0.3	52.2	52.6	0.4	47.9	48.2	0.3	47.8	48.2	0.4	48.5	48.5	0	47.5	48.5	1
10013849199	PARC BUSNES PENRHOS HOLYHEAD LL65 2FD	Industrial	52.5	52.8	0.3	52.6	53	0.4	48.1	48.3	0.3	48.2	48.5	0.4	48.5	48.5	0	48.5	48.5	0
10013849200	PARC BUSNES PENRHOS HOLYHEAD LL65 2FD	Industrial	52.9	53.2	0.3	53.1	53.5	0.4	48.4	48.7	0.3	48.6	49	0.4	48.5	48.5	0	48.5	49.5	1
10013849201	TROS YR AFON TREGELE CEMAES BAY LL67 0D	Residential	48	48.7	0.7	48.2	49.1	0.9	43.7	44.4	0.7	43.9	44.8	0.9	43.5	44.5	1	44.5	44.5	0
10013849289	TYN CAE TREGELE CEMAES BAY LL67 0DW	Residential	48	48.7	0.7	48.2	49.1	0.9	43.7	44.4	0.7	43.9	44.8	0.9	43.5	44.5	1	44.5	44.5	0
10013849290	10 RHODFA SHORNEY VALLEY HOLYHEAD LL65	Residential	51.1	51.7	0.6	50.4	50.6	0.2	46.7	47.3	0.6	46	46.2	0.2	46.5	47.5	1	46.5	46.5	0
10013849294	VILLAGE HALL LLANFACHRAETH HOLYHEAD LL6	Community	68	69.4	1.4	46.1	43.7	-2.4	63.1	64.4	1.4	41.8	39.5	-2.3	62.5	64.5	2	42.5	39.5	-3
10013851281	VILLAGE HALL LLANFAETHLU HOLYHEAD LL65	Community	59	60.5	1.5	48.1	47.5	-0.6	54.4	55.8	1.5	43.8	43.2	-0.6	54.5	55.5	1	44.5	43.5	-1
10013851282	GWEL Y HAUL TREGELE CEMAES BAY LL67 0DP	Residential	48.4	48.8	0.4	48.4	49	0.6	44.1	44.5	0.4	44.1	44.7	0.6	44.5	44.5	0	44.5	44.5	0
10013851286	LLETYR WENNOL LLANFACHRAETH HOLYHEAD LL	Residential	42	43.3	1.3	38.9	41.2	2.3	37.9	39.1	1.3	34.9	37.1	2.2	38.5	39.5	1	35.5	37.5	2
10013851288	SIMDDRA WEN LLANFAETHLU HOLYHEAD LL65 4	Residential	46.6	47.1	0.5	64.1	64.3	0.2	42.3	42.8	0.5	59.3	59.5	0.2	42.5	43.5	1	59.5	59.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013851358	SIMDDRA WEN LLANFAETHLU HOLYHEAD LL65 4	Residential	46.8	47.2	0.4	64.3	64.5	0.2	42.5	42.9	0.4	59.5	59.7	0.2	42.5	43.5	1	59.5	59.5	0
10013851359	SIMDDRA WEN LLANFAETHLU HOLYHEAD LL65 4	Residential	50.7	50.9	0.2	63.7	63.9	0.2	46.3	46.5	0.2	58.9	59.1	0.2	46.5	46.5	0	58.5	59.5	1
10013851360	BRYN ISAF LLANFAETHLU HOLYHEAD LL65 4NW	Residential	48.5	50.2	1.7	47.5	49.9	2.4	44.2	45.8	1.6	43.2	45.5	2.3	44.5	46.5	2	43.5	45.5	2
10013851469	PARC BUSNES PENRHOS HOLYHEAD LL65 2FD	Industrial	53.3	53.5	0.2	53.3	53.5	0.2	48.8	49	0.2	48.8	49	0.2	48.5	49.5	1	48.5	49.5	1
10013851506	PARC BUSNES PENRHOS HOLYHEAD LL65 2FD	Industrial	49.2	49.4	0.2	49.2	49.3	0.1	44.9	45	0.2	44.9	45	0.1	45.5	45.5	0	45.5	45.5	0
10013851507	PARC BUSNES PENRHOS HOLYHEAD LL65 2FD	Industrial	55.3	55.4	0.1	55.3	55.3	0	50.8	50.9	0.1	50.8	50.8	0	50.5	50.5	0	50.5	50.5	0
10013851508	PARC BUSNES PENRHOS HOLYHEAD LL65 2FD	Industrial	51.6	51.7	0.1	55.6	55.6	0	47.2	47.3	0.1	51.1	51.1	0	47.5	47.5	0	51.5	51.5	0
10013851509	THE OLD BARNBRONALLT LLANYNGHENEDL HOLY	Residential	59.3	60.5	1.2	59.3	60.8	1.5	54.7	55.8	1.2	54.7	56.1	1.5	54.5	55.5	1	54.5	56.5	2
10013851511	LLOFFT STORWSBRONALLT LLANYNGHENEDL HOL	Residential	59.1	60.3	1.2	59.1	60.6	1.5	54.5	55.6	1.2	54.5	55.9	1.5	54.5	55.5	1	54.5	55.5	1
10013851512	FLATVALLEY HOTEL VALLEY HOLYHEAD LL65 3	Residential	66.7	67.5	0.8	64.6	64.9	0.3	61.8	62.6	0.8	59.8	60.1	0.3	61.5	62.5	1	59.5	60.5	1
10013851513	FLATRHIANFA CAERGEILIOG HOLYHEAD LL65 3	Residential	55.2	55.5	0.3	55.2	55.7	0.5	50.7	51	0.3	50.7	51.2	0.5	50.5	51.5	1	50.5	51.5	1
10013851655	CARAVANBOTAN FAWR HOLYHEAD LL65 4NH	Residential	47.6	48.9	1.3	46.6	48.6	2	43.3	44.6	1.3	42.3	44.3	1.9	43.5	44.5	1	42.5	44.5	2
10013851658	TY BRENIN LLANFACHRAETH HOLYHEAD LL65 4	Residential	42.8	44.2	1.4	41.8	43.6	1.8	38.6	40	1.4	37.7	39.4	1.7	38.5	40.5	2	38.5	39.5	1
10013851659	ALLTWEN COCH HOLYHEAD LL65 3DX	Residential	55.8	56.3	0.5	55.7	56.2	0.5	51.3	51.7	0.5	51.2	51.6	0.5	51.5	51.5	0	51.5	51.5	0
10013851841	1 Y NYTH VALLEY HOLYHEAD LL65 3FB	Residential	57.2	57.7	0.5	57.3	57.5	0.2	52.6	53.1	0.5	52.7	52.9	0.2	52.5	53.5	1	52.5	52.5	0
10013851842	2 Y NYTH VALLEY HOLYHEAD LL65 3FB	Residential	53.7	54.2	0.5	52.4	52.9	0.5	49.2	49.7	0.5	48	48.4	0.5	49.5	49.5	0	48.5	48.5	0
10013851843	3 Y NYTH VALLEY HOLYHEAD LL65 3FB	Residential	54.1	54.6	0.5	55.4	55.8	0.4	49.6	50.1	0.5	50.9	51.3	0.4	49.5	50.5	1	50.5	51.5	1
10013851844	5 Y NYTH VALLEY HOLYHEAD LL65 3FB	Residential	53.8	54.3	0.5	52.6	53	0.4	49.3	49.8	0.5	48.2	48.5	0.4	49.5	49.5	0	48.5	48.5	0
10013851846	AUCTION MARKET SITE VALLEY HOLYHEAD LL6	Industrial	52.4	52.8	0.4	52.9	53.2	0.3	48	48.3	0.4	48.4	48.7	0.3	48.5	48.5	0	48.5	48.5	0
10013851886	THE SQUARELONDON ROAD VALLEY HOLYHEAD L	Commercial	59.9	61.3	1.4	61.3	61.4	0.1	55.2	56.6	1.4	56.6	56.7	0.1	55.5	56.5	1	56.5	56.5	0
10013851895	ANNEXESIOP SOAR HOLYHEAD LL65 4NL	Residential	51.7	53.1	1.4	52.9	49.3	-3.6	47.3	48.6	1.4	48.4	45	-3.5	47.5	48.5	1	48.5	45.5	-3
10013851901	CARTIO MONBRYN GOLEU BRYNGWRAN HOLYHEAD	Commercial	62.5	63	0.5	63.1	63.6	0.5	57.8	58.2	0.5	58.3	58.8	0.5	57.5	58.5	1	58.5	58.5	0
10013851905	VEHICLE REPAIR WORKSHOPDYFFRYN SERVICE	Commercial	50.4	50.6	0.2	62.3	62.5	0.2	46	46.2	0.2	57.6	57.8	0.2	46.5	46.5	0	57.5	57.5	0
10013851911	TAN Y REFAIL YARDTANREFAIL COTTAGE HOL	Commercial	41.4	41.5	0.1	41.5	41.7	0.2	37.3	37.4	0.1	37.4	37.6	0.2	37.5	37.5	0	37.5	37.5	0

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			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013851913	GWYNEDD SHIPPING HOLYHEAD LL65 2PB	Commercial	58.3	58.4	0.1	41.3	41.6	0.3	53.7	53.8	0.1	37.2	37.5	0.3	53.5	53.5	0	37.5	37.5	0
10013851914	COMMUNICATIONS MAST LLANFAETHLU HOLYHEA	Industrial	60.5	62.1	1.6	51.4	51.6	0.2	55.8	57.4	1.6	47	47.2	0.2	55.5	57.5	2	47.5	47.5	0
10013851916	ANNEXESWN Y NANT LLANRHYDDLAD HOLYHEAD	Residential	41.1	42.7	1.6	41	43.4	2.4	37	38.5	1.6	36.9	39.2	2.3	37.5	38.5	1	37.5	39.5	2
10013851926	THE OLD TELEPHONE EXCHANGE LLANYNGHENED	Residential	67.6	68.8	1.2	68.3	70.1	1.8	62.7	63.9	1.2	63.4	65.1	1.7	62.5	63.5	1	63.5	64.5	1
10013851946	HOLLAND PARK INDUSTRIAL ESTATE HOLYHEA	Industrial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
10013851955	HOLLAND PARK INDUSTRIAL ESTATE HOLYHEA	Commercial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
10013851956	HOLLAND PARK INDUSTRIAL ESTATE HOLYHEA	Commercial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
10013851957	HOLLAND PARK INDUSTRIAL ESTATECYTTIR RO	Commercial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
10013851958	HOLLAND PARK INDUSTRIAL ESTATE HOLYHEA	Office	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
10013851959	CARAVANCAE BYCHAN HOLYHEAD LL65 3DX	Residential	54.9	55.4	0.5	55.4	55.8	0.4	50.4	50.9	0.5	50.9	51.3	0.4	50.5	50.5	0	50.5	51.5	1
10013851976	HOMEBASE PLC HOLYHEAD LL65 2PE	Commercial	46.6	46.8	0.2	44.9	45.1	0.2	42.3	42.5	0.2	40.7	40.9	0.2	42.5	42.5	0	40.5	41.5	1
10013851977	CHALETGWAELOD MAWR CAERGEILIOG HOLYHEAD	Residential	59.6	59.9	0.3	59.6	60.1	0.5	54.9	55.2	0.3	54.9	55.4	0.5	54.5	55.5	1	54.5	55.5	1
10013851978	1 CARNA TERRACE VALLEY HOLYHEAD LL65 3E	Residential	51.1	51.6	0.5	51.2	51.7	0.5	46.7	47.2	0.5	46.8	47.3	0.5	46.5	47.5	1	46.5	47.5	1
10013852006	2 CARNA TERRACE VALLEY HOLYHEAD LL65 3E	Residential	51	51.5	0.5	51.1	51.6	0.5	46.6	47.1	0.5	46.7	47.2	0.5	46.5	47.5	1	46.5	47.5	1
10013852007	3 CARNA TERRACE VALLEY HOLYHEAD LL65 3E	Residential	54.4	54.9	0.5	52	52.6	0.6	49.9	50.4	0.5	47.6	48.2	0.6	50.5	50.5	0	47.5	48.5	1
10013852008	AWEL Y BRYN TREGELE CEMAES BAY LL67 0DW	Residential	48.4	49.1	0.7	48.4	49.3	0.9	44.1	44.8	0.7	44.1	45	0.9	44.5	44.5	0	44.5	45.5	1
10013852084	MEIRIONFA TREGELE CEMAES BAY LL67 0DW	Residential	48.9	49.8	0.9	48.9	50	1.1	44.6	45.4	0.9	44.6	45.6	1.1	44.5	45.5	1	44.5	45.5	1
10013852085	TYN LLAN LLANYNGHENEDL HOLYHEAD LL65 3D	Residential	53	54	1	53.1	54.3	1.2	48.5	49.5	1	48.6	49.8	1.2	48.5	49.5	1	48.5	49.5	1
10013852159	TY GWYN BARN VALLEY HOLYHEAD LL65 3DB	Residential	60.6	62	1.4	62.1	64	1.9	55.9	57.3	1.4	57.4	59.2	1.8	55.5	57.5	2	57.5	59.5	2
10013852160	HOLLAND PARK INDUSTRIAL ESTATE HOLYHEA	Commercial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
10013852183	UNIT 24HOLLAND PARK INDUSTRIAL ESTATECY	Community	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
10013852184	UNIT 25HOLLAND PARK INDUSTRIAL ESTATECY	Commercial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
10013852185	UNIT 26HOLLAND PARK INDUSTRIAL ESTATE	Commercial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0

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			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013852186	HOLLAND PARK INDUSTRIAL ESTATE HOLYHEA	Office	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
10013852187	HOLLAND PARK INDUSTRIAL ESTATE HOLYHEA	Commercial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
10013852188	HOLLAND PARK INDUSTRIAL ESTATECYTTIR RO	Commercial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
10013852189	HOLLAND PARK INDUSTRIAL ESTATE HOLYHEA	Commercial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
10013852190	A5 BARBERSSTATION ROAD VALLEY HOLYHEAD	Commercial	71.8	73	1.2	63.2	63.5	0.3	66.8	67.9	1.2	58.4	58.7	0.3	66.5	67.5	1	58.5	58.5	0
10013852198	COAL YARD VALLEY HOLYHEAD LL65 3EB	Commercial	51.6	52	0.4	52.9	53.2	0.3	47.2	47.6	0.4	48.4	48.7	0.3	47.5	47.5	0	48.5	48.5	0
10013852204	CAPEL BRITANNIA TREGELE CEMAES BAY LL67	Residential	46.9	47.5	0.6	46.9	47.7	0.8	42.6	43.2	0.6	42.6	43.4	0.8	42.5	43.5	1	42.5	43.5	1
10013852224	BRYN COED LLANFACHRAETH HOLYHEAD LL65 3	Residential	67.5	68.9	1.4	67.2	69	1.8	62.6	64	1.4	62.3	64.1	1.7	62.5	63.5	1	62.5	63.5	1
10013852298	TEGEIRIAN WENPENCRAIG LLANYNGHENEDL HOL	Residential	45.9	47.2	1.3	45.9	47.5	1.6	41.7	42.9	1.3	41.7	43.2	1.6	41.5	43.5	2	41.5	43.5	2
10013852464	DERWEN GARAGELONDON ROAD HOLYHEAD LL65	Commercial	57.1	58.6	1.5	64.8	63.7	-1.1	52.5	54	1.5	60	58.9	-1.1	52.5	54.5	2	59.5	58.5	-1
10013852466	SEA KAYAKING UK LTDUNIT 1 HOLYHEAD LL6	Commercial	63.3	63.4	0.1	63.5	63.7	0.2	58.5	58.6	0.1	58.7	58.9	0.2	58.5	58.5	0	58.5	58.5	0
10013852468	UNIT 2WAREHOUSE HOLYHEAD LL65 2RD	Commercial	47	47.2	0.2	47	47.4	0.4	42.7	42.9	0.2	42.7	43.1	0.4	42.5	43.5	1	42.5	43.5	1
10013852469	PAVILION SHORNEY VALLEY HOLYHEAD LL65 3	Commercial	54.4	54.8	0.4	56.4	56.7	0.3	49.9	50.3	0.4	51.8	52.1	0.3	50.5	50.5	0	51.5	52.5	1
10013852474	TYN Y COED VALLEY HOLYHEAD LL65 3DA	Residential	56.6	57.7	1.1	55.3	57	1.7	52	53.1	1.1	50.8	52.4	1.6	52.5	53.5	1	50.5	52.5	2
10013852556	PLAS UCHAF HOLYHEAD LL65 4PB	Residential	47.2	48.6	1.4	43.9	43.7	-0.2	42.9	44.3	1.4	39.7	39.5	-0.2	43.5	44.5	1	40.5	39.5	-1
10013852705	TY TOP HOLYHEAD LL65 4PB	Residential	39.8	41.2	1.4	43.1	43.2	0.1	35.7	37.1	1.4	38.9	39	0.1	36.5	37.5	1	39.5	39.5	0
10013852706	CAE BACH EITHIN LLANRHYDDLAD HOLYHEAD L	Residential	63.3	64.9	1.6	63.2	65.7	2.5	58.5	60.1	1.6	58.4	60.9	2.4	58.5	60.5	2	58.5	60.5	2
10013852812	TY MON LLANRHYDDLAD HOLYHEAD LL65 4HT	Residential	44.4	46	1.6	44.3	46.7	2.4	40.2	41.8	1.6	40.1	42.4	2.3	40.5	42.5	2	40.5	42.5	2
10013852968	TRIGFAN LLANFECHELL AMLWCH LL68 0UD	Residential	64.6	66.2	1.6	66.7	69.5	2.8	59.8	61.3	1.6	61.8	64.5	2.7	59.5	61.5	2	61.5	64.5	3
10013852970	STABLE FLATGWAELOD MAWR CAERGEILIOG HOL	Residential	58.3	58.6	0.3	58.2	58.7	0.5	53.7	54	0.3	53.6	54.1	0.5	53.5	54.5	1	53.5	54.5	1
10013853000	ANNEXELLAINWEN HOLYHEAD LL65 3HL	Residential	51.5	51.9	0.4	51.4	51.9	0.5	47.1	47.5	0.4	47	47.5	0.5	47.5	47.5	0	47.5	47.5	0
10013853001	CAN Y GWYNT LLANRHYDDLAD HOLYHEAD LL65	Residential	46.3	47.9	1.6	46.1	48.5	2.4	42	43.6	1.6	41.8	44.2	2.3	42.5	43.5	1	42.5	44.5	2
10013853022	FLATPORTOBELLO LLANFACHRAETH HOLYHEAD L	Residential	57	58.5	1.5	56.1	58.8	2.7	52.4	53.9	1.5	51.5	54.2	2.6	52.5	53.5	1	51.5	54.5	3
10013853025	LLWYN Y FFYNNON LLANFACHRAETH HOLYHEAD	Residential	43.6	44.9	1.3	37.7	38.1	0.4	39.4	40.7	1.3	33.7	34.1	0.4	39.5	40.5	1	34.5	34.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10013853026	CARAVANPANT LLANFAETHLU HOLYHEAD LL65 4	Residential	64.1	65.6	1.5	62.1	64.3	2.2	59.3	60.8	1.5	57.4	59.5	2.1	59.5	60.5	1	57.5	59.5	2
10013853123	FLATPOST OFFICE VALLEY HOLYHEAD LL65 3E	Residential	64.1	64.7	0.6	54.3	54.8	0.5	59.3	59.9	0.6	49.8	50.3	0.5	59.5	59.5	0	49.5	50.5	1
10013853214	PANT Y FEDWENALLTWEN GOCH HOLYHEAD LL6	Residential	57.3	57.8	0.5	57.4	57.9	0.5	52.7	53.2	0.5	52.8	53.3	0.5	52.5	53.5	1	52.5	53.5	1
10013853217	FLATCAPEL BRITANNIA TREGELE CEMAES BAY	Residential	46.9	47.5	0.6	46.9	47.7	0.8	42.6	43.2	0.6	42.6	43.4	0.8	42.5	43.5	1	42.5	43.5	1
10013853228	CYSGOD Y FOEL TREGELE CEMAES BAY LL67 0	Residential	48.3	49.1	0.8	48.3	49.1	0.8	44	44.8	0.8	44	44.8	0.8	44.5	44.5	0	44.5	44.5	0
10013853229	PANT Y BWLCH LLANFECHELL AMLWCH LL68 0U	Residential	39.9	41.3	1.4	41.2	41.8	0.6	35.8	37.2	1.4	37.1	37.7	0.6	36.5	37.5	1	37.5	38.5	1
10013853340	TYN Y GONGL TREGELE CEMAES BAY LL67 0DW	Residential	62.8	63.5	0.7	62.8	63.7	0.9	58	58.7	0.7	58	58.9	0.9	58.5	58.5	0	58.5	58.5	0
10013853600	MEIRLYS LLANFAETHLU HOLYHEAD LL65 4NT	Residential	48	48.9	0.9	60.5	60.7	0.2	43.7	44.6	0.9	55.8	56	0.2	43.5	44.5	1	55.5	56.5	1
10013853608	SUNNEY VALLEYLONDON ROAD HOLYHEAD LL65	Commercial	47.8	48.2	0.4	60.5	60.6	0.1	43.5	43.9	0.4	55.8	55.9	0.1	43.5	44.5	1	55.5	55.5	0
10013853683	VALLEY PRECINCT VALLEY HOLYHEAD LL65 3E	Residential	53.2	53.9	0.7	55.3	55.5	0.2	48.7	49.4	0.7	50.8	51	0.2	48.5	49.5	1	50.5	51.5	1
10013853710	BETHESDA LLANFACHRAETH HOLYHEAD LL65 4U	Residential	49.6	51	1.4	45	43.2	-1.8	45.2	46.6	1.4	40.8	39	-1.7	45.5	46.5	1	41.5	39.5	-2
10013853792	THE CROSSINGSSTATION ROAD VALLEY HOLYHE	Residential	68.4	68.9	0.5	63.3	63.6	0.3	63.5	64	0.5	58.5	58.8	0.3	63.5	63.5	0	58.5	58.5	0
10013853798	GWYN LYS LLANRHYDDLAD HOLYHEAD LL65 4HT	Residential	45.8	47.4	1.6	45.8	48.2	2.4	41.6	43.1	1.6	41.6	43.9	2.3	41.5	43.5	2	41.5	44.5	3
10013854027	CAERDEGOG ISAF LLANFECHELL AMLWCH LL68	Residential	44.4	45.9	1.5	43.6	44.6	1	40.2	41.7	1.5	39.4	40.4	1	40.5	41.5	1	39.5	40.5	1
10013854028	YR HEN EFAILFIELD STREET VALLEY HOLYHEA	Residential	53.9	54.3	0.4	54.5	54.7	0.2	49.4	49.8	0.4	50	50.2	0.2	49.5	49.5	0	50.5	50.5	0
10013854054	TANKS 110M FROM MAGNOX ELECTRIC PLC, WY	Industrial	25.4	26.3	0.9	25.4	26.6	1.2	21.8	22.6	0.9	21.8	22.9	1.2	22.5	23.5	1	22.5	23.5	1
10015268425	TANK 146M FROM HAUL Y GWYNT IN WYLFA PO	Industrial	36.9	37.7	0.8	36.9	37.9	1	32.9	33.7	0.8	32.9	33.9	1	33.5	34.5	1	33.5	34.5	1
10015331666	TRAV C 239M FROM MAGNOX ELECTRIC PLC, W	Industrial	23.9	24.7	0.8	23.9	24.9	1	20.3	21.1	0.8	20.3	21.3	1	20.5	21.5	1	20.5	21.5	1
10015360143	TANKS 438M FROM MAGNOX ELECTRIC PLC, WY	Industrial	22.1	23	0.9	22.1	23.1	1	18.6	19.4	0.9	18.6	19.5	1	19.5	20.5	1	19.5	20.5	1
10015404701	TANKS 132M FROM MAGNOX ELECTRIC PLC, WY	Office	24.4	25.3	0.9	24.4	25.5	1.1	20.8	21.7	0.9	20.8	21.9	1.1	21.5	22.5	1	21.5	22.5	1
10015432047	TANKS 167M FROM MAGNOX ELECTRIC PLC, WY	Office	26.4	27.3	0.9	26.4	27.5	1.1	22.7	23.6	0.9	22.7	23.8	1.1	23.5	24.5	1	23.5	24.5	1
10015464922	TANKS 285M FROM MAGNOX ELECTRIC PLC, WY	Office	28	28.8	0.8	28	29	1	24.3	25.1	0.8	24.3	25.3	1	24.5	25.5	1	24.5	25.5	1
10015470934	WYLFA POWER STATION CEMAES BAY LL67 0D	Office	32.9	33.9	1	33.5	34.5	1	29	30	1	29.6	30.6	1	29.5	30.5	1	30.5	31.5	1

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			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10024355249	WORKSHOP AND YARDRALLT GOCH HOLYHEAD L	Commercial	40.4	41.9	1.5	40.4	41.4	1	36.3	37.8	1.5	36.3	37.3	1	36.5	38.5	2	36.5	37.5	1
10024355351	OLD CHURCH HALL VALLEY HOLYHEAD LL65 3D	Place of Worship	50.3	51.1	0.8	62.6	62.7	0.1	45.9	46.7	0.8	57.9	57.9	0.1	46.5	46.5	0	57.5	57.5	0
10024355359	HALL VALLEY HOLYHEAD LL65 3DP	Place of Worship	50.6	51.2	0.6	54.5	54.7	0.2	46.2	46.8	0.6	50	50.2	0.2	46.5	46.5	0	50.5	50.5	0
10024355360	1 STAD GLASFRYNSTAD GLASFRYN HOLYHEAD	Residential	53.5	53.7	0.2	51.8	52.2	0.4	49	49.2	0.2	47.4	47.8	0.4	49.5	49.5	0	47.5	47.5	0
10024355478	2 STAD GLASFRYNSTAD GLASFRYN HOLYHEAD	Residential	51.4	51.6	0.2	53.6	54	0.4	47	47.2	0.2	49.1	49.5	0.4	47.5	47.5	0	49.5	49.5	0
10024355479	3 STAD GLASFRYNSTAD GLASFRYN HOLYHEAD	Residential	53.5	53.8	0.3	53.6	53.9	0.3	49	49.3	0.3	49.1	49.4	0.3	49.5	49.5	0	49.5	49.5	0
10024355480	4 STAD GLASFRYNSTAD GLASFRYN HOLYHEAD	Residential	49.9	50.2	0.3	53.6	54	0.4	45.5	45.8	0.3	49.1	49.5	0.4	45.5	46.5	1	49.5	49.5	0
10024355481	5 STAD GLASFRYNSTAD GLASFRYN HOLYHEAD	Residential	53.8	54	0.2	51.5	51.9	0.4	49.3	49.5	0.2	47.1	47.5	0.4	49.5	49.5	0	47.5	47.5	0
10024355482	6 STAD GLASFRYNSTAD GLASFRYN HOLYHEAD	Residential	53.8	54	0.2	53.9	54.2	0.3	49.3	49.5	0.2	49.4	49.7	0.3	49.5	49.5	0	49.5	49.5	0
10024355483	7 STAD GLASFRYNSTAD GLASFRYN HOLYHEAD	Residential	54.2	54.4	0.2	54.2	54.6	0.4	49.7	49.9	0.2	49.7	50.1	0.4	49.5	50.5	1	49.5	50.5	1
10024355484	BWTHYN NI LLANFACHRAETH HOLYHEAD LL65 4	Residential	71.3	72.7	1.4	50.2	45.2	-5	66.3	67.6	1.4	45.8	41	-4.9	66.5	67.5	1	46.5	41.5	-5
10024355546	PONT YR ARW LLANFACHRAETH HOLYHEAD LL65	Residential	61	62.4	1.4	50.7	46.8	-3.9	56.3	57.7	1.4	46.3	42.5	-3.8	56.5	57.5	1	46.5	42.5	-4
10024355547	ANNEXTY NEWYDD HOLYHEAD LL65 4UY	Residential	58	59.3	1.3	60	53.8	-6.2	53.4	54.7	1.3	55.3	49.3	-6	53.5	54.5	1	55.5	49.5	-6
10024355548	BRO DAWEL LLANFAETHLU HOLYHEAD LL65 4NW	Residential	60.6	62.2	1.6	60.6	62.9	2.3	55.9	57.5	1.6	55.9	58.1	2.2	55.5	57.5	2	55.5	58.5	3
10024355553	CRIB Y BRYNTAN Y BRYN VALLEY HOLYHEAD L	Residential	55	55.4	0.4	55.3	55.6	0.3	50.5	50.9	0.4	50.8	51.1	0.3	50.5	50.5	0	50.5	51.5	1
10024355668	CRIB Y BRYNTAN Y BRYN VALLEY HOLYHEAD L	Residential	53.3	53.6	0.3	53.4	53.8	0.4	48.8	49.1	0.3	48.9	49.3	0.4	48.5	49.5	1	49.5	49.5	0
10024355669	FLAT 1ABRON HEULOG VALLEY HOLYHEAD LL65	Residential	57.6	57.7	0.1	51	51.2	0.2	53	53.1	0.1	46.6	46.8	0.2	53.5	53.5	0	46.5	46.5	0
10024355681	MEIRIONFATYNRHOS ESTATE CAERGEILIOG HOL	Residential	54.9	55.2	0.3	54.9	55.4	0.5	50.4	50.7	0.3	50.4	50.9	0.5	50.5	50.5	0	50.5	50.5	0
10024355707	BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	49.4	49.7	0.3	52.7	53	0.3	45	45.3	0.3	48.2	48.5	0.3	45.5	45.5	0	48.5	48.5	0
10024355709	HOMESTEADSTATION ROAD VALLEY HOLYHEAD L	Residential	61.9	62.4	0.5	55	55.4	0.4	57.2	57.7	0.5	50.5	50.9	0.4	57.5	57.5	0	50.5	50.5	0
10024355727	CERRIGDRUDION HOLYHEAD LL65 4PB	Residential	47.7	48.9	1.2	47.8	48.4	0.6	43.4	44.6	1.2	43.5	44.1	0.6	43.5	44.5	1	43.5	44.5	1
10024355734	CERRIGDRUDION HOLYHEAD LL65 4PB	Residential	46.2	47.5	1.3	46.9	47.6	0.7	41.9	43.2	1.3	42.6	43.3	0.7	42.5	43.5	1	42.5	43.5	1
10024355735	LLAMEDOSLLYNNON PARK LLANFACHRAETH HOLY	Residential	48	49.4	1.4	44.4	49.1	4.7	43.7	45	1.4	40.2	44.8	4.6	43.5	45.5	2	40.5	44.5	4
10024355760	PANDY MILL LLANFACHRAETH HOLYHEAD LL65	Residential	55.8	57.2	1.4	50.5	51.8	1.3	51.3	52.6	1.4	46.1	47.4	1.3	51.5	52.5	1	46.5	47.5	1

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			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10024355786	ARLANNAUPENRHOS BEACH ROAD HOLYHEAD LL	Residential	47.9	48.1	0.2	47.9	48.1	0.2	43.6	43.8	0.2	43.6	43.8	0.2	43.5	44.5	1	43.5	44.5	1
10024355803	FFORDD PENDYFFRYN VALLEY HOLYHEAD LL65	Residential	52.4	53.1	0.7	50.1	50.4	0.3	48	48.6	0.7	45.7	46	0.3	48.5	48.5	0	45.5	46.5	1
10024355818	BODFAIR BACH LLANRHYDDLAD HOLYHEAD LL65	Residential	50.6	52.2	1.6	50.4	52.9	2.5	46.2	47.8	1.6	46	48.4	2.4	46.5	47.5	1	46.5	48.5	2
10024355819	GWYDDELYN NEWYDD CEMAES BAY LL67 0DA	Residential	46.3	47.1	0.8	49.2	50	0.8	42	42.8	0.8	44.9	45.6	0.8	42.5	43.5	1	45.5	45.5	0
10024355825	TY CROES LLANFAIRYNGHORNWY HOLYHEAD LL6	Residential	50.4	51.9	1.5	46.6	47.7	1.1	46	47.5	1.5	42.3	43.4	1.1	46.5	47.5	1	42.5	43.5	1
10024355829	MINFFORDDSTATION ROAD VALLEY HOLYHEAD L	Residential	63.8	64.3	0.5	59.8	60.1	0.3	59	59.5	0.5	55.1	55.4	0.3	58.5	59.5	1	55.5	55.5	0
10024355889	TAWELFAN TREGELE CEMAES BAY LL67 0DP	Residential	51	51.7	0.7	51	51.7	0.7	46.6	47.3	0.7	46.6	47.3	0.7	46.5	47.5	1	46.5	47.5	1
10024355900	TREM ERYRI LLANFAETHLU HOLYHEAD LL65 4N	Residential	50.5	51.4	0.9	50.2	50.4	0.2	46.1	47	0.9	45.8	46	0.2	46.5	47.5	1	46.5	46.5	0
10024356020	TREM ERYRI LLANFAETHLU HOLYHEAD LL65 4N	Residential	46.3	47.4	1.1	49.4	49.5	0.1	42	43.1	1.1	45	45.1	0.1	42.5	43.5	1	45.5	45.5	0
10024356021	LON DEG HOLYHEAD LL65 2PD	Residential	46.5	46.6	0.1	45.8	46.1	0.3	42.2	42.3	0.1	41.6	41.8	0.3	42.5	42.5	0	41.5	42.5	1
10024356044	LON DEG HOLYHEAD LL65 2PD	Residential	50	50.2	0.2	50	50.2	0.2	45.6	45.8	0.2	45.6	45.8	0.2	45.5	46.5	1	45.5	46.5	1
10024356045	HAFAN Y RHYD LLANRHYDDLAD HOLYHEAD LL65	Residential	45.1	46.7	1.6	45	47.4	2.4	40.9	42.4	1.6	40.8	43.1	2.3	41.5	42.5	1	41.5	43.5	2
10024356115	ALLTWEN GOCH HOLYHEAD LL65 3DX	Residential	56.4	56.9	0.5	56.4	56.9	0.5	51.8	52.3	0.5	51.8	52.3	0.5	51.5	52.5	1	51.5	52.5	1
10024356132	BOTTOM FLATGREENFIELD TERRACE HOLYHEAD	Residential	49.6	49.7	0.1	49.2	49.5	0.3	45.2	45.3	0.1	44.9	45.1	0.3	45.5	45.5	0	45.5	45.5	0
10024356139	1 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	61.3	61.4	0.1	55.4	55.7	0.3	56.6	56.7	0.1	50.9	51.2	0.3	56.5	56.5	0	50.5	51.5	1
10024356227	2 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	56.6	56.7	0.1	56.6	56.9	0.3	52	52.1	0.1	52	52.3	0.3	52.5	52.5	0	52.5	52.5	0
10024356228	3 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	53.6	53.7	0.1	53.6	53.9	0.3	49.1	49.2	0.1	49.1	49.4	0.3	49.5	49.5	0	49.5	49.5	0
10024356229	4 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	69.3	69.3	0	69.1	69.3	0.2	64.4	64.4	0	64.2	64.4	0.2	64.5	64.5	0	64.5	64.5	0
10024356230	5 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	68.9	68.9	0	66.6	66.8	0.2	64	64	0	61.7	61.9	0.2	63.5	63.5	0	61.5	61.5	0
10024356231	6 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	61.7	61.7	0	61.7	61.9	0.2	57	57	0	57	57.2	0.2	56.5	56.5	0	56.5	57.5	1
10024356232	7 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	59.3	59.4	0.1	51.8	52.1	0.3	54.7	54.7	0.1	47.4	47.7	0.3	54.5	54.5	0	47.5	47.5	0
10024356233	8 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	56.4	56.5	0.1	56.4	56.7	0.3	51.8	51.9	0.1	51.8	52.1	0.3	51.5	52.5	1	51.5	52.5	1
10024356234	9 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	56.4	56.5	0.1	56.4	56.7	0.3	51.8	51.9	0.1	51.8	52.1	0.3	51.5	52.5	1	51.5	52.5	1
10024356235	10 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	56.4	56.5	0.1	56.4	56.7	0.3	51.8	51.9	0.1	51.8	52.1	0.3	51.5	52.5	1	51.5	52.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10024356236	11 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	50.6	50.8	0.2	49.4	49.7	0.3	46.2	46.4	0.2	45	45.3	0.3	46.5	46.5	0	45.5	45.5	0
10024356237	12 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	50.6	50.8	0.2	49.4	49.7	0.3	46.2	46.4	0.2	45	45.3	0.3	46.5	46.5	0	45.5	45.5	0
10024356238	14 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	50.6	50.8	0.2	49.4	49.7	0.3	46.2	46.4	0.2	45	45.3	0.3	46.5	46.5	0	45.5	45.5	0
10024356239	15 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	50.6	50.8	0.2	49.4	49.7	0.3	46.2	46.4	0.2	45	45.3	0.3	46.5	46.5	0	45.5	45.5	0
10024356240	16 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	50.6	50.8	0.2	49.4	49.7	0.3	46.2	46.4	0.2	45	45.3	0.3	46.5	46.5	0	45.5	45.5	0
10024356241	17 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	50.6	50.8	0.2	49.4	49.7	0.3	46.2	46.4	0.2	45	45.3	0.3	46.5	46.5	0	45.5	45.5	0
10024356242	18 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	50.6	50.8	0.2	49.4	49.7	0.3	46.2	46.4	0.2	45	45.3	0.3	46.5	46.5	0	45.5	45.5	0
10024356243	19 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	50.6	50.8	0.2	49.4	49.7	0.3	46.2	46.4	0.2	45	45.3	0.3	46.5	46.5	0	45.5	45.5	0
10024356244	20 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	50.6	50.8	0.2	49.4	49.7	0.3	46.2	46.4	0.2	45	45.3	0.3	46.5	46.5	0	45.5	45.5	0
10024356245	21 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	57.5	57.6	0.1	51.3	51.6	0.3	52.9	53	0.1	46.9	47.2	0.3	52.5	53.5	1	47.5	47.5	0
10024356246	22 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	61.6	61.6	0	59.9	60.1	0.2	56.9	56.9	0	55.2	55.4	0.2	56.5	56.5	0	55.5	55.5	0
10024356247	23 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	66.1	66.2	0.1	66.5	66.7	0.2	61.2	61.3	0.1	61.6	61.8	0.2	61.5	61.5	0	61.5	61.5	0
10024356248	24 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	65.6	65.7	0.1	56.4	56.7	0.3	60.8	60.9	0.1	51.8	52.1	0.3	60.5	60.5	0	51.5	52.5	1
10024356249	25 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	65.6	65.7	0.1	56.4	56.7	0.3	60.8	60.9	0.1	51.8	52.1	0.3	60.5	60.5	0	51.5	52.5	1
10024356250	26 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	65.6	65.7	0.1	56.4	56.7	0.3	60.8	60.9	0.1	51.8	52.1	0.3	60.5	60.5	0	51.5	52.5	1
10024356251	27 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	65.6	65.7	0.1	56.4	56.7	0.3	60.8	60.9	0.1	51.8	52.1	0.3	60.5	60.5	0	51.5	52.5	1
10024356252	28 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	66.8	66.9	0.1	51.4	51.7	0.3	61.9	62	0.1	47	47.3	0.3	61.5	61.5	0	47.5	47.5	0
10024356253	29 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	66.8	66.9	0.1	51.4	51.7	0.3	61.9	62	0.1	47	47.3	0.3	61.5	61.5	0	47.5	47.5	0
10024356254	30 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	66.8	66.9	0.1	51.4	51.7	0.3	61.9	62	0.1	47	47.3	0.3	61.5	61.5	0	47.5	47.5	0
10024356255	31 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	66.8	66.9	0.1	51.4	51.7	0.3	61.9	62	0.1	47	47.3	0.3	61.5	61.5	0	47.5	47.5	0
10024356256	32 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	66.8	66.9	0.1	51.4	51.7	0.3	61.9	62	0.1	47	47.3	0.3	61.5	61.5	0	47.5	47.5	0
10024356257	33 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	66.8	66.9	0.1	51.4	51.7	0.3	61.9	62	0.1	47	47.3	0.3	61.5	61.5	0	47.5	47.5	0
10024356258	34 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	56.9	57	0.1	51.8	52.1	0.3	52.3	52.4	0.1	47.4	47.7	0.3	52.5	52.5	0	47.5	47.5	0
10024356259	35 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	56.9	57	0.1	51.8	52.1	0.3	52.3	52.4	0.1	47.4	47.7	0.3	52.5	52.5	0	47.5	47.5	0
10024356260	36 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	56.9	57	0.1	51.8	52.1	0.3	52.3	52.4	0.1	47.4	47.7	0.3	52.5	52.5	0	47.5	47.5	0
10024356261	37 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	56.9	57	0.1	51.8	52.1	0.3	52.3	52.4	0.1	47.4	47.7	0.3	52.5	52.5	0	47.5	47.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10024356262	38 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	56.9	57	0.1	51.8	52.1	0.3	52.3	52.4	0.1	47.4	47.7	0.3	52.5	52.5	0	47.5	47.5	0
10024356263	39 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	56.9	57	0.1	51.8	52.1	0.3	52.3	52.4	0.1	47.4	47.7	0.3	52.5	52.5	0	47.5	47.5	0
10024356264	40 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	52.5	52.7	0.2	54.3	54.6	0.3	48.1	48.2	0.2	49.8	50.1	0.3	48.5	48.5	0	49.5	50.5	1
10024356265	41 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	56.3	56.4	0.1	47.9	48.2	0.3	51.7	51.8	0.1	43.6	43.9	0.3	51.5	51.5	0	43.5	44.5	1
10024356266	42 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	49.9	50	0.1	49.9	50.2	0.3	45.5	45.6	0.1	45.5	45.8	0.3	45.5	45.5	0	45.5	46.5	1
10024356267	43 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	56.8	56.9	0.1	49.2	49.5	0.3	52.2	52.3	0.1	44.9	45.1	0.3	52.5	52.5	0	45.5	45.5	0
10024356268	44 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	56.3	56.4	0.1	48.8	49.1	0.3	51.7	51.8	0.1	44.5	44.8	0.3	51.5	51.5	0	44.5	44.5	0
10024356269	45 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	56.3	56.4	0.1	48.8	49.1	0.3	51.7	51.8	0.1	44.5	44.8	0.3	51.5	51.5	0	44.5	44.5	0
10024356270	46 CYTIR CLOSE HOLYHEAD LL65 2WF	Residential	56.3	56.4	0.1	48.8	49.1	0.3	51.7	51.8	0.1	44.5	44.8	0.3	51.5	51.5	0	44.5	44.5	0
10024356271	VALLEY PRECINCTSTATION ROAD VALLEY HOLY	Residential	59	59.7	0.7	56.2	56.1	-0.1	54.4	55	0.7	51.6	51.5	-0.1	54.5	55.5	1	51.5	51.5	0
10024356297	VALLEY PRECINCTSTATION ROAD VALLEY HOLY	Residential	55.8	56.5	0.7	55.8	55.7	-0.1	51.3	51.9	0.7	51.3	51.2	-0.1	51.5	52.5	1	51.5	51.5	0
10024356298	10 LLYS COEDLYS VALLEY HOLYHEAD LL65 3F	Residential	55.5	55.7	0.2	53.6	53.9	0.3	51	51.2	0.2	49.1	49.4	0.3	51.5	51.5	0	49.5	49.5	0
10024356354	2 LLYS COEDLYS VALLEY HOLYHEAD LL65 3FD	Residential	52.9	53.2	0.3	52.9	53.1	0.2	48.4	48.7	0.3	48.4	48.6	0.2	48.5	48.5	0	48.5	48.5	0
10024356355	3 LLYS COEDLYS VALLEY HOLYHEAD LL65 3FD	Residential	53.8	54.1	0.3	51.6	51.9	0.3	49.3	49.6	0.3	47.2	47.5	0.3	49.5	49.5	0	47.5	47.5	0
10024356356	4 LLYS COEDLYS VALLEY HOLYHEAD LL65 3FD	Residential	52.7	53	0.3	53.4	53.6	0.2	48.2	48.5	0.3	48.9	49.1	0.2	48.5	48.5	0	49.5	49.5	0
10024356357	5 LLYS COEDLYS VALLEY HOLYHEAD LL65 3FD	Residential	52.5	52.9	0.4	54.9	55.2	0.3	48.1	48.4	0.4	50.4	50.7	0.3	48.5	48.5	0	50.5	50.5	0
10024356358	6 LLYS COEDLYS VALLEY HOLYHEAD LL65 3FD	Residential	50.9	51.3	0.4	53.9	54.2	0.3	46.5	46.9	0.4	49.4	49.7	0.3	46.5	47.5	1	49.5	49.5	0
10024356359	7 LLYS COEDLYS VALLEY HOLYHEAD LL65 3FD	Residential	49.8	50.2	0.4	50.2	50.5	0.3	45.4	45.8	0.4	45.8	46.1	0.3	45.5	46.5	1	46.5	46.5	0
10024356360	8 LLYS COEDLYS VALLEY HOLYHEAD LL65 3FD	Residential	54	54.3	0.3	54.8	55	0.2	49.5	49.8	0.3	50.3	50.5	0.2	49.5	49.5	0	50.5	50.5	0
10024356361	9 LLYS COEDLYS VALLEY HOLYHEAD LL65 3FD	Residential	52	52.4	0.4	51.1	51.4	0.3	47.6	48	0.4	46.7	47	0.3	47.5	48.5	1	46.5	47.5	1
10024356362	3 STAD ARDRUM HOLYHEAD LL65 2QH	Residential	42	42.1	0.1	40.3	40.6	0.3	37.9	38	0.1	36.2	36.5	0.3	38.5	38.5	0	36.5	36.5	0
10024356368	4 STAD ARDRUM HOLYHEAD LL65 2QH	Residential	42	42.1	0.1	39.4	39.7	0.3	37.9	38	0.1	35.3	35.6	0.3	38.5	38.5	0	35.5	36.5	1
10024356369	5 STAD ARDRUM HOLYHEAD LL65 2QH	Residential	42.9	43	0.1	42.9	43.1	0.2	38.7	38.8	0.1	38.7	38.9	0.2	39.5	39.5	0	39.5	39.5	0
10024356370	5 THE FLATGREENFIELD TERRACEGREENFIELD	Residential	51.9	52	0.1	44.7	45	0.3	47.5	47.6	0.1	40.5	40.8	0.3	47.5	47.5	0	40.5	41.5	1
10024356445	ARDRO LLANYNGHENEDL HOLYHEAD LL65 3DE	Residential	58.6	59.9	1.3	58.2	59.9	1.7	54	55.2	1.3	53.6	55.2	1.6	54.5	55.5	1	53.5	55.5	2

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			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10024356460	BRYN EGLWYSLONDON ROAD VALLEY HOLYHEAD	Residential	52.9	53.2	0.3	61.8	62	0.2	48.4	48.7	0.3	57.1	57.3	0.2	48.5	48.5	0	57.5	57.5	0
10024356461	MELITALONDON ROAD VALLEY HOLYHEAD LL65	Residential	52.9	53.2	0.3	58.5	58.7	0.2	48.4	48.7	0.3	53.9	54.1	0.2	48.5	48.5	0	53.5	54.5	1
10024356462	TYN Y WAUN CAERGEILIOG HOLYHEAD LL65 3H	Residential	60.3	60.9	0.6	66.8	67.4	0.6	55.6	56.2	0.6	61.9	62.5	0.6	55.5	56.5	1	61.5	62.5	1
10024356611	FLATGREENFIELD TERRACE HOLYHEAD LL65 2	Residential	55.5	55.6	0.1	55.5	55.7	0.2	51	51.1	0.1	51	51.2	0.2	51.5	51.5	0	51.5	51.5	0
10024356628	CYBI GARAGELONDON ROAD HOLYHEAD LL65 2	Commercial	43.1	43.3	0.2	42.9	43.2	0.3	38.9	39.1	0.2	38.7	39	0.3	39.5	39.5	0	39.5	39.5	0
10024356676	ROSIES KEBABSNEUADD TABORSTATION ROAD V	Commercial	69.9	70.4	0.5	62.9	63.2	0.3	64.9	65.4	0.5	58.1	58.4	0.3	64.5	65.5	1	58.5	58.5	0
10024356694	STORE VALLEY HOLYHEAD LL65 3FB	Industrial	59.1	59.6	0.5	56.4	56.7	0.3	54.5	54.9	0.5	51.8	52.1	0.3	54.5	54.5	0	51.5	52.5	1
10024356695	CYMYRAN HOUSE CAERGEILIOG HOLYHEAD LL65	Residential	55.5	55.7	0.2	55.5	55.8	0.3	51	51.2	0.2	51	51.3	0.3	51.5	51.5	0	51.5	51.5	0
10024356710	STORECYMYRAN HOUSE CAERGEILIOG HOLYHEAD	Industrial	52.9	53.1	0.2	52.8	53.2	0.4	48.4	48.6	0.2	48.3	48.7	0.4	48.5	48.5	0	48.5	48.5	0
10024356711	HILLSIDE HOLYHEAD LL65 2SP	Residential	50.6	50.7	0.1	45.9	46.2	0.3	46.2	46.3	0.1	41.7	41.9	0.3	46.5	46.5	0	41.5	42.5	1
10024356725	HILLSIDEKINGSLAND ROAD HOLYHEAD LL65 2	Residential	50.6	50.7	0.1	45.9	46.2	0.3	46.2	46.3	0.1	41.7	41.9	0.3	46.5	46.5	0	41.5	42.5	1
10024356726	HILLSIDEKINGSLAND ROAD HOLYHEAD LL65 2	Residential	50.6	50.7	0.1	45.9	46.2	0.3	46.2	46.3	0.1	41.7	41.9	0.3	46.5	46.5	0	41.5	42.5	1
10024356727	HOLLAND PARK INDUSTRIAL ESTATECYTTIR RO	Commercial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
10024356863	PEACOCKS STORES LTDPENRHOS INDUSTRIAL E	Commercial	50.9	51.1	0.2	53.6	53.9	0.3	46.5	46.7	0.2	49.1	49.4	0.3	46.5	46.5	0	49.5	49.5	0
10024356864	ALL AROUND THE GLOBEROWLANDS UNDERTAKER	Commercial	52.9	53.1	0.2	56.3	56.5	0.2	48.4	48.6	0.2	51.7	51.9	0.2	48.5	48.5	0	51.5	52.5	1
10024356866	AMAZON EXOTICSDYFFRYN SERVICE STATION	Commercial	50.4	50.6	0.2	62.3	62.5	0.2	46	46.2	0.2	57.6	57.8	0.2	46.5	46.5	0	57.5	57.5	0
10024356867	VALLEY SURGERYLONDON ROAD VALLEY HOLYHE	Office	48.4	48.8	0.4	52.4	52.6	0.2	44.1	44.5	0.4	48	48.2	0.2	44.5	44.5	0	48.5	48.5	0
10024356898	GRAYS SKIPSBERWYN YARD HOLYHEAD LL65 2	Commercial	44.1	44.2	0.1	39.3	39.6	0.3	39.9	40	0.1	35.3	35.5	0.3	40.5	40.5	0	35.5	35.5	0
10024356918	K W AUTOSBERWYN YARDPORTHDAFARCH ROAD	Commercial	44.1	44.2	0.1	39.3	39.6	0.3	39.9	40	0.1	35.3	35.5	0.3	40.5	40.5	0	35.5	35.5	0
10024356919	CARAVANPENCRAIG LLANYNGHENEDL HOLYHEAD	Residential	46.1	47.4	1.3	46.5	48.2	1.7	41.8	43.1	1.3	42.2	43.9	1.6	42.5	43.5	1	42.5	44.5	2
10024356994	COTTAGEBRYN TEG VALLEY HOLYHEAD LL65 3B	Commercial	37.3	38.3	1	43.4	44.2	0.8	33.3	34.3	1	39.2	40	0.8	33.5	34.5	1	39.5	40.5	1
10024356995	FLATREFAIL BACH HOLYHEAD LL65 2PR	Residential	52.9	53	0.1	52.9	53	0.1	48.4	48.5	0.1	48.4	48.5	0.1	48.5	48.5	0	48.5	48.5	0
10024356996	POUNDLANDPENRHOS INDUSTRIAL ESTATE HOL	Commercial	53.8	54.1	0.3	54.3	54.7	0.4	49.3	49.6	0.3	49.8	50.2	0.4	49.5	49.5	0	49.5	50.5	1
10024357175	KFC HOLYHEAD LL65 2UQ	Commercial	50.3	50.5	0.2	50.3	50.6	0.3	45.9	46.1	0.2	45.9	46.2	0.3	46.5	46.5	0	46.5	46.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10024357176	YSGUBOR DDEGWM ANGLESEY LL67 0DT	Residential	49.7	50.7	1	61.5	62.6	1.1	45.3	46.3	1	56.8	57.9	1.1	45.5	46.5	1	56.5	57.5	1
10024357205	ANN EVANS ANTIQUES VALLEY HOLYHEAD LL65	Commercial	63.2	63.7	0.5	67.5	67.8	0.3	58.4	58.9	0.5	62.6	62.9	0.3	58.5	58.5	0	62.5	62.5	0
10024357247	SUKOTHAI RESTAURANT VALLEY HOLYHEAD LL6	Commercial	71.8	73	1.2	63.2	63.5	0.3	66.8	67.9	1.2	58.4	58.7	0.3	66.5	67.5	1	58.5	58.5	0
10024357248	CLUBROOM HOLYHEAD LL65 2SP	Commercial	50.9	51	0.1	44.4	44.7	0.3	46.5	46.6	0.1	40.2	40.5	0.3	46.5	46.5	0	40.5	40.5	0
10024357265	CARAVANGWAELOD BACH CAERGEILIOG HOLYHEA	Residential	57.3	57.6	0.3	60.4	60.7	0.3	52.7	53	0.3	55.7	56	0.3	52.5	53.5	1	55.5	56.5	1
10024357292	HILLSIDEKINGSLAND ROAD HOLYHEAD LL65 2	Residential	50.6	50.7	0.1	45.9	46.2	0.3	46.2	46.3	0.1	41.7	41.9	0.3	46.5	46.5	0	41.5	42.5	1
10024357313	PURE BEAUTY VALLEY HOLYHEAD LL65 3EB	Residential	68.8	70	1.2	63.6	63.9	0.3	63.9	65	1.2	58.8	59.1	0.3	63.5	64.5	1	58.5	59.5	1
10024357333	COTTAGERALLT GOCH LLANRHYDDLAD HOLYHEAD	Residential	47.7	49.2	1.5	42.3	43.9	1.6	43.4	44.9	1.5	38.2	39.7	1.6	43.5	45.5	2	38.5	40.5	2
10024357419	COTTAGERHOS Y GAER HOLYHEAD LL65 4NH	Residential	53.2	54.6	1.4	48.3	50.4	2.1	48.7	50.1	1.4	44	46	2	48.5	50.5	2	44.5	46.5	2
10024357428	BUNGALOWAEL Y BRYN LLANFAETHLU HOLYHEAD	Residential	57.9	59.5	1.6	59.6	62	2.4	53.3	54.8	1.6	54.9	57.3	2.3	53.5	54.5	1	54.5	57.5	3
10024357437	CARAVANBOD HALEN LLANFAETHLU HOLYHEAD L	Residential	62.4	64	1.6	65.4	67.7	2.3	57.7	59.2	1.6	60.6	62.8	2.2	57.5	59.5	2	60.5	62.5	2
10024357438	FLAT ABOVEVALLEY PRECINCTSTATION ROAD V	Residential	62.4	63	0.6	70.1	70.4	0.3	57.7	58.2	0.6	65.1	65.4	0.3	57.5	58.5	1	64.5	65.5	1
10024357455	COTTAGETY MAWR CAERGEILIOG HOLYHEAD LL6	Residential	60.9	61.2	0.3	60.9	61.2	0.3	56.2	56.5	0.3	56.2	56.5	0.3	56.5	56.5	0	56.5	56.5	0
10024357456	CARAVANYSGUBOR DDEGWM ANGLESEY LL67 0D	Residential	49.7	50.7	1	61.5	62.6	1.1	45.3	46.3	1	56.8	57.9	1.1	45.5	46.5	1	56.5	57.5	1
10024357476	TAFARN Y CWCH UNITS CAERGEILIOG HOLYHEA	Commercial	51.3	51.7	0.4	51.5	52	0.5	46.9	47.3	0.4	47.1	47.6	0.5	47.5	47.5	0	47.5	47.5	0
10024357540	UNIT 1TAFARN Y CWCH UNITS CAERGEILIOG H	Commercial	51.3	51.7	0.4	51.5	52	0.5	46.9	47.3	0.4	47.1	47.6	0.5	47.5	47.5	0	47.5	47.5	0
10024357541	UNIT 2TAFARN Y CWCH UNITS CAERGEILIOG H	Commercial	51.3	51.7	0.4	51.5	52	0.5	46.9	47.3	0.4	47.1	47.6	0.5	47.5	47.5	0	47.5	47.5	0
10024357542	UNIT 3TAFARN Y CWCH UNITS CAERGEILIOG H	Commercial	51.3	51.7	0.4	51.5	52	0.5	46.9	47.3	0.4	47.1	47.6	0.5	47.5	47.5	0	47.5	47.5	0
10024357543	UNIT 4TAFARN Y CWCH UNITS CAERGEILIOG H	Commercial	51.3	51.7	0.4	51.5	52	0.5	46.9	47.3	0.4	47.1	47.6	0.5	47.5	47.5	0	47.5	47.5	0
10024357544	UNIT 5TAFARN Y CWCH UNITS CAERGEILIOG H	Commercial	51.3	51.7	0.4	51.5	52	0.5	46.9	47.3	0.4	47.1	47.6	0.5	47.5	47.5	0	47.5	47.5	0
10024357545	HOLLAND PARK INDUSTRIAL ESTATE HOLYHEA	Industrial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
10024357589	SAFFRONLONDON ROAD HOLYHEAD LL65 2RB	Residential	49	49.2	0.2	47.6	48	0.4	44.7	44.9	0.2	43.3	43.7	0.4	44.5	45.5	1	43.5	43.5	0
10024357610	BISTRO VALLEY HOLYHEAD LL65 3EB	Commercial	69.3	69.8	0.5	69.3	69.5	0.2	64.4	64.8	0.5	64.4	64.5	0.2	64.5	64.5	0	64.5	64.5	0
10024357617	CARAVAN PRIMROSE LLANRHYDDLAD HOLYHEAD	Residential	54.3	55.9	1.6	54.1	56.6	2.5	49.8	51.4	1.6	49.6	52	2.4	49.5	51.5	2	49.5	52.5	3

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			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10024357791	CARAVANABER ALAW LLANFACHRAETH HOLYHEAD	Residential	43.8	45.1	1.3	38.4	39.3	0.9	39.6	40.9	1.3	34.4	35.3	0.9	39.5	41.5	2	34.5	35.5	1
10024357802	COMPETETIVE STREAKNEUADD TABOR VALLEY H	Commercial	69.8	70.3	0.5	69.6	69.9	0.3	64.8	65.3	0.5	64.6	64.9	0.3	64.5	65.5	1	64.5	64.5	0
10024357831	ATMVALLEY PRECINCT VALLEY HOLYHEAD LL65	Commercial	57.5	58.1	0.6	65.7	66	0.3	52.9	53.5	0.6	60.9	61.2	0.3	52.5	53.5	1	60.5	61.5	1
10024357840	TYN RARDDCARNA TERRACE VALLEY HOLYHEAD	Residential	57.9	58.4	0.5	52.8	53.2	0.4	53.3	53.8	0.5	48.3	48.7	0.4	53.5	53.5	0	48.5	48.5	0
10024357844	PENLONCARNA TERRACE VALLEY HOLYHEAD LL6	Residential	61.3	61.7	0.4	61.3	61.6	0.3	56.6	57	0.4	56.6	56.9	0.3	56.5	56.5	0	56.5	56.5	0
10024357845	LONDON ROAD VALLEY HOLYHEAD LL65 3DP	Residential	54.9	55.1	0.2	72.8	72.9	0.1	50.4	50.6	0.2	67.7	67.8	0.1	50.5	50.5	0	67.5	67.5	0
10024357898	CAPEL HERMON LLANYNGHENEDL HOLYHEAD LL6	Residential	64.3	65.7	1.4	67.3	69.2	1.9	59.5	60.9	1.4	62.4	64.3	1.8	59.5	60.5	1	62.5	64.5	2
10024357903	CARAVANGWYDDELYN FACH CEMAES BAY LL67	Residential	47.8	48.6	0.8	47.8	48.7	0.9	43.5	44.3	0.8	43.5	44.4	0.9	43.5	44.5	1	43.5	44.5	1
10024357912	CHALETGWAELOD MAWR CAERGEILIOG HOLYHEAD	Residential	58.9	59.2	0.3	59.4	59.9	0.5	54.3	54.6	0.3	54.7	55.2	0.5	54.5	54.5	0	54.5	55.5	1
10024357952	HERMON HOUSEFIELD STREET VALLEY HOLYHEA	Residential	51.8	52.1	0.3	53.2	53.5	0.3	47.4	47.7	0.3	48.7	49	0.3	47.5	47.5	0	48.5	49.5	1
10024357980	GWYNLLYS VALLEY HOLYHEAD LL65 3EG	Residential	53.7	54	0.3	53.7	53.9	0.2	49.2	49.5	0.3	49.2	49.4	0.2	49.5	49.5	0	49.5	49.5	0
10024357981	PENNANT CAERGEILIOG HOLYHEAD LL65 3YD	Residential	51	51.3	0.3	51	51.4	0.4	46.6	46.9	0.3	46.6	47	0.4	46.5	47.5	1	46.5	47.5	1
10024357995	1 GWERYD VILLASKINGSLAND ROAD HOLYHEAD	Residential	51.3	51.7	0.4	44.3	44.9	0.6	46.9	47.3	0.4	40.1	40.7	0.6	47.5	47.5	0	40.5	40.5	0
10024358058	GWERYD VILLAS HOLYHEAD LL65 2YF	Residential	51.8	52.2	0.4	51.3	52	0.7	47.4	47.8	0.4	46.9	47.6	0.7	47.5	47.5	0	47.5	47.5	0
10024358059	BRYN GOLAU LLANFAETHLU HOLYHEAD LL65 4N	Residential	54.8	55.9	1.1	63	64.2	1.2	50.3	51.4	1.1	58.2	59.4	1.2	50.5	51.5	1	58.5	59.5	1
10024358162	THE STANDING STONESPENRHOS INDUSTRIAL E	Industrial	56.7	57	0.3	56.7	57.2	0.5	52.1	52.4	0.3	52.1	52.6	0.5	52.5	52.5	0	52.5	52.5	0
10024358188	FLATBOSTON TERRACE VALLEY HOLYHEAD LL65	Residential	54.7	55	0.3	54.7	54.9	0.2	50.2	50.5	0.3	50.2	50.4	0.2	50.5	50.5	0	50.5	50.5	0
10024358196	CARAVANDRONWY HOLYHEAD LL65 4YB	Residential	46.1	47.6	1.5	46.1	48.6	2.5	41.8	43.3	1.5	41.8	44.3	2.4	42.5	43.5	1	42.5	44.5	2
10024358307	CARAVANCAE MAWR LLANFECHELL AMLWCH LL68	Residential	45.3	46.9	1.6	45	46	1	41.1	42.6	1.6	40.8	41.8	1	41.5	42.5	1	41.5	42.5	1
10024358308	CARAVANRALLT GOCH HOLYHEAD LL65 4DY	Residential	46.8	48.2	1.4	46.9	46.1	-0.8	42.5	43.9	1.4	42.6	41.8	-0.8	42.5	44.5	2	42.5	42.5	0
10024358367	EBENEZER CHAPEL HOUSEKINGSLAND ROAD HO	Residential	46	46.2	0.2	46.2	46.6	0.4	41.8	41.9	0.2	41.9	42.3	0.4	42.5	42.5	0	42.5	42.5	0
10024358464	FLATNEUADD TABOR VALLEY HOLYHEAD LL65 3	Residential	70.7	71.2	0.5	70.6	70.9	0.3	65.7	66.2	0.5	65.6	65.9	0.3	65.5	66.5	1	65.5	65.5	0
10024358467	GWEL Y MYNYDD CAERGEILIOG HOLYHEAD LL65	Residential	51.8	52.2	0.4	51.8	52.3	0.5	47.4	47.8	0.4	47.4	47.9	0.5	47.5	47.5	0	47.5	48.5	1
10024358502	CARAVANGWEL Y MYNYDDCYMYRAN ROAD CAERGE	Residential	51.8	52.2	0.4	51.8	52.3	0.5	47.4	47.8	0.4	47.4	47.9	0.5	47.5	47.5	0	47.5	48.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10024358503	ANNEXEGWAELOD MAWR CAERGEILIOG HOLYHEAD	Residential	58.4	58.7	0.3	58.3	58.8	0.5	53.8	54.1	0.3	53.7	54.2	0.5	53.5	54.5	1	53.5	54.5	1
10024358588	HILLSIDE HOLYHEAD LL65 2SP	Residential	50.6	50.7	0.1	45.9	46.2	0.3	46.2	46.3	0.1	41.7	41.9	0.3	46.5	46.5	0	41.5	42.5	1
10024358621	ANNEXEBRYN LLANFACHRAETH HOLYHEAD LL65	Residential	41.5	42.8	1.3	39.7	43.5	3.8	37.4	38.6	1.3	35.6	39.3	3.7	37.5	38.5	1	36.5	39.5	3
10024358623	THE GRANARYBRONALLT LLANYNGHENEDL HOLYH	Residential	59	60.2	1.2	55.3	57	1.7	54.4	55.5	1.2	50.8	52.4	1.6	54.5	55.5	1	50.5	52.5	2
10024358716	COTTAGEGERLLAN BODEDERN HOLYHEAD LL65 3	Residential	55.8	56	0.2	54.6	55	0.4	51.3	51.5	0.2	50.1	50.5	0.4	51.5	51.5	0	50.5	50.5	0
10024358717	APRICOT COTTAGE LLANFACHRAETH HOLYHEAD	Residential	43.6	44.9	1.3	40.8	40.5	-0.3	39.4	40.7	1.3	36.7	36.4	-0.3	39.5	40.5	1	37.5	36.5	-1
10024358786	PUMP HOUSE ONE LLANFACHRAETH HOLYHEAD L	Industrial	41.3	42.5	1.2	40.7	40.5	-0.2	37.2	38.4	1.2	36.6	36.4	-0.2	37.5	38.5	1	36.5	36.5	0
10024358886	PUMP HOUSE LLANFACHRAETH HOLYHEAD LL65	Industrial	39.8	41	1.2	39.8	42	2.2	35.7	36.9	1.2	35.7	37.9	2.1	36.5	37.5	1	36.5	38.5	2
10024358898	PUMP LLANFACHRAETH HOLYHEAD LL65 4DH	Industrial	42.1	43.4	1.3	38.7	40.1	1.4	38	39.2	1.3	34.7	36	1.4	38.5	39.5	1	35.5	36.5	1
10024358928	PUMPING STATION TREARDDUR BAY HOLYHEAD	Industrial	61.4	61.6	0.2	62.3	62.6	0.3	56.7	56.9	0.2	57.6	57.9	0.3	56.5	56.5	0	57.5	57.5	0
10024359108	FLATTHE STANDING STONES HOLYHEAD LL65	Commercial	56.7	57	0.3	56.7	57.2	0.5	52.1	52.4	0.3	52.1	52.6	0.5	52.5	52.5	0	52.5	52.5	0
10024359200	BODFAIR BACH LLANRHYDDLAD HOLYHEAD LL65	Residential	56.6	58.2	1.6	56.5	59	2.5	52	53.6	1.6	51.9	54.4	2.4	52.5	53.5	1	52.5	54.5	2
10024359204	BODFAIR BACH LLANRHYDDLAD HOLYHEAD LL65	Residential	59.1	60.7	1.6	57.7	60.2	2.5	54.5	56	1.6	53.1	55.5	2.4	54.5	56.5	2	53.5	55.5	2
10024359205	YSGOLDY PEDAIR LLANRHYDDLAD HOLYHEAD LL	Residential	65.3	66.9	1.6	65.4	67.9	2.5	60.5	62	1.6	60.6	63	2.4	60.5	61.5	1	60.5	62.5	2
10024359206	YSGOLDY PEDAIR LLANRHYDDLAD HOLYHEAD LL	Residential	65.3	66.9	1.6	64.4	66.9	2.5	60.5	62	1.6	59.6	62	2.4	60.5	61.5	1	59.5	61.5	2
10024359207	THE SQUARELONDON ROAD VALLEY HOLYHEAD L	Commercial	62.4	63.8	1.4	65.5	62.9	-2.6	57.7	59	1.4	60.7	58.1	-2.5	57.5	58.5	1	60.5	58.5	-2
10024359344	REFAIL NEWYDD LLANYNGHENEDL HOLYHEAD LL	Residential	53.3	54.7	1.4	53.3	55.2	1.9	48.8	50.2	1.4	48.8	50.7	1.8	48.5	50.5	2	48.5	50.5	2
10024359354	TAN Y FELIN CAERGEILIOG HOLYHEAD LL65 3	Residential	50.8	51.1	0.3	50.8	51.2	0.4	46.4	46.7	0.3	46.4	46.8	0.4	46.5	46.5	0	46.5	46.5	0
10024359387	CARAVAN PARKDRONWY HOLYHEAD LL65 4YB	Commercial	48.8	50.2	1.4	48.5	50.7	2.2	44.5	45.8	1.4	44.2	46.3	2.1	44.5	46.5	2	44.5	46.5	2
10024359405	ABERNANT LLANYNGHENEDL HOLYHEAD LL65 3D	Residential	64.1	65.5	1.4	65.4	67.4	2	59.3	60.7	1.4	60.6	62.5	1.9	59.5	60.5	1	60.5	62.5	2
10024359677	KINGDOM HALL HOLYHEAD LL65 2TJ	Place of Worship	44.4	44.6	0.2	47.5	47.8	0.3	40.2	40.4	0.2	43.2	43.5	0.3	40.5	40.5	0	43.5	43.5	0
10024359711	BRYN CARREG LLANFAETHLU HOLYHEAD LL65 4	Residential	51	52.5	1.5	45.5	47.5	2	46.6	48.1	1.5	41.3	43.2	1.9	46.5	48.5	2	41.5	43.5	2
10024359753	LILI WEN LLANFACHRAETH HOLYHEAD LL65 4U	Residential	43.6	44.9	1.3	38.5	38.3	-0.2	39.4	40.7	1.3	34.5	34.3	-0.2	39.5	40.5	1	34.5	34.5	0

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			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10024359759	ALARCH LLANFACHRAETH HOLYHEAD LL65 4UR	Residential	43.6	44.9	1.3	38.5	38.3	-0.2	39.4	40.7	1.3	34.5	34.3	-0.2	39.5	40.5	1	34.5	34.5	0
10024359760	CARAVANGWEL Y HAUL TREGELE CEMAES BAY L	Residential	48.4	48.8	0.4	48.4	49	0.6	44.1	44.5	0.4	44.1	44.7	0.6	44.5	44.5	0	44.5	44.5	0
10024359763	COTTAGEBRYN LLANFACHRAETH HOLYHEAD LL65	Residential	45.6	46.9	1.3	39.7	43.9	4.2	41.4	42.6	1.3	35.6	39.7	4.1	41.5	42.5	1	36.5	40.5	4
10024359802	VALLEY RAILWAY STATION VALLEY HOLYHEAD	Industrial	67.8	68.3	0.5	67.8	68.1	0.3	62.9	63.4	0.5	62.9	63.2	0.3	62.5	63.5	1	62.5	63.5	1
10024359806	SHOPTROS Y FFORDD TREGELE HOLYHEAD LL67	Commercial	54.3	55.2	0.9	55.1	56.3	1.2	49.8	50.7	0.9	50.6	51.7	1.2	49.5	50.5	1	50.5	51.5	1
10024359818	OAKFIELD VILLAOAKFIELD TREGELE HOLYHEAD	Residential	52.4	53.3	0.9	52.4	53.6	1.2	48	48.8	0.9	48	49.1	1.2	48.5	48.5	0	48.5	49.5	1
10024359819	CHALETTHE RECTORY HOLYHEAD LL65 4YA	Residential	56.2	57.4	1.2	46	44.1	-1.9	51.6	52.8	1.2	41.8	39.9	-1.8	51.5	52.5	1	42.5	40.5	-2
10024359844	LLAIN TYN PWLLCYTIR CLOSE HOLYHEAD LL6	Residential	51.8	52	0.2	50.3	50.7	0.4	47.4	47.6	0.2	45.9	46.3	0.4	47.5	47.5	0	46.5	46.5	0
10024359928	LLAIN TYN PWLLCYTIR CLOSE HOLYHEAD LL6	Residential	52.3	52.4	0.1	52.3	52.6	0.3	47.9	48	0.1	47.9	48.2	0.3	48.5	48.5	0	48.5	48.5	0
10024359929	LLAIN TYN PWLLCYTIR CLOSE HOLYHEAD LL6	Residential	52.5	52.6	0.1	52.5	52.8	0.3	48.1	48.2	0.1	48.1	48.3	0.3	48.5	48.5	0	48.5	48.5	0
10024359930	LLAIN TYN PWLLCYTIR CLOSE HOLYHEAD LL6	Residential	51.8	52	0.2	50.3	50.7	0.4	47.4	47.6	0.2	45.9	46.3	0.4	47.5	47.5	0	46.5	46.5	0
10024359931	LLAIN TYN PWLLCYTIR CLOSE HOLYHEAD LL6	Residential	51.8	52	0.2	50.3	50.7	0.4	47.4	47.6	0.2	45.9	46.3	0.4	47.5	47.5	0	46.5	46.5	0
10024359932	LLAIN TYN PWLLCYTIR CLOSE HOLYHEAD LL6	Residential	53.4	53.5	0.1	53.4	53.7	0.3	48.9	49	0.1	48.9	49.2	0.3	49.5	49.5	0	49.5	49.5	0
10024359933	LLAIN TYN PWLLCYTIR CLOSE HOLYHEAD LL6	Residential	53.4	53.5	0.1	53.4	53.7	0.3	48.9	49	0.1	48.9	49.2	0.3	49.5	49.5	0	49.5	49.5	0
10024359934	LLAIN TYN PWLLCYTIR CLOSE HOLYHEAD LL6	Residential	52.3	52.4	0.1	52.3	52.6	0.3	47.9	48	0.1	47.9	48.2	0.3	48.5	48.5	0	48.5	48.5	0
10024359935	LLAIN TYN PWLLCYTIR CLOSE HOLYHEAD LL6	Residential	52.5	52.6	0.1	52.5	52.8	0.3	48.1	48.2	0.1	48.1	48.3	0.3	48.5	48.5	0	48.5	48.5	0
10024359936	LLAIN TYN PWLLCYTIR CLOSE HOLYHEAD LL6	Residential	53.4	53.5	0.1	53.4	53.7	0.3	48.9	49	0.1	48.9	49.2	0.3	49.5	49.5	0	49.5	49.5	0
10024359937	LLAIN TYN PWLLCYTIR CLOSE HOLYHEAD LL6	Residential	52.5	52.6	0.1	52.5	52.8	0.3	48.1	48.2	0.1	48.1	48.3	0.3	48.5	48.5	0	48.5	48.5	0
10024359938	LLAIN TYN PWLLCYTIR CLOSE HOLYHEAD LL6	Residential	52.3	52.4	0.1	52.3	52.6	0.3	47.9	48	0.1	47.9	48.2	0.3	48.5	48.5	0	48.5	48.5	0
10024359939	YSGOL RHYD Y LLAN LLANFAETHLU HOLYHEAD	School	52.6	54.2	1.6	46.5	48.2	1.7	48.2	49.7	1.6	42.2	43.9	1.6	48.5	49.5	1	42.5	44.5	2
10024359940	ELECTRICITY SUB STATION 12M FROM 149 LO	Industrial	44.4	44.5	0.1	43.4	43.7	0.3	40.2	40.3	0.1	39.2	39.5	0.3	40.5	40.5	0	39.5	39.5	0
10024760879	ELECTRICITY SUB STATION 12M FROM 9 PENL	Industrial	50.4	50.5	0.1	50.4	50.6	0.2	46	46.1	0.1	46	46.2	0.2	46.5	46.5	0	46.5	46.5	0
10024993885	ELECTRICITY SUB STATION 1M FROM 56 LLAN	Industrial	47.7	47.9	0.2	47.7	48	0.3	43.4	43.6	0.2	43.4	43.7	0.3	43.5	43.5	0	43.5	43.5	0
10024994796	ELECTRICITY SUB STATION AT HOLYHEAD LEI	Industrial	49.1	49.7	0.6	49	50	1	44.8	45.3	0.6	44.7	45.6	1	44.5	45.5	1	44.5	45.5	1
10024999919	ELECTRICITY SUB STATION 38M FROM BONDS	Industrial	54.3	54.5	0.2	54.1	54.5	0.4	49.8	50	0.2	49.6	50	0.4	49.5	50.5	1	49.5	50.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
10025289754	ELECTRICITY SUB STATION 12M FROM MON CO	Industrial	51.7	51.9	0.2	51.8	52.1	0.3	47.3	47.5	0.2	47.4	47.7	0.3	47.5	47.5	0	47.5	47.5	0
10025289755	ELECTRICITY SUB STATION 74M FROM VENTUR	Industrial	53.3	53.5	0.2	53.3	53.6	0.3	48.8	49	0.2	48.8	49.1	0.3	48.5	49.5	1	48.5	49.5	1
10025298353	ELECTRICITY SUB STATION 251M FROM ROADK	Industrial	53.9	55	1.1	53.9	55.4	1.5	49.4	50.5	1.1	49.4	50.9	1.5	49.5	50.5	1	49.5	50.5	1
10025362342	ELECTRICITY SUB STATION 3M FROM TESCO S	Industrial	60.1	60.1	0	58.9	59.1	0.2	55.4	55.4	0	54.3	54.5	0.2	55.5	55.5	0	54.5	54.5	0
10025398614	1 ARTHUR STREET HOLYHEAD LL65 2SF	Residential	48.8	48.9	0.1	48.8	49.1	0.3	44.5	44.6	0.1	44.5	44.8	0.3	44.5	44.5	0	44.5	44.5	0
100100001244	2 ARTHUR STREET HOLYHEAD LL65 2SF	Residential	48.1	48.2	0.1	48.3	48.5	0.2	43.8	43.9	0.1	44	44.2	0.2	44.5	44.5	0	44.5	44.5	0
100100001245	3 ARTHUR STREET HOLYHEAD LL65 2SF	Residential	44	44.1	0.1	48.5	48.7	0.2	39.8	39.9	0.1	44.2	44.4	0.2	40.5	40.5	0	44.5	44.5	0
100100001246	4 ARTHUR STREET HOLYHEAD LL65 2SF	Residential	48.2	48.3	0.1	44.5	44.7	0.2	43.9	44	0.1	40.3	40.5	0.2	44.5	44.5	0	40.5	40.5	0
100100001247	5 ARTHUR STREET HOLYHEAD LL65 2SF	Residential	43.9	44	0.1	43.9	44.2	0.3	39.7	39.8	0.1	39.7	40	0.3	40.5	40.5	0	40.5	40.5	0
100100001248	6 ARTHUR STREET HOLYHEAD LL65 2SF	Residential	47.5	47.6	0.1	47.5	47.7	0.2	43.2	43.3	0.1	43.2	43.4	0.2	43.5	43.5	0	43.5	43.5	0
100100001249	8 ARTHUR STREET HOLYHEAD LL65 2SF	Residential	47.5	47.6	0.1	43.9	44.2	0.3	43.2	43.3	0.1	39.7	40	0.3	43.5	43.5	0	40.5	40.5	0
100100001251	10 ARTHUR STREET HOLYHEAD LL65 2SF	Residential	43.9	44	0.1	43.9	44.2	0.3	39.7	39.8	0.1	39.7	40	0.3	40.5	40.5	0	40.5	40.5	0
100100001253	12 ARTHUR STREET HOLYHEAD LL65 2SF	Residential	46.9	47	0.1	43.4	43.7	0.3	42.6	42.7	0.1	39.2	39.5	0.3	42.5	42.5	0	39.5	39.5	0
100100001255	14 ARTHUR STREET HOLYHEAD LL65 2SF	Residential	44.1	44.2	0.1	44.1	44.4	0.3	39.9	40	0.1	39.9	40.2	0.3	40.5	40.5	0	40.5	40.5	0
100100001257	15 ARTHUR STREET HOLYHEAD LL65 2SF	Residential	46.4	46.4	0	46.4	46.6	0.2	42.1	42.1	0	42.1	42.3	0.2	42.5	42.5	0	42.5	42.5	0
100100001258	16 ARTHUR STREET HOLYHEAD LL65 2SF	Residential	46.3	46.4	0.1	42.8	43.1	0.3	42	42.1	0.1	38.6	38.9	0.3	42.5	42.5	0	38.5	39.5	1
100100001259	2 BRYN ERW ROAD HOLYHEAD LL65 2PY	Residential	49.5	49.7	0.2	49.7	50.1	0.4	45.1	45.3	0.2	45.3	45.7	0.4	45.5	45.5	0	45.5	45.5	0
100100001306	4 ISFRYNBRYN ERW ROAD HOLYHEAD LL65 2P	Residential	48.7	48.9	0.2	48.8	49.1	0.3	44.4	44.6	0.2	44.5	44.8	0.3	44.5	44.5	0	44.5	44.5	0
100100001308	6 BRYN ERW ROAD HOLYHEAD LL65 2PY	Residential	48.9	49.1	0.2	47.9	48.2	0.3	44.6	44.8	0.2	43.6	43.9	0.3	44.5	44.5	0	43.5	44.5	1
100100001309	7 TREGARONBRYN ERW ROAD HOLYHEAD LL65	Residential	48.3	48.5	0.2	46.9	47.3	0.4	44	44.2	0.2	42.6	43	0.4	44.5	44.5	0	42.5	43.5	1
100100001310	8 BRYN ERW ROAD HOLYHEAD LL65 2PY	Residential	46.5	46.7	0.2	48.4	48.7	0.3	42.2	42.4	0.2	44.1	44.4	0.3	42.5	42.5	0	44.5	44.5	0
100100001311	9 BRYN ERW ROAD HOLYHEAD LL65 2PY	Residential	49	49.2	0.2	48.4	48.7	0.3	44.7	44.9	0.2	44.1	44.4	0.3	44.5	45.5	1	44.5	44.5	0
100100001312	10 BRYN ERW ROAD HOLYHEAD LL65 2PY	Residential	49.3	49.5	0.2	48.6	49	0.4	45	45.1	0.2	44.3	44.7	0.4	45.5	45.5	0	44.5	44.5	0
100100001313	11 BRYN ERW ROAD HOLYHEAD LL65 2PY	Residential	50	50.1	0.1	49.4	49.7	0.3	45.6	45.7	0.1	45	45.3	0.3	45.5	45.5	0	45.5	45.5	0
100100001314	12 BRYN ERW ROAD HOLYHEAD LL65 2PY	Residential	46.3	46.5	0.2	50.3	50.6	0.3	42	42.2	0.2	45.9	46.2	0.3	42.5	42.5	0	46.5	46.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100001315	14 BRYN ERW ROAD HOLYHEAD LL65 2PY	Residential	50.8	51	0.2	50.8	51.2	0.4	46.4	46.6	0.2	46.4	46.8	0.4	46.5	46.5	0	46.5	46.5	0
100100001316	15 BRYN ERW ROAD HOLYHEAD LL65 2PY	Residential	49.4	49.6	0.2	49.4	49.8	0.4	45	45.2	0.2	45	45.4	0.4	45.5	45.5	0	45.5	45.5	0
100100001317	17 CARTREFBRYN ERW ROAD HOLYHEAD LL65	Residential	50.4	50.6	0.2	50.3	50.6	0.3	46	46.2	0.2	45.9	46.2	0.3	46.5	46.5	0	46.5	46.5	0
100100001318	2 CAE BRAENAR HOLYHEAD LL65 2PN	Residential	48.4	48.6	0.2	48.4	48.7	0.3	44.1	44.3	0.2	44.1	44.4	0.3	44.5	44.5	0	44.5	44.5	0
100100001469	4 CAE BRAENAR HOLYHEAD LL65 2PN	Residential	45.1	45.3	0.2	44.8	45.1	0.3	40.9	41.1	0.2	40.6	40.9	0.3	41.5	41.5	0	40.5	41.5	1
100100001470	ARWELFALLANFAWR ROAD HOLYHEAD LL65 2PP	Residential	45.3	45.5	0.2	45.1	45.4	0.3	41.1	41.3	0.2	40.9	41.2	0.3	41.5	41.5	0	41.5	41.5	0
100100001509	1 CLIFTON TERRACE HOLYHEAD LL65 2SL	Residential	48.1	48.2	0.1	46.9	47.2	0.3	43.8	43.9	0.1	42.6	42.9	0.3	44.5	44.5	0	42.5	43.5	1
100100001593	2 CLIFTON TERRACE HOLYHEAD LL65 2SL	Residential	47.1	47.2	0.1	46.8	47.1	0.3	42.8	42.9	0.1	42.5	42.8	0.3	43.5	43.5	0	42.5	43.5	1
100100001594	3 CLIFTON TERRACE HOLYHEAD LL65 2SL	Residential	51.8	51.9	0.1	47.7	48	0.3	47.4	47.5	0.1	43.4	43.7	0.3	47.5	47.5	0	43.5	43.5	0
100100001595	4 CLIFTON TERRACE HOLYHEAD LL65 2SL	Residential	53	53.1	0.1	47	47.3	0.3	48.5	48.6	0.1	42.7	43	0.3	48.5	48.5	0	42.5	43.5	1
100100001596	1 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	48.9	49.1	0.2	48.9	49.2	0.3	44.6	44.8	0.2	44.6	44.9	0.3	44.5	44.5	0	44.5	45.5	1
100100001770	2 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	48.9	49.1	0.2	48.9	49.2	0.3	44.6	44.8	0.2	44.6	44.9	0.3	44.5	44.5	0	44.5	45.5	1
100100001771	3 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	49	49.2	0.2	49.1	49.4	0.3	44.7	44.9	0.2	44.8	45	0.3	44.5	45.5	1	44.5	45.5	1
100100001772	4 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	48.8	48.9	0.1	48.8	49.1	0.3	44.5	44.6	0.1	44.5	44.8	0.3	44.5	44.5	0	44.5	44.5	0
100100001773	5 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	49.2	49.4	0.2	49.2	49.5	0.3	44.9	45	0.2	44.9	45.1	0.3	45.5	45.5	0	45.5	45.5	0
100100001774	6 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	48.7	48.9	0.2	48.6	48.9	0.3	44.4	44.6	0.2	44.3	44.6	0.3	44.5	44.5	0	44.5	44.5	0
100100001775	7 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	48.9	49.1	0.2	46.3	46.6	0.3	44.6	44.8	0.2	42	42.3	0.3	44.5	44.5	0	42.5	42.5	0
100100001776	8 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	44.6	44.8	0.2	48.6	48.9	0.3	40.4	40.6	0.2	44.3	44.6	0.3	40.5	40.5	0	44.5	44.5	0
100100001777	9 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	48	48.2	0.2	48.9	49.2	0.3	43.7	43.9	0.2	44.6	44.9	0.3	43.5	44.5	1	44.5	45.5	1
100100001778	10 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	48.2	48.4	0.2	48.2	48.5	0.3	43.9	44.1	0.2	43.9	44.2	0.3	44.5	44.5	0	44.5	44.5	0
100100001779	11 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	48.8	49	0.2	48.8	49.1	0.3	44.5	44.7	0.2	44.5	44.8	0.3	44.5	44.5	0	44.5	44.5	0
100100001780	12 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	48.5	48.7	0.2	48.6	48.9	0.3	44.2	44.4	0.2	44.3	44.6	0.3	44.5	44.5	0	44.5	44.5	0
100100001781	13 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	48.4	48.5	0.1	48.4	48.7	0.3	44.1	44.2	0.1	44.1	44.4	0.3	44.5	44.5	0	44.5	44.5	0
100100001782	14 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	48.6	48.8	0.2	48.7	49	0.3	44.3	44.5	0.2	44.4	44.7	0.3	44.5	44.5	0	44.5	44.5	0
100100001783	15 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	48.3	48.5	0.2	48.3	48.6	0.3	44	44.2	0.2	44	44.3	0.3	44.5	44.5	0	44.5	44.5	0
100100001784	16 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	48.7	48.9	0.2	44.9	45.2	0.3	44.4	44.6	0.2	40.7	41	0.3	44.5	44.5	0	40.5	41.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100001785	17 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	48.3	48.5	0.2	48.3	48.6	0.3	44	44.2	0.2	44	44.3	0.3	44.5	44.5	0	44.5	44.5	0
100100001786	18 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	48	48.2	0.2	48.6	48.9	0.3	43.7	43.9	0.2	44.3	44.6	0.3	43.5	44.5	1	44.5	44.5	0
100100001787	19 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	48.2	48.4	0.2	48.3	48.6	0.3	43.9	44.1	0.2	44	44.3	0.3	44.5	44.5	0	44.5	44.5	0
100100001788	20 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	48.4	48.5	0.1	48.4	48.7	0.3	44.1	44.2	0.1	44.1	44.4	0.3	44.5	44.5	0	44.5	44.5	0
100100001789	21 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	47.7	47.9	0.2	47.7	48	0.3	43.4	43.6	0.2	43.4	43.7	0.3	43.5	43.5	0	43.5	43.5	0
100100001790	22 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	48.3	48.5	0.2	48.3	48.6	0.3	44	44.2	0.2	44	44.3	0.3	44.5	44.5	0	44.5	44.5	0
100100001791	23 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	47.7	47.9	0.2	47.7	48	0.3	43.4	43.6	0.2	43.4	43.7	0.3	43.5	43.5	0	43.5	43.5	0
100100001792	24 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	48.3	48.4	0.1	48.3	48.6	0.3	44	44.1	0.1	44	44.3	0.3	44.5	44.5	0	44.5	44.5	0
100100001793	25 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	47.5	47.7	0.2	45.9	46.2	0.3	43.2	43.4	0.2	41.7	41.9	0.3	43.5	43.5	0	41.5	42.5	1
100100001794	26 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	48.2	48.4	0.2	48.3	48.6	0.3	43.9	44.1	0.2	44	44.3	0.3	44.5	44.5	0	44.5	44.5	0
100100001795	27 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	47.4	47.5	0.1	47.4	47.7	0.3	43.1	43.2	0.1	43.1	43.4	0.3	43.5	43.5	0	43.5	43.5	0
100100001796	28 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	48.2	48.4	0.2	48.3	48.6	0.3	43.9	44.1	0.2	44	44.3	0.3	44.5	44.5	0	44.5	44.5	0
100100001797	29 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	46.6	46.8	0.2	47.3	47.6	0.3	42.3	42.5	0.2	43	43.3	0.3	42.5	42.5	0	43.5	43.5	0
100100001798	30 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	47.4	47.6	0.2	45.8	46.1	0.3	43.1	43.3	0.2	41.6	41.8	0.3	43.5	43.5	0	41.5	42.5	1
100100001799	31 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	46.8	47	0.2	46.9	47.2	0.3	42.5	42.7	0.2	42.6	42.9	0.3	42.5	42.5	0	42.5	43.5	1
100100001800	32 FFORDD FEURIG HOLYHEAD LL65 2PE	Residential	47.6	47.8	0.2	47.6	47.9	0.3	43.3	43.5	0.2	43.3	43.6	0.3	43.5	43.5	0	43.5	43.5	0
100100001801	1 FFORDD HIRNOS HOLYHEAD LL65 2PG	Residential	48.8	49	0.2	48.9	49.2	0.3	44.5	44.7	0.2	44.6	44.9	0.3	44.5	44.5	0	44.5	45.5	1
100100001816	2 FFORDD HIRNOS HOLYHEAD LL65 2PG	Residential	49	49.2	0.2	49	49.4	0.4	44.7	44.9	0.2	44.7	45	0.4	44.5	45.5	1	44.5	45.5	1
100100001817	3 FFORDD HIRNOS HOLYHEAD LL65 2PG	Residential	49	49.2	0.2	49	49.3	0.3	44.7	44.9	0.2	44.7	45	0.3	44.5	45.5	1	44.5	45.5	1
100100001818	4 FFORDD HIRNOS HOLYHEAD LL65 2PG	Residential	49	49.2	0.2	45.8	46.1	0.3	44.7	44.9	0.2	41.6	41.8	0.3	44.5	45.5	1	41.5	42.5	1
100100001819	5 FFORDD HIRNOS HOLYHEAD LL65 2PG	Residential	46.5	46.7	0.2	49.3	49.6	0.3	42.2	42.4	0.2	45	45.2	0.3	42.5	42.5	0	45.5	45.5	0
100100001820	6 FFORDD HIRNOS HOLYHEAD LL65 2PG	Residential	49.4	49.5	0.1	49.4	49.7	0.3	45	45.1	0.1	45	45.3	0.3	45.5	45.5	0	45.5	45.5	0
100100001821	7 FFORDD HIRNOS HOLYHEAD LL65 2PG	Residential	46.6	46.9	0.3	44.3	44.7	0.4	42.3	42.6	0.3	40.1	40.5	0.4	42.5	42.5	0	40.5	40.5	0
100100001822	8 FFORDD HIRNOS HOLYHEAD LL65 2PG	Residential	44.8	45	0.2	44.8	45.2	0.4	40.6	40.8	0.2	40.6	41	0.4	40.5	41.5	1	40.5	41.5	1
100100001823	9 FFORDD HIRNOS HOLYHEAD LL65 2PG	Residential	43.5	43.7	0.2	44.2	44.6	0.4	39.3	39.5	0.2	40	40.4	0.4	39.5	39.5	0	40.5	40.5	0
100100001824	10 FFORDD HIRNOS HOLYHEAD LL65 2PG	Residential	49.7	49.9	0.2	45.3	45.6	0.3	45.3	45.5	0.2	41.1	41.4	0.3	45.5	45.5	0	41.5	41.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100001825	11 FFORDD HIRNOS HOLYHEAD LL65 2PG	Residential	49.9	50.1	0.2	46.8	47.2	0.4	45.5	45.7	0.2	42.5	42.9	0.4	45.5	45.5	0	42.5	43.5	1
100100001826	12 FFORDD HIRNOS HOLYHEAD LL65 2PG	Residential	48.2	48.4	0.2	48.2	48.6	0.4	43.9	44.1	0.2	43.9	44.3	0.4	44.5	44.5	0	44.5	44.5	0
100100001827	23 FFORDD HIRNOS HOLYHEAD LL65 2PG	Residential	47.9	48.1	0.2	47.9	48.2	0.3	43.6	43.8	0.2	43.6	43.9	0.3	43.5	44.5	1	43.5	44.5	1
100100001838	24 FFORDD HIRNOS HOLYHEAD LL65 2PG	Residential	48.2	48.4	0.2	48.2	48.5	0.3	43.9	44.1	0.2	43.9	44.2	0.3	44.5	44.5	0	44.5	44.5	0
100100001839	25 FFORDD HIRNOS HOLYHEAD LL65 2PG	Residential	48	48.2	0.2	48.1	48.4	0.3	43.7	43.9	0.2	43.8	44.1	0.3	43.5	44.5	1	44.5	44.5	0
100100001840	26 FFORDD HIRNOS HOLYHEAD LL65 2PG	Residential	47.8	48	0.2	47.8	48.1	0.3	43.5	43.7	0.2	43.5	43.8	0.3	43.5	43.5	0	43.5	44.5	1
100100001841	1 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	49.1	49.3	0.2	49.1	49.4	0.3	44.8	45	0.2	44.8	45	0.3	44.5	45.5	1	44.5	45.5	1
100100001842	2 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	48.9	49.1	0.2	48.6	48.9	0.3	44.6	44.8	0.2	44.3	44.6	0.3	44.5	44.5	0	44.5	44.5	0
100100001843	3 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	47.8	47.9	0.1	48.7	49	0.3	43.5	43.6	0.1	44.4	44.7	0.3	43.5	43.5	0	44.5	44.5	0
100100001844	4 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	48.5	48.6	0.1	48.5	48.8	0.3	44.2	44.3	0.1	44.2	44.5	0.3	44.5	44.5	0	44.5	44.5	0
100100001845	5 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	48.7	48.9	0.2	48.7	49	0.3	44.4	44.6	0.2	44.4	44.7	0.3	44.5	44.5	0	44.5	44.5	0
100100001846	6 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	48.4	48.6	0.2	48.5	48.7	0.2	44.1	44.3	0.2	44.2	44.4	0.2	44.5	44.5	0	44.5	44.5	0
100100001847	7 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	48.6	48.8	0.2	45.2	45.5	0.3	44.3	44.5	0.2	41	41.3	0.3	44.5	44.5	0	41.5	41.5	0
100100001848	8 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	44.9	45.1	0.2	48.4	48.7	0.3	40.7	40.9	0.2	44.1	44.4	0.3	40.5	41.5	1	44.5	44.5	0
100100001849	9 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	46.3	46.5	0.2	46.3	46.6	0.3	42	42.2	0.2	42	42.3	0.3	42.5	42.5	0	42.5	42.5	0
100100001850	10 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	48.3	48.5	0.2	48.3	48.6	0.3	44	44.2	0.2	44	44.3	0.3	44.5	44.5	0	44.5	44.5	0
100100001851	11 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	48.5	48.7	0.2	48.6	48.8	0.2	44.2	44.4	0.2	44.3	44.5	0.2	44.5	44.5	0	44.5	44.5	0
100100001852	12 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	48.2	48.4	0.2	48.3	48.6	0.3	43.9	44.1	0.2	44	44.3	0.3	44.5	44.5	0	44.5	44.5	0
100100001853	13 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	48.4	48.6	0.2	48.5	48.8	0.3	44.1	44.3	0.2	44.2	44.5	0.3	44.5	44.5	0	44.5	44.5	0
100100001854	14 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	48.4	48.6	0.2	48.4	48.7	0.3	44.1	44.3	0.2	44.1	44.4	0.3	44.5	44.5	0	44.5	44.5	0
100100001855	15 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	45.1	45.3	0.2	48.5	48.8	0.3	40.9	41.1	0.2	44.2	44.5	0.3	41.5	41.5	0	44.5	44.5	0
100100001856	16 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	48.2	48.4	0.2	48.3	48.6	0.3	43.9	44.1	0.2	44	44.3	0.3	44.5	44.5	0	44.5	44.5	0
100100001857	17 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	48.4	48.6	0.2	48.4	48.7	0.3	44.1	44.3	0.2	44.1	44.4	0.3	44.5	44.5	0	44.5	44.5	0
100100001858	18 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	48.4	48.6	0.2	48.4	48.7	0.3	44.1	44.3	0.2	44.1	44.4	0.3	44.5	44.5	0	44.5	44.5	0
100100001859	19 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	48.2	48.4	0.2	48.3	48.5	0.2	43.9	44.1	0.2	44	44.2	0.2	44.5	44.5	0	44.5	44.5	0
100100001860	20 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	48.2	48.4	0.2	48.3	48.5	0.2	43.9	44.1	0.2	44	44.2	0.2	44.5	44.5	0	44.5	44.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100001861	21 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	47.5	47.6	0.1	47.5	47.8	0.3	43.2	43.3	0.1	43.2	43.5	0.3	43.5	43.5	0	43.5	43.5	0
100100001862	22 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	46	46.1	0.1	48.2	48.5	0.3	41.8	41.8	0.1	43.9	44.2	0.3	42.5	42.5	0	44.5	44.5	0
100100001863	23 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	48	48.1	0.1	48	48.3	0.3	43.7	43.8	0.1	43.7	44	0.3	43.5	44.5	1	43.5	44.5	1
100100001864	24 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	44.9	45.1	0.2	44.9	45.2	0.3	40.7	40.9	0.2	40.7	41	0.3	40.5	41.5	1	40.5	41.5	1
100100001865	25 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	48	48.2	0.2	48.1	48.3	0.2	43.7	43.9	0.2	43.8	44	0.2	43.5	44.5	1	44.5	44.5	0
100100001866	26 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	47.4	47.6	0.2	48.1	48.4	0.3	43.1	43.3	0.2	43.8	44.1	0.3	43.5	43.5	0	44.5	44.5	0
100100001867	27 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	48	48.1	0.1	44.8	45.1	0.3	43.7	43.8	0.1	40.6	40.9	0.3	43.5	44.5	1	40.5	41.5	1
100100001868	28 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	48.3	48.5	0.2	48.3	48.6	0.3	44	44.2	0.2	44	44.3	0.3	44.5	44.5	0	44.5	44.5	0
100100001869	29 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	47.8	48	0.2	47.8	48.1	0.3	43.5	43.7	0.2	43.5	43.8	0.3	43.5	43.5	0	43.5	44.5	1
100100001870	30 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	46	46.2	0.2	48.4	48.7	0.3	41.8	41.9	0.2	44.1	44.4	0.3	42.5	42.5	0	44.5	44.5	0
100100001871	31 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	47.8	47.9	0.1	47.8	48.1	0.3	43.5	43.6	0.1	43.5	43.8	0.3	43.5	43.5	0	43.5	44.5	1
100100001872	32 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	48.4	48.6	0.2	46.2	46.6	0.4	44.1	44.3	0.2	41.9	42.3	0.4	44.5	44.5	0	42.5	42.5	0
100100001873	34 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	48.3	48.5	0.2	48.3	48.6	0.3	44	44.2	0.2	44	44.3	0.3	44.5	44.5	0	44.5	44.5	0
100100001874	36 FFORDD JASPER HOLYHEAD LL65 2PF	Residential	47.4	47.6	0.2	46.7	47.1	0.4	43.1	43.3	0.2	42.4	42.8	0.4	43.5	43.5	0	42.5	43.5	1
100100001875	1 KINGSLAND ROAD HOLYHEAD LL65 2SP	Commercial	41	41.1	0.1	48.7	49	0.3	36.9	37	0.1	44.4	44.7	0.3	37.5	37.5	0	44.5	44.5	0
100100002251	2 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	50.9	51	0.1	50.9	51.2	0.3	46.5	46.6	0.1	46.5	46.8	0.3	46.5	46.5	0	46.5	46.5	0
100100002252	3 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	50.6	50.7	0.1	45.7	46	0.3	46.2	46.3	0.1	41.5	41.8	0.3	46.5	46.5	0	41.5	42.5	1
100100002253	4 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	50.3	50.4	0.1	45.7	46	0.3	45.9	46	0.1	41.5	41.8	0.3	46.5	46.5	0	41.5	42.5	1
100100002254	5 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	49.8	49.9	0.1	49.8	50.1	0.3	45.4	45.5	0.1	45.4	45.7	0.3	45.5	45.5	0	45.5	45.5	0
100100002255	6 KINGSLAND ROAD HOLYHEAD LL65 2SP	Commercial	47.3	47.4	0.1	40.8	41.1	0.3	43	43.1	0.1	36.7	37	0.3	43.5	43.5	0	37.5	37.5	0
100100002256	7 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	49.8	49.9	0.1	49.8	50.1	0.3	45.4	45.5	0.1	45.4	45.7	0.3	45.5	45.5	0	45.5	45.5	0
100100002257	9 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	49.5	49.6	0.1	49.5	49.8	0.3	45.1	45.2	0.1	45.1	45.4	0.3	45.5	45.5	0	45.5	45.5	0
100100002258	10 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	49.1	49.2	0.1	45.3	45.6	0.3	44.8	44.9	0.1	41.1	41.4	0.3	44.5	45.5	1	41.5	41.5	0
100100002259	11 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	48.4	48.5	0.1	48.4	48.7	0.3	44.1	44.2	0.1	44.1	44.4	0.3	44.5	44.5	0	44.5	44.5	0
100100002260	12 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	48.5	48.6	0.1	48.5	48.8	0.3	44.2	44.3	0.1	44.2	44.5	0.3	44.5	44.5	0	44.5	44.5	0
100100002261	13 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	51.1	51.3	0.2	51.1	51.4	0.3	46.7	46.9	0.2	46.7	47	0.3	46.5	47.5	1	46.5	47.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100002262	14 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	48.6	48.7	0.1	45.5	45.7	0.2	44.3	44.4	0.1	41.3	41.5	0.2	44.5	44.5	0	41.5	41.5	0
100100002263	15 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	51.8	52	0.2	51.6	52	0.4	47.4	47.6	0.2	47.2	47.6	0.4	47.5	47.5	0	47.5	47.5	0
100100002264	16 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	45.3	45.4	0.1	45.3	45.6	0.3	41.1	41.2	0.1	41.1	41.4	0.3	41.5	41.5	0	41.5	41.5	0
100100002265	17 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	51.8	52	0.2	51.8	52.2	0.4	47.4	47.6	0.2	47.4	47.8	0.4	47.5	47.5	0	47.5	47.5	0
100100002266	18 GRISEDALEKINGSLAND ROAD HOLYHEAD LL	Residential	48.4	48.5	0.1	48.4	48.7	0.3	44.1	44.2	0.1	44.1	44.4	0.3	44.5	44.5	0	44.5	44.5	0
100100002267	19 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	51.9	52.1	0.2	51.9	52.3	0.4	47.5	47.7	0.2	47.5	47.9	0.4	47.5	47.5	0	47.5	48.5	1
100100002268	20 TOLLGATE HOUSEKINGSLAND ROAD HOLYHE	Residential	48.6	48.7	0.1	48.6	48.9	0.3	44.3	44.4	0.1	44.3	44.6	0.3	44.5	44.5	0	44.5	44.5	0
100100002269	21 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	52.3	52.5	0.2	52.3	52.7	0.4	47.9	48.1	0.2	47.9	48.2	0.4	48.5	48.5	0	48.5	48.5	0
100100002270	22 HILLCOCKKINGSLAND ROAD HOLYHEAD LL6	Residential	48.8	48.9	0.1	48.8	49.1	0.3	44.5	44.6	0.1	44.5	44.8	0.3	44.5	44.5	0	44.5	44.5	0
100100002271	23 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	52.2	52.5	0.3	52	52.4	0.4	47.8	48.1	0.3	47.6	48	0.4	47.5	48.5	1	47.5	48.5	1
100100002272	24 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	49	49.1	0.1	49	49.3	0.3	44.7	44.8	0.1	44.7	45	0.3	44.5	44.5	0	44.5	45.5	1
100100002273	25 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	52.1	52.3	0.2	52.1	52.5	0.4	47.7	47.9	0.2	47.7	48.1	0.4	47.5	48.5	1	47.5	48.5	1
100100002274	26 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	45	45.1	0.1	49.2	49.5	0.3	40.8	40.9	0.1	44.9	45.1	0.3	41.5	41.5	0	45.5	45.5	0
100100002275	27 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	51.8	52	0.2	51.3	51.7	0.4	47.4	47.6	0.2	46.9	47.3	0.4	47.5	47.5	0	47.5	47.5	0
100100002276	28 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	49.8	50	0.2	49.8	50.1	0.3	45.4	45.6	0.2	45.4	45.7	0.3	45.5	45.5	0	45.5	45.5	0
100100002277	29 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	51.2	51.4	0.2	51.2	51.6	0.4	46.8	47	0.2	46.8	47.2	0.4	46.5	47.5	1	46.5	47.5	1
100100002278	30 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	49.4	49.6	0.2	49.4	49.8	0.4	45	45.2	0.2	45	45.4	0.4	45.5	45.5	0	45.5	45.5	0
100100002279	31 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	51.4	51.6	0.2	51.4	51.8	0.4	47	47.2	0.2	47	47.4	0.4	47.5	47.5	0	47.5	47.5	0
100100002280	32 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	48.9	49.2	0.3	48.9	49.4	0.5	44.6	44.9	0.3	44.6	45	0.5	44.5	45.5	1	44.5	45.5	1
100100002281	33 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	50.8	51	0.2	50.8	51.2	0.4	46.4	46.6	0.2	46.4	46.8	0.4	46.5	46.5	0	46.5	46.5	0
100100002282	34 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	50.7	50.9	0.2	50.7	51.1	0.4	46.3	46.5	0.2	46.3	46.7	0.4	46.5	46.5	0	46.5	46.5	0
100100002283	36 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	50.5	50.7	0.2	50.5	50.9	0.4	46.1	46.3	0.2	46.1	46.5	0.4	46.5	46.5	0	46.5	46.5	0
100100002284	37 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	49.3	49.6	0.3	49.9	50.3	0.4	45	45.2	0.3	45.5	45.9	0.4	45.5	45.5	0	45.5	46.5	1
100100002285	41 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	49.5	49.7	0.2	49.5	49.9	0.4	45.1	45.3	0.2	45.1	45.5	0.4	45.5	45.5	0	45.5	45.5	0
100100002286	43 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	49.4	49.5	0.1	49.4	49.7	0.3	45	45.1	0.1	45	45.3	0.3	45.5	45.5	0	45.5	45.5	0
100100002287	44 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	49.4	49.6	0.2	49.4	49.8	0.4	45	45.2	0.2	45	45.4	0.4	45.5	45.5	0	45.5	45.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100002288	45 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	49.2	49.4	0.2	49.2	49.6	0.4	44.9	45	0.2	44.9	45.2	0.4	45.5	45.5	0	45.5	45.5	0
100100002289	47 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	46.3	46.4	0.1	48.2	48.5	0.3	42	42.1	0.1	43.9	44.2	0.3	42.5	42.5	0	44.5	44.5	0
100100002290	49 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	48.6	48.8	0.2	48.6	49	0.4	44.3	44.5	0.2	44.3	44.7	0.4	44.5	44.5	0	44.5	44.5	0
100100002291	51 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	46.5	46.6	0.1	46.7	47	0.3	42.2	42.3	0.1	42.4	42.7	0.3	42.5	42.5	0	42.5	42.5	0
100100002292	53 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	44.4	44.6	0.2	47.3	47.6	0.3	40.2	40.4	0.2	43	43.3	0.3	40.5	40.5	0	43.5	43.5	0
100100002293	55 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	47.3	47.5	0.2	47.3	47.7	0.4	43	43.2	0.2	43	43.4	0.4	43.5	43.5	0	43.5	43.5	0
100100002294	57 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	47.5	47.7	0.2	47.5	47.9	0.4	43.2	43.4	0.2	43.2	43.6	0.4	43.5	43.5	0	43.5	43.5	0
100100002295	59 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	47.9	48.1	0.2	48.2	48.6	0.4	43.6	43.8	0.2	43.9	44.3	0.4	43.5	44.5	1	44.5	44.5	0
100100002296	61 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	46.5	46.6	0.1	44.4	44.7	0.3	42.2	42.3	0.1	40.2	40.5	0.3	42.5	42.5	0	40.5	40.5	0
100100002297	63 KINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	48.3	48.6	0.3	48.5	49	0.5	44	44.3	0.3	44.2	44.7	0.5	44.5	44.5	0	44.5	44.5	0
100100002298	42 LLANFAWR ROAD HOLYHEAD LL65 2PL	Residential	48	48.2	0.2	48.2	48.5	0.3	43.7	43.9	0.2	43.9	44.2	0.3	43.5	44.5	1	44.5	44.5	0
100100002427	44 LLANFAWR ROAD HOLYHEAD LL65 2PL	Residential	48.3	48.5	0.2	48.3	48.6	0.3	44	44.2	0.2	44	44.3	0.3	44.5	44.5	0	44.5	44.5	0
100100002428	46 LLANFAWR ROAD HOLYHEAD LL65 2PL	Residential	48.3	48.5	0.2	48.3	48.6	0.3	44	44.2	0.2	44	44.3	0.3	44.5	44.5	0	44.5	44.5	0
100100002429	48 LLANFAWR ROAD HOLYHEAD LL65 2PL	Residential	48	48.2	0.2	48.2	48.5	0.3	43.7	43.9	0.2	43.9	44.2	0.3	43.5	44.5	1	44.5	44.5	0
100100002430	50 LLANFAWR ROAD HOLYHEAD LL65 2PL	Residential	48.3	48.5	0.2	48.3	48.6	0.3	44	44.2	0.2	44	44.3	0.3	44.5	44.5	0	44.5	44.5	0
100100002431	52 LLANFAWR ROAD HOLYHEAD LL65 2PL	Residential	48.2	48.4	0.2	48.2	48.5	0.3	43.9	44.1	0.2	43.9	44.2	0.3	44.5	44.5	0	44.5	44.5	0
100100002432	54 LLANFAWR ROAD HOLYHEAD LL65 2PL	Residential	49.2	49.4	0.2	48.2	48.5	0.3	44.9	45	0.2	43.9	44.2	0.3	45.5	45.5	0	44.5	44.5	0
100100002433	56 LLANFAWR ROAD HOLYHEAD LL65 2PP	Residential	48.5	48.7	0.2	48.7	49	0.3	44.2	44.4	0.2	44.4	44.7	0.3	44.5	44.5	0	44.5	44.5	0
100100002434	58 LLANFAWR ROAD HOLYHEAD LL65 2PP	Residential	48.8	49	0.2	48.8	49.1	0.3	44.5	44.7	0.2	44.5	44.8	0.3	44.5	44.5	0	44.5	44.5	0
100100002435	60 LLANFAWR ROAD HOLYHEAD LL65 2PP	Residential	49	49.2	0.2	49	49.3	0.3	44.7	44.9	0.2	44.7	45	0.3	44.5	45.5	1	44.5	45.5	1
100100002436	62 LLANFAWR ROAD HOLYHEAD LL65 2PP	Residential	49.2	49.4	0.2	49.3	49.6	0.3	44.9	45	0.2	45	45.2	0.3	45.5	45.5	0	45.5	45.5	0
100100002437	THE WILLOWSLLANFAWR ROAD HOLYHEAD LL65	Residential	49.5	49.7	0.2	49.6	49.9	0.3	45.1	45.3	0.2	45.2	45.5	0.3	45.5	45.5	0	45.5	45.5	0
100100002440	2 LON DEG HOLYHEAD LL65 2PD	Residential	48.5	48.6	0.1	45.5	45.8	0.3	44.2	44.3	0.1	41.3	41.6	0.3	44.5	44.5	0	41.5	41.5	0
100100002485	3 LON DEG HOLYHEAD LL65 2PD	Residential	48.9	49.1	0.2	48.8	49.1	0.3	44.6	44.8	0.2	44.5	44.8	0.3	44.5	44.5	0	44.5	44.5	0
100100002486	4 LON DEG HOLYHEAD LL65 2PD	Residential	45.6	45.7	0.1	45.6	45.9	0.3	41.4	41.5	0.1	41.4	41.7	0.3	41.5	41.5	0	41.5	41.5	0
100100002487	5 LON DEG HOLYHEAD LL65 2PD	Residential	48.9	49.1	0.2	48.9	49.2	0.3	44.6	44.8	0.2	44.6	44.9	0.3	44.5	44.5	0	44.5	45.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100002488	6 LON DEG HOLYHEAD LL65 2PD	Residential	45.5	45.6	0.1	45.5	45.8	0.3	41.3	41.4	0.1	41.3	41.6	0.3	41.5	41.5	0	41.5	41.5	0
100100002489	7 LON DEG HOLYHEAD LL65 2PD	Residential	49	49.2	0.2	45.8	46.1	0.3	44.7	44.9	0.2	41.6	41.8	0.3	44.5	45.5	1	41.5	42.5	1
100100002490	8 LON DEG HOLYHEAD LL65 2PD	Residential	45.6	45.7	0.1	45.6	45.8	0.2	41.4	41.5	0.1	41.4	41.6	0.2	41.5	41.5	0	41.5	41.5	0
100100002491	9 LON DEG HOLYHEAD LL65 2PD	Residential	47	47.2	0.2	48.8	49	0.2	42.7	42.9	0.2	44.5	44.7	0.2	42.5	43.5	1	44.5	44.5	0
100100002492	10 LON DEG HOLYHEAD LL65 2PD	Residential	45.6	45.7	0.1	45.6	45.9	0.3	41.4	41.5	0.1	41.4	41.7	0.3	41.5	41.5	0	41.5	41.5	0
100100002493	11 LON DEG HOLYHEAD LL65 2PD	Residential	45.5	45.7	0.2	49.1	49.4	0.3	41.3	41.5	0.2	44.8	45	0.3	41.5	41.5	0	44.5	45.5	1
100100002494	12 LON DEG HOLYHEAD LL65 2PD	Residential	49.8	50	0.2	49.2	49.5	0.3	45.4	45.6	0.2	44.9	45.1	0.3	45.5	45.5	0	45.5	45.5	0
100100002495	13 LON DEG HOLYHEAD LL65 2PD	Residential	49.4	49.6	0.2	44.7	45	0.3	45	45.2	0.2	40.5	40.8	0.3	45.5	45.5	0	40.5	41.5	1
100100002496	14 LON DEG HOLYHEAD LL65 2PD	Residential	45.4	45.6	0.2	45.5	45.7	0.2	41.2	41.4	0.2	41.3	41.5	0.2	41.5	41.5	0	41.5	41.5	0
100100002497	16 LON DEG HOLYHEAD LL65 2PD	Residential	45.4	45.6	0.2	45.5	45.7	0.2	41.2	41.4	0.2	41.3	41.5	0.2	41.5	41.5	0	41.5	41.5	0
100100002498	18 LON DEG HOLYHEAD LL65 2PD	Residential	45.6	45.7	0.1	45.6	45.8	0.2	41.4	41.5	0.1	41.4	41.6	0.2	41.5	41.5	0	41.5	41.5	0
100100002499	20 LON DEG HOLYHEAD LL65 2PD	Residential	45.5	45.7	0.2	45.6	45.8	0.2	41.3	41.5	0.2	41.4	41.6	0.2	41.5	41.5	0	41.5	41.5	0
100100002500	22 LON DEG HOLYHEAD LL65 2PD	Residential	45.5	45.6	0.1	45.5	45.8	0.3	41.3	41.4	0.1	41.3	41.6	0.3	41.5	41.5	0	41.5	41.5	0
100100002501	24 LON DEG HOLYHEAD LL65 2PD	Residential	49.1	49.3	0.2	46	46.3	0.3	44.8	45	0.2	41.8	42	0.3	44.5	45.5	1	42.5	42.5	0
100100002502	26 LON DEG HOLYHEAD LL65 2PD	Residential	50.1	50.2	0.1	45.3	45.5	0.2	45.7	45.8	0.1	41.1	41.3	0.2	45.5	46.5	1	41.5	41.5	0
100100002503	28 LON DEG HOLYHEAD LL65 2PD	Residential	48.2	48.3	0.1	48.2	48.4	0.2	43.9	44	0.1	43.9	44.1	0.2	44.5	44.5	0	44.5	44.5	0
100100002504	30 LON DEG HOLYHEAD LL65 2PD	Residential	45.2	45.3	0.1	45.2	45.5	0.3	41	41.1	0.1	41	41.3	0.3	41.5	41.5	0	41.5	41.5	0
100100002505	32 LON DEG HOLYHEAD LL65 2PD	Residential	45.3	45.4	0.1	45.3	45.6	0.3	41.1	41.2	0.1	41.1	41.4	0.3	41.5	41.5	0	41.5	41.5	0
100100002506	34 LON DEG HOLYHEAD LL65 2PD	Residential	47	47.2	0.2	45.4	45.7	0.3	42.7	42.9	0.2	41.2	41.5	0.3	42.5	43.5	1	41.5	41.5	0
100100002507	36 LON DEG HOLYHEAD LL65 2PD	Residential	45.8	46	0.2	45.8	46.1	0.3	41.6	41.8	0.2	41.6	41.8	0.3	41.5	42.5	1	41.5	42.5	1
100100002508	81 LONDON ROAD HOLYHEAD LL65 2NY	Residential	44.5	44.6	0.1	51	51.2	0.2	40.3	40.4	0.1	46.6	46.8	0.2	40.5	40.5	0	46.5	46.5	0
100100002601	83 LONDON ROAD HOLYHEAD LL65 2NY	Residential	50.9	51	0.1	51	51.2	0.2	46.5	46.6	0.1	46.6	46.8	0.2	46.5	46.5	0	46.5	46.5	0
100100002602	85 LONDON ROAD HOLYHEAD LL65 2NY	Residential	51.4	51.5	0.1	51.4	51.6	0.2	47	47.1	0.1	47	47.2	0.2	47.5	47.5	0	47.5	47.5	0
100100002603	87 LONDON ROAD HOLYHEAD LL65 2NY	Residential	44.6	44.7	0.1	51.8	52	0.2	40.4	40.5	0.1	47.4	47.6	0.2	40.5	40.5	0	47.5	47.5	0
100100002604	89 LONDON ROAD HOLYHEAD LL65 2NY	Residential	51.5	51.6	0.1	51.5	51.7	0.2	47.1	47.2	0.1	47.1	47.3	0.2	47.5	47.5	0	47.5	47.5	0
100100002606	90 LONDON ROAD HOLYHEAD LL65 2RE	Residential	54.4	54.5	0.1	45.4	45.7	0.3	49.9	50	0.1	41.2	41.5	0.3	50.5	50.5	0	41.5	41.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100002607	91 LONDON ROAD HOLYHEAD LL65 2NY	Residential	50.8	50.9	0.1	50.8	51.1	0.3	46.4	46.5	0.1	46.4	46.7	0.3	46.5	46.5	0	46.5	46.5	0
100100002608	92 LONDON ROAD HOLYHEAD LL65 2RE	Residential	55.4	55.5	0.1	45.5	45.8	0.3	50.9	51	0.1	41.3	41.6	0.3	50.5	51.5	1	41.5	41.5	0
100100002609	93 LONDON ROAD HOLYHEAD LL65 2NY	Residential	51	51.1	0.1	50.8	51.1	0.3	46.6	46.7	0.1	46.4	46.7	0.3	46.5	46.5	0	46.5	46.5	0
100100002610	94 LONDON ROAD HOLYHEAD LL65 2RE	Residential	55.8	55.9	0.1	46.1	46.4	0.3	51.3	51.4	0.1	41.8	42.1	0.3	51.5	51.5	0	42.5	42.5	0
100100002611	95 LONDON ROAD HOLYHEAD LL65 2NY	Residential	51	51.1	0.1	51	51.3	0.3	46.6	46.7	0.1	46.6	46.9	0.3	46.5	46.5	0	46.5	47.5	1
100100002612	96 LONDON ROAD HOLYHEAD LL65 2RE	Residential	55.9	56	0.1	55.9	56.1	0.2	51.4	51.5	0.1	51.4	51.5	0.2	51.5	51.5	0	51.5	51.5	0
100100002613	97 LONDON ROAD HOLYHEAD LL65 2NY	Residential	50.6	50.7	0.1	50.6	50.9	0.3	46.2	46.3	0.1	46.2	46.5	0.3	46.5	46.5	0	46.5	46.5	0
100100002614	98 LONDON ROAD HOLYHEAD LL65 2RE	Residential	54	54.1	0.1	45.8	46.1	0.3	49.5	49.6	0.1	41.6	41.8	0.3	49.5	49.5	0	41.5	42.5	1
100100002615	99 LONDON ROAD HOLYHEAD LL65 2NY	Residential	50.5	50.6	0.1	48.8	49.1	0.3	46.1	46.2	0.1	44.5	44.8	0.3	46.5	46.5	0	44.5	44.5	0
100100002616	100 LONDON ROAD HOLYHEAD LL65 2RE	Residential	55.6	55.6	0	55.5	55.7	0.2	51.1	51.1	0	51	51.2	0.2	51.5	51.5	0	51.5	51.5	0
100100002617	101 LONDON ROAD HOLYHEAD LL65 2NY	Residential	50.4	50.5	0.1	50.4	50.6	0.2	46	46.1	0.1	46	46.2	0.2	46.5	46.5	0	46.5	46.5	0
100100002618	102 LONDON ROAD HOLYHEAD LL65 2RE	Residential	49.8	49.9	0.1	55.3	55.5	0.2	45.4	45.5	0.1	50.8	51	0.2	45.5	45.5	0	50.5	51.5	1
100100002619	103 LONDON ROAD HOLYHEAD LL65 2NY	Residential	50.3	50.4	0.1	50.3	50.6	0.3	45.9	46	0.1	45.9	46.2	0.3	46.5	46.5	0	46.5	46.5	0
100100002620	104 LONDON ROAD HOLYHEAD LL65 2RE	Residential	54.9	55	0.1	54.9	55.1	0.2	50.4	50.5	0.1	50.4	50.6	0.2	50.5	50.5	0	50.5	50.5	0
100100002621	105 LONDON ROAD HOLYHEAD LL65 2NY	Residential	47.3	47.5	0.2	47.9	48.2	0.3	43	43.2	0.2	43.6	43.9	0.3	43.5	43.5	0	43.5	44.5	1
100100002622	106 LONDON ROAD HOLYHEAD LL65 2RE	Residential	54.5	54.6	0.1	49.8	50.1	0.3	50	50.1	0.1	45.4	45.7	0.3	50.5	50.5	0	45.5	45.5	0
100100002623	107 LONDON ROAD HOLYHEAD LL65 2NY	Residential	49.8	49.9	0.1	47.8	48.1	0.3	45.4	45.5	0.1	43.5	43.8	0.3	45.5	45.5	0	43.5	44.5	1
100100002624	108 LONDON ROAD HOLYHEAD LL65 2RE	Residential	45.9	46	0.1	53.9	54.1	0.2	41.7	41.8	0.1	49.4	49.6	0.2	41.5	42.5	1	49.5	49.5	0
100100002625	109 LONDON ROAD HOLYHEAD LL65 2NY	Residential	45.5	45.6	0.1	45.5	45.8	0.3	41.3	41.4	0.1	41.3	41.6	0.3	41.5	41.5	0	41.5	41.5	0
100100002626	110 LONDON ROAD HOLYHEAD LL65 2RE	Residential	48.6	48.7	0.1	48.6	48.9	0.3	44.3	44.4	0.1	44.3	44.6	0.3	44.5	44.5	0	44.5	44.5	0
100100002627	111 LONDON ROAD HOLYHEAD LL65 2NY	Residential	45.5	45.7	0.2	44.9	45.2	0.3	41.3	41.5	0.2	40.7	41	0.3	41.5	41.5	0	40.5	41.5	1
100100002628	112 LONDON ROAD HOLYHEAD LL65 2RE	Residential	52.9	53	0.1	52.9	53.1	0.2	48.4	48.5	0.1	48.4	48.6	0.2	48.5	48.5	0	48.5	48.5	0
100100002629	113 LONDON ROAD HOLYHEAD LL65 2NY	Residential	49.4	49.5	0.1	45.3	45.6	0.3	45	45.1	0.1	41.1	41.4	0.3	45.5	45.5	0	41.5	41.5	0
100100002630	114 LONDON ROAD HOLYHEAD LL65 2RE	Residential	47.5	47.7	0.2	45.8	46.1	0.3	43.2	43.4	0.2	41.6	41.8	0.3	43.5	43.5	0	41.5	42.5	1
100100002631	115 LONDON ROAD HOLYHEAD LL65 2NY	Residential	49	49.1	0.1	45.8	46.1	0.3	44.7	44.8	0.1	41.6	41.8	0.3	44.5	44.5	0	41.5	42.5	1
100100002632	116 LONDON ROAD HOLYHEAD LL65 2RE	Residential	52	52.1	0.1	45.5	45.8	0.3	47.6	47.7	0.1	41.3	41.6	0.3	47.5	47.5	0	41.5	41.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100002633	117 LONDON ROAD HOLYHEAD LL65 2NY	Residential	45.5	45.7	0.2	48.8	49.1	0.3	41.3	41.5	0.2	44.5	44.8	0.3	41.5	41.5	0	44.5	44.5	0
100100002634	118 LONDON ROAD HOLYHEAD LL65 2RE	Residential	51.8	51.9	0.1	46	46.3	0.3	47.4	47.5	0.1	41.8	42	0.3	47.5	47.5	0	42.5	42.5	0
100100002635	119 LONDON ROAD HOLYHEAD LL65 2NY	Residential	44.6	44.7	0.1	44.4	44.7	0.3	40.4	40.5	0.1	40.2	40.5	0.3	40.5	40.5	0	40.5	40.5	0
100100002636	120 LONDON ROAD HOLYHEAD LL65 2RE	Residential	51.3	51.4	0.1	51.3	51.5	0.2	46.9	47	0.1	46.9	47.1	0.2	47.5	47.5	0	47.5	47.5	0
100100002637	121 LONDON ROAD HOLYHEAD LL65 2NY	Residential	48.6	48.7	0.1	48.6	48.9	0.3	44.3	44.4	0.1	44.3	44.6	0.3	44.5	44.5	0	44.5	44.5	0
100100002638	122 LONDON ROAD HOLYHEAD LL65 2RE	Residential	50.8	50.9	0.1	50.6	50.9	0.3	46.4	46.5	0.1	46.2	46.5	0.3	46.5	46.5	0	46.5	46.5	0
100100002639	123 LONDON ROAD HOLYHEAD LL65 2NY	Residential	46.5	46.7	0.2	48.6	48.9	0.3	42.2	42.4	0.2	44.3	44.6	0.3	42.5	42.5	0	44.5	44.5	0
100100002640	124 LONDON ROAD HOLYHEAD LL65 2RB	Residential	48.9	49	0.1	48.9	49.2	0.3	44.6	44.7	0.1	44.6	44.9	0.3	44.5	44.5	0	44.5	45.5	1
100100002641	125 LONDON ROAD HOLYHEAD LL65 2NY	Residential	48.5	48.6	0.1	44.4	44.7	0.3	44.2	44.3	0.1	40.2	40.5	0.3	44.5	44.5	0	40.5	40.5	0
100100002642	126 LONDON ROAD HOLYHEAD LL65 2RB	Residential	46.1	46.3	0.2	46.7	47	0.3	41.8	42	0.2	42.4	42.7	0.3	42.5	42.5	0	42.5	42.5	0
100100002643	127 LONDON ROAD HOLYHEAD LL65 2NY	Residential	44.7	44.9	0.2	48.4	48.7	0.3	40.5	40.7	0.2	44.1	44.4	0.3	40.5	40.5	0	44.5	44.5	0
100100002644	128 LONDON ROAD HOLYHEAD LL65 2RB	Residential	48.6	48.7	0.1	48.6	48.9	0.3	44.3	44.4	0.1	44.3	44.6	0.3	44.5	44.5	0	44.5	44.5	0
100100002645	129 LONDON ROAD HOLYHEAD LL65 2NY	Residential	48.3	48.4	0.1	48.3	48.6	0.3	44	44.1	0.1	44	44.3	0.3	44.5	44.5	0	44.5	44.5	0
100100002646	130 LONDON ROAD HOLYHEAD LL65 2RB	Residential	47.1	47.3	0.2	48	48.3	0.3	42.8	43	0.2	43.7	44	0.3	43.5	43.5	0	43.5	44.5	1
100100002647	131 LONDON ROAD HOLYHEAD LL65 2NY	Residential	48.1	48.2	0.1	48.1	48.4	0.3	43.8	43.9	0.1	43.8	44.1	0.3	44.5	44.5	0	44.5	44.5	0
100100002648	132 LONDON ROAD HOLYHEAD LL65 2RB	Residential	48.9	49.1	0.2	48.9	49.2	0.3	44.6	44.8	0.2	44.6	44.9	0.3	44.5	44.5	0	44.5	45.5	1
100100002649	133 LONDON ROAD HOLYHEAD LL65 2NY	Residential	48	48.1	0.1	47.9	48.2	0.3	43.7	43.8	0.1	43.6	43.9	0.3	43.5	44.5	1	43.5	44.5	1
100100002650	134 LONDON ROAD HOLYHEAD LL65 2RB	Residential	48.8	49	0.2	48.8	49.1	0.3	44.5	44.7	0.2	44.5	44.8	0.3	44.5	44.5	0	44.5	44.5	0
100100002651	135 LONDON ROAD HOLYHEAD LL65 2NY	Residential	47.8	47.9	0.1	47.8	48.1	0.3	43.5	43.6	0.1	43.5	43.8	0.3	43.5	43.5	0	43.5	44.5	1
100100002652	136 LONDON ROAD HOLYHEAD LL65 2RB	Residential	48.5	48.7	0.2	47.4	47.8	0.4	44.2	44.4	0.2	43.1	43.5	0.4	44.5	44.5	0	43.5	43.5	0
100100002653	137 LONDON ROAD HOLYHEAD LL65 2NY	Residential	44	44.2	0.2	44	44.4	0.4	39.8	40	0.2	39.8	40.2	0.4	40.5	40.5	0	40.5	40.5	0
100100002654	139 LONDON ROAD HOLYHEAD LL65 2NY	Residential	47.7	47.9	0.2	47.8	48.1	0.3	43.4	43.6	0.2	43.5	43.8	0.3	43.5	43.5	0	43.5	44.5	1
100100002655	141 LONDON ROAD HOLYHEAD LL65 2NY	Residential	44.1	44.3	0.2	47.8	48.1	0.3	39.9	40.1	0.2	43.5	43.8	0.3	40.5	40.5	0	43.5	44.5	1
100100002656	142 LONDON ROAD HOLYHEAD LL65 2RB	Residential	47.1	47.3	0.2	46.4	46.7	0.3	42.8	43	0.2	42.1	42.4	0.3	43.5	43.5	0	42.5	42.5	0
100100002657	143 LONDON ROAD HOLYHEAD LL65 2NY	Residential	47.8	48	0.2	47.8	48.1	0.3	43.5	43.7	0.2	43.5	43.8	0.3	43.5	43.5	0	43.5	44.5	1
100100002658	144 LONDON ROAD HOLYHEAD LL65 2RB	Residential	48	48.2	0.2	48.2	48.5	0.3	43.7	43.9	0.2	43.9	44.2	0.3	43.5	44.5	1	44.5	44.5	0

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			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100002659	145 LONDON ROAD HOLYHEAD LL65 2NY	Residential	47.7	47.9	0.2	47.8	48.1	0.3	43.4	43.6	0.2	43.5	43.8	0.3	43.5	43.5	0	43.5	44.5	1
100100002660	146 LONDON ROAD HOLYHEAD LL65 2RB	Residential	47.7	47.9	0.2	48.3	48.6	0.3	43.4	43.6	0.2	44	44.3	0.3	43.5	43.5	0	44.5	44.5	0
100100002661	147 LONDON ROAD HOLYHEAD LL65 2NY	Residential	46.4	46.6	0.2	47.8	48.1	0.3	42.1	42.3	0.2	43.5	43.8	0.3	42.5	42.5	0	43.5	44.5	1
100100002662	148 AROSFALONDON ROAD HOLYHEAD LL65 2R	Residential	48.3	48.5	0.2	48.4	48.7	0.3	44	44.2	0.2	44.1	44.4	0.3	44.5	44.5	0	44.5	44.5	0
100100002663	149 LONDON ROAD HOLYHEAD LL65 2NY	Residential	47.4	47.6	0.2	47.4	47.7	0.3	43.1	43.3	0.2	43.1	43.4	0.3	43.5	43.5	0	43.5	43.5	0
100100002664	150 LUKINLONDON ROAD HOLYHEAD LL65 2RB	Residential	48.3	48.4	0.1	48.3	48.6	0.3	44	44.1	0.1	44	44.3	0.3	44.5	44.5	0	44.5	44.5	0
100100002665	151 FRON HELILONDON ROAD HOLYHEAD LL65	Residential	47.5	47.7	0.2	44.9	45.2	0.3	43.2	43.4	0.2	40.7	41	0.3	43.5	43.5	0	40.5	41.5	1
100100002666	152 LONDON ROAD HOLYHEAD LL65 2RB	Residential	48	48.2	0.2	45.1	45.5	0.4	43.7	43.9	0.2	40.9	41.3	0.4	43.5	44.5	1	41.5	41.5	0
100100002667	153 LONDON ROAD HOLYHEAD LL65 2NY	Residential	45.9	46.1	0.2	45.9	46.3	0.4	41.7	41.8	0.2	41.7	42	0.4	41.5	42.5	1	41.5	42.5	1
100100002668	154 LONDON ROAD HOLYHEAD LL65 2RB	Residential	48.8	49	0.2	48.9	49.2	0.3	44.5	44.7	0.2	44.6	44.9	0.3	44.5	44.5	0	44.5	45.5	1
100100002669	155 LONDON ROAD HOLYHEAD LL65 2NY	Residential	48	48.2	0.2	45.9	46.3	0.4	43.7	43.9	0.2	41.7	42	0.4	43.5	44.5	1	41.5	42.5	1
100100002670	LONDON ROAD HOLYHEAD LL65 2NY	Residential	49.3	49.5	0.2	49.3	49.6	0.3	45	45.1	0.2	45	45.2	0.3	45.5	45.5	0	45.5	45.5	0
100100002671	157 LONDON ROAD HOLYHEAD LL65 2NY	Residential	46.4	46.6	0.2	47.7	48	0.3	42.1	42.3	0.2	43.4	43.7	0.3	42.5	42.5	0	43.5	43.5	0
100100002672	158 MOR AWELLONDON ROAD HOLYHEAD LL65	Residential	48.3	48.5	0.2	48.4	48.7	0.3	44	44.2	0.2	44.1	44.4	0.3	44.5	44.5	0	44.5	44.5	0
100100002673	159 LONDON ROAD HOLYHEAD LL65 2NY	Residential	49.5	49.7	0.2	49.4	49.7	0.3	45.1	45.3	0.2	45	45.3	0.3	45.5	45.5	0	45.5	45.5	0
100100002674	160 LONDON ROAD HOLYHEAD LL65 2RB	Residential	48.8	49	0.2	48.9	49.2	0.3	44.5	44.7	0.2	44.6	44.9	0.3	44.5	44.5	0	44.5	45.5	1
100100002675	161 LONDON ROAD HOLYHEAD LL65 2NY	Residential	49.7	49.9	0.2	49.7	50	0.3	45.3	45.5	0.2	45.3	45.6	0.3	45.5	45.5	0	45.5	45.5	0
100100002676	162 SAFFRONLONDON ROAD HOLYHEAD LL65 2	Residential	47.3	47.5	0.2	49	49.3	0.3	43	43.2	0.2	44.7	45	0.3	43.5	43.5	0	44.5	45.5	1
100100002677	163 LONDON ROAD HOLYHEAD LL65 2NY	Residential	50.9	51.1	0.2	51	51.2	0.2	46.5	46.7	0.2	46.6	46.8	0.2	46.5	46.5	0	46.5	46.5	0
100100002678	164 AWELONLONDON ROAD HOLYHEAD LL65 2R	Residential	49	49.2	0.2	47.1	47.5	0.4	44.7	44.9	0.2	42.8	43.2	0.4	44.5	45.5	1	43.5	43.5	0
100100002679	165 LONDON ROAD HOLYHEAD LL65 2RA	Residential	51.7	51.9	0.2	46.3	46.6	0.3	47.3	47.5	0.2	42	42.3	0.3	47.5	47.5	0	42.5	42.5	0
100100002680	166 LONDON ROAD HOLYHEAD LL65 2RB	Residential	47.3	47.5	0.2	49.3	49.6	0.3	43	43.2	0.2	45	45.2	0.3	43.5	43.5	0	45.5	45.5	0
100100002681	167 LONDON ROAD HOLYHEAD LL65 2RA	Residential	50.4	50.6	0.2	50.7	51	0.3	46	46.2	0.2	46.3	46.6	0.3	46.5	46.5	0	46.5	46.5	0
100100002682	168 LONDON ROAD HOLYHEAD LL65 2RB	Residential	46.7	46.9	0.2	45.9	46.2	0.3	42.4	42.6	0.2	41.7	41.9	0.3	42.5	42.5	0	41.5	42.5	1
100100002683	170 LONDON ROAD HOLYHEAD LL65 2RB	Residential	48.8	49	0.2	46.6	47	0.4	44.5	44.7	0.2	42.3	42.7	0.4	44.5	44.5	0	42.5	42.5	0
100100002684	172 LONDON ROAD HOLYHEAD LL65 2RB	Residential	49.4	49.6	0.2	49.8	50.1	0.3	45	45.2	0.2	45.4	45.7	0.3	45.5	45.5	0	45.5	45.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100002685	174 LONDON ROAD HOLYHEAD LL65 2RB	Residential	49.3	49.5	0.2	49.3	49.6	0.3	45	45.1	0.2	45	45.2	0.3	45.5	45.5	0	45.5	45.5	0
100100002686	176 LONDON ROAD HOLYHEAD LL65 2RB	Residential	48.9	49.1	0.2	48.9	49.2	0.3	44.6	44.8	0.2	44.6	44.9	0.3	44.5	44.5	0	44.5	45.5	1
100100002687	178 LONDON ROAD HOLYHEAD LL65 2RB	Residential	46.5	46.7	0.2	46.5	46.9	0.4	42.2	42.4	0.2	42.2	42.6	0.4	42.5	42.5	0	42.5	42.5	0
100100002688	180 LONDON ROAD HOLYHEAD LL65 2RB	Residential	51.4	51.6	0.2	48.5	48.9	0.4	47	47.2	0.2	44.2	44.6	0.4	47.5	47.5	0	44.5	44.5	0
100100002689	2 MAES Y DELYN HOLYHEAD LL65 2TD	Residential	53.1	53.5	0.4	53.1	53.8	0.7	48.6	49	0.4	48.6	49.3	0.7	48.5	49.5	1	48.5	49.5	1
100100002816	3 MAES Y DELYN HOLYHEAD LL65 2TD	Residential	46.8	47.4	0.6	46.8	47.6	0.8	42.5	43.1	0.6	42.5	43.3	0.8	42.5	43.5	1	42.5	43.5	1
100100002817	4 MAES Y DELYN HOLYHEAD LL65 2TD	Residential	53.3	53.7	0.4	53.4	54	0.6	48.8	49.2	0.4	48.9	49.5	0.6	48.5	49.5	1	49.5	49.5	0
100100002818	6 MAES Y DELYN HOLYHEAD LL65 2TD	Residential	50.1	50.9	0.8	50.1	51.3	1.2	45.7	46.5	0.8	45.7	46.9	1.2	45.5	46.5	1	45.5	47.5	2
100100002819	7 MAES Y DELYN HOLYHEAD LL65 2TD	Residential	55.5	56	0.5	55.5	56.2	0.7	51	51.5	0.5	51	51.6	0.7	51.5	51.5	0	51.5	51.5	0
100100002820	8 MAES Y DELYN HOLYHEAD LL65 2TD	Residential	50.1	51	0.9	50.1	51.4	1.3	45.7	46.6	0.9	45.7	47	1.3	45.5	46.5	1	45.5	47.5	2
100100002821	11 MAES Y DELYN HOLYHEAD LL65 2TD	Residential	54.8	55.3	0.5	54.5	55.3	0.8	50.3	50.8	0.5	50	50.8	0.8	50.5	50.5	0	50.5	50.5	0
100100002822	12 MAES Y DELYN HOLYHEAD LL65 2TD	Residential	54.3	54.8	0.5	54.3	55.1	0.8	49.8	50.3	0.5	49.8	50.6	0.8	49.5	50.5	1	49.5	50.5	1
100100002823	1 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	49.3	49.4	0.1	50.2	50.5	0.3	45	45	0.1	45.8	46.1	0.3	45.5	45.5	0	46.5	46.5	0
100100003216	2 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	50.3	50.4	0.1	45.7	46	0.3	45.9	46	0.1	41.5	41.8	0.3	46.5	46.5	0	41.5	42.5	1
100100003217	3 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	50.5	50.6	0.1	50.4	50.7	0.3	46.1	46.2	0.1	46	46.3	0.3	46.5	46.5	0	46.5	46.5	0
100100003218	4 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	50.5	50.6	0.1	48.4	48.7	0.3	46.1	46.2	0.1	44.1	44.4	0.3	46.5	46.5	0	44.5	44.5	0
100100003219	5 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	50.3	50.4	0.1	50	50.3	0.3	45.9	46	0.1	45.6	45.9	0.3	46.5	46.5	0	45.5	46.5	1
100100003220	6 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	50.2	50.4	0.2	50.2	50.5	0.3	45.8	46	0.2	45.8	46.1	0.3	46.5	46.5	0	46.5	46.5	0
100100003221	7 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	50.1	50.3	0.2	50.2	50.5	0.3	45.7	45.9	0.2	45.8	46.1	0.3	45.5	46.5	1	46.5	46.5	0
100100003222	8 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	49.9	50.1	0.2	47.9	48.2	0.3	45.5	45.7	0.2	43.6	43.9	0.3	45.5	45.5	0	43.5	44.5	1
100100003223	9 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	48	48.1	0.1	49.7	50	0.3	43.7	43.8	0.1	45.3	45.6	0.3	43.5	44.5	1	45.5	45.5	0
100100003224	10 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	49.4	49.5	0.1	49.4	49.7	0.3	45	45.1	0.1	45	45.3	0.3	45.5	45.5	0	45.5	45.5	0
100100003225	11 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	49	49.1	0.1	48.9	49.2	0.3	44.7	44.8	0.1	44.6	44.9	0.3	44.5	44.5	0	44.5	45.5	1
100100003226	12 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	47.7	47.9	0.2	48.4	48.7	0.3	43.4	43.6	0.2	44.1	44.4	0.3	43.5	43.5	0	44.5	44.5	0
100100003227	13 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	48.2	48.4	0.2	48.2	48.6	0.4	43.9	44.1	0.2	43.9	44.3	0.4	44.5	44.5	0	44.5	44.5	0
100100003228	14 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	48.4	48.6	0.2	48.4	48.8	0.4	44.1	44.3	0.2	44.1	44.5	0.4	44.5	44.5	0	44.5	44.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100003229	15 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	48.6	48.7	0.1	48.7	49	0.3	44.3	44.4	0.1	44.4	44.7	0.3	44.5	44.5	0	44.5	44.5	0
100100003230	16 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	49.9	50.1	0.2	49.9	50.3	0.4	45.5	45.7	0.2	45.5	45.9	0.4	45.5	45.5	0	45.5	46.5	1
100100003231	17 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	50.5	50.6	0.1	50.4	50.7	0.3	46.1	46.2	0.1	46	46.3	0.3	46.5	46.5	0	46.5	46.5	0
100100003232	18 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	50.6	50.7	0.1	50.6	50.9	0.3	46.2	46.3	0.1	46.2	46.5	0.3	46.5	46.5	0	46.5	46.5	0
100100003233	19 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	50.6	50.8	0.2	50.7	51	0.3	46.2	46.4	0.2	46.3	46.6	0.3	46.5	46.5	0	46.5	46.5	0
100100003234	20 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	50.8	50.9	0.1	50.8	51.1	0.3	46.4	46.5	0.1	46.4	46.7	0.3	46.5	46.5	0	46.5	46.5	0
100100003235	21 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	49.5	49.7	0.2	49.5	49.9	0.4	45.1	45.3	0.2	45.1	45.5	0.4	45.5	45.5	0	45.5	45.5	0
100100003236	22 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	46.4	46.5	0.1	46.3	46.6	0.3	42.1	42.2	0.1	42	42.3	0.3	42.5	42.5	0	42.5	42.5	0
100100003237	23 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	46.4	46.5	0.1	46.4	46.7	0.3	42.1	42.2	0.1	42.1	42.4	0.3	42.5	42.5	0	42.5	42.5	0
100100003238	24 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	51.2	51.3	0.1	51.2	51.5	0.3	46.8	46.9	0.1	46.8	47.1	0.3	46.5	47.5	1	46.5	47.5	1
100100003239	25 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	51.1	51.2	0.1	48.3	48.6	0.3	46.7	46.8	0.1	44	44.3	0.3	46.5	46.5	0	44.5	44.5	0
100100003240	26 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	51.1	51.2	0.1	51.2	51.5	0.3	46.7	46.8	0.1	46.8	47.1	0.3	46.5	46.5	0	46.5	47.5	1
100100003241	27 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	51.4	51.5	0.1	46.3	46.6	0.3	47	47.1	0.1	42	42.3	0.3	47.5	47.5	0	42.5	42.5	0
100100003242	28 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	51.5	51.6	0.1	51.3	51.6	0.3	47.1	47.2	0.1	46.9	47.2	0.3	47.5	47.5	0	47.5	47.5	0
100100003243	29 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	51.9	52	0.1	51.9	52.2	0.3	47.5	47.6	0.1	47.5	47.8	0.3	47.5	47.5	0	47.5	47.5	0
100100003244	30 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	50.5	50.6	0.1	48.9	49.2	0.3	46.1	46.2	0.1	44.6	44.9	0.3	46.5	46.5	0	44.5	45.5	1
100100003245	31 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	50.5	50.6	0.1	48.8	49.1	0.3	46.1	46.2	0.1	44.5	44.8	0.3	46.5	46.5	0	44.5	44.5	0
100100003246	32 MORRISON CRESCENT HOLYHEAD LL65 2RD	Residential	47.3	47.5	0.2	47.6	47.9	0.3	43	43.2	0.2	43.3	43.6	0.3	43.5	43.5	0	43.5	43.5	0
100100003247	1 PENRHOS VIEW HOLYHEAD LL65 2SW	Residential	52.8	52.9	0.1	50.3	50.6	0.3	48.3	48.4	0.1	45.9	46.2	0.3	48.5	48.5	0	46.5	46.5	0
100100003451	3 PENRHOS VIEW HOLYHEAD LL65 2SW	Residential	49.6	49.8	0.2	49.6	50	0.4	45.2	45.4	0.2	45.2	45.6	0.4	45.5	45.5	0	45.5	45.5	0
100100003452	4 PENRHOS VIEW HOLYHEAD LL65 2SW	Residential	48.4	48.6	0.2	48.5	48.8	0.3	44.1	44.3	0.2	44.2	44.5	0.3	44.5	44.5	0	44.5	44.5	0
100100003453	5 PENRHOS VIEW HOLYHEAD LL65 2SW	Residential	48.2	48.3	0.1	47.7	48	0.3	43.9	44	0.1	43.4	43.7	0.3	44.5	44.5	0	43.5	43.5	0
100100003454	6 PENRHOS VIEW HOLYHEAD LL65 2SW	Residential	52.1	52.2	0.1	48.5	48.8	0.3	47.7	47.8	0.1	44.2	44.5	0.3	47.5	47.5	0	44.5	44.5	0
100100003455	7 PENRHOS VIEW HOLYHEAD LL65 2SW	Residential	52.1	52.2	0.1	51.3	51.6	0.3	47.7	47.8	0.1	46.9	47.2	0.3	47.5	47.5	0	47.5	47.5	0
100100003456	9 PENRHOS VIEW HOLYHEAD LL65 2SW	Residential	51.6	51.8	0.2	51.6	52	0.4	47.2	47.4	0.2	47.2	47.6	0.4	47.5	47.5	0	47.5	47.5	0
100100003457	10 PENRHOS VIEW HOLYHEAD LL65 2SW	Residential	49.1	49.2	0.1	47.9	48.2	0.3	44.8	44.9	0.1	43.6	43.9	0.3	44.5	45.5	1	43.5	44.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100003458	11 PENRHOS VIEW HOLYHEAD LL65 2SW	Residential	48.6	48.7	0.1	48.6	48.9	0.3	44.3	44.4	0.1	44.3	44.6	0.3	44.5	44.5	0	44.5	44.5	0
100100003459	12 PENRHOS VIEW HOLYHEAD LL65 2SW	Residential	49.3	49.4	0.1	49.3	49.6	0.3	45	45	0.1	45	45.2	0.3	45.5	45.5	0	45.5	45.5	0
100100003460	13 PENRHOS VIEW HOLYHEAD LL65 2SW	Residential	53.9	54	0.1	51.7	52	0.3	49.4	49.5	0.1	47.3	47.6	0.3	49.5	49.5	0	47.5	47.5	0
100100003461	15 PENRHOS VIEW HOLYHEAD LL65 2SW	Residential	48.7	48.8	0.1	49.3	49.5	0.2	44.4	44.5	0.1	45	45.1	0.2	44.5	44.5	0	45.5	45.5	0
100100003462	16 PENRHOS VIEW HOLYHEAD LL65 2SW	Residential	54.6	54.7	0.1	53.4	53.7	0.3	50.1	50.2	0.1	48.9	49.2	0.3	50.5	50.5	0	49.5	49.5	0
100100003463	TANREFAIL COTTAGEPORTHDAFARCH ROAD HOL	Residential	39.6	39.7	0.1	39.6	39.9	0.3	35.5	35.6	0.1	35.5	35.8	0.3	35.5	36.5	1	35.5	36.5	1
100100003905	4 TYN PWLL ROAD HOLYHEAD LL65 2TL	Residential	46.6	46.7	0.1	51.7	52	0.3	42.3	42.4	0.1	47.3	47.6	0.3	42.5	42.5	0	47.5	47.5	0
100100004299	5 TYN PWLL ROAD HOLYHEAD LL65 2TL	Residential	47.4	47.7	0.3	47.4	47.9	0.5	43.1	43.4	0.3	43.1	43.6	0.5	43.5	43.5	0	43.5	43.5	0
100100004300	7 TYN PWLL ROAD HOLYHEAD LL65 2TL	Residential	47.5	47.7	0.2	47.5	47.9	0.4	43.2	43.4	0.2	43.2	43.6	0.4	43.5	43.5	0	43.5	43.5	0
100100004301	8 TYN PWLL ROAD HOLYHEAD LL65 2TL	Residential	48.6	48.8	0.2	48.6	49	0.4	44.3	44.5	0.2	44.3	44.7	0.4	44.5	44.5	0	44.5	44.5	0
100100004302	9 TYN PWLL ROAD HOLYHEAD LL65 2TL	Residential	47.6	47.7	0.1	47.6	48	0.4	43.3	43.4	0.1	43.3	43.7	0.4	43.5	43.5	0	43.5	43.5	0
100100004303	10 TYN PWLL ROAD HOLYHEAD LL65 2TL	Residential	47.4	47.6	0.2	47.4	47.8	0.4	43.1	43.3	0.2	43.1	43.5	0.4	43.5	43.5	0	43.5	43.5	0
100100004304	11 TYN PWLL ROAD HOLYHEAD LL65 2TL	Residential	47.3	47.5	0.2	47.3	47.7	0.4	43	43.2	0.2	43	43.4	0.4	43.5	43.5	0	43.5	43.5	0
100100004305	12 TYN PWLL ROAD HOLYHEAD LL65 2TL	Residential	51.4	51.6	0.2	49	49.4	0.4	47	47.2	0.2	44.7	45	0.4	47.5	47.5	0	44.5	45.5	1
100100004306	13 TYN PWLL ROAD HOLYHEAD LL65 2TL	Residential	47.5	47.8	0.3	47.5	48	0.5	43.2	43.5	0.3	43.2	43.7	0.5	43.5	43.5	0	43.5	43.5	0
100100004307	14 TYN PWLL ROAD HOLYHEAD LL65 2TL	Residential	47.4	47.7	0.3	47.4	47.9	0.5	43.1	43.4	0.3	43.1	43.6	0.5	43.5	43.5	0	43.5	43.5	0
100100004308	15 TYN PWLL ROAD HOLYHEAD LL65 2TL	Residential	48.1	48.3	0.2	48.1	48.5	0.4	43.8	44	0.2	43.8	44.2	0.4	44.5	44.5	0	44.5	44.5	0
100100004309	16 TYN PWLL ROAD HOLYHEAD LL65 2TL	Residential	46.6	46.7	0.1	46.6	46.9	0.3	42.3	42.4	0.1	42.3	42.6	0.3	42.5	42.5	0	42.5	42.5	0
100100004310	17 TYN PWLL ROAD HOLYHEAD LL65 2TL	Residential	47.9	48.1	0.2	47.9	48.3	0.4	43.6	43.8	0.2	43.6	44	0.4	43.5	44.5	1	43.5	44.5	1
100100004311	18 TYN PWLL ROAD HOLYHEAD LL65 2TL	Residential	47.9	48.1	0.2	48.1	48.5	0.4	43.6	43.8	0.2	43.8	44.2	0.4	43.5	44.5	1	44.5	44.5	0
100100004312	19 TYN PWLL ROAD HOLYHEAD LL65 2TL	Residential	51.6	51.7	0.1	51.6	51.9	0.3	47.2	47.3	0.1	47.2	47.5	0.3	47.5	47.5	0	47.5	47.5	0
100100004313	20 TYN PWLL ROAD HOLYHEAD LL65 2TL	Residential	47.3	47.5	0.2	51.8	52.1	0.3	43	43.2	0.2	47.4	47.7	0.3	43.5	43.5	0	47.5	47.5	0
100100004314	21 TYN PWLL ROAD HOLYHEAD LL65 2TL	Residential	52.3	52.4	0.1	52.3	52.6	0.3	47.9	48	0.1	47.9	48.2	0.3	48.5	48.5	0	48.5	48.5	0
100100004315	22 TYN PWLL ROAD HOLYHEAD LL65 2TL	Residential	48.3	48.5	0.2	48.3	48.7	0.4	44	44.2	0.2	44	44.4	0.4	44.5	44.5	0	44.5	44.5	0
100100004316	3 BELVERDALEYR ERWLONDON ROAD HOLYHEAD	Residential	46.2	46.4	0.2	47.4	47.7	0.3	41.9	42.1	0.2	43.1	43.4	0.3	42.5	42.5	0	43.5	43.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100004584	5 ARWELFAYR ERWLONDON ROAD HOLYHEAD LL	Residential	52.5	52.7	0.2	51.3	51.6	0.3	48.1	48.2	0.2	46.9	47.2	0.3	48.5	48.5	0	47.5	47.5	0
100100004585	2 YR OGOF HOLYHEAD LL65 2TN	Residential	46.3	46.5	0.2	46.3	46.7	0.4	42	42.2	0.2	42	42.4	0.4	42.5	42.5	0	42.5	42.5	0
100100004586	10 YR OGOF HOLYHEAD LL65 2TN	Residential	47.5	47.7	0.2	47.5	47.9	0.4	43.2	43.4	0.2	43.2	43.6	0.4	43.5	43.5	0	43.5	43.5	0
100100004587	19 YR OGOF HOLYHEAD LL65 2TN	Residential	46.2	46.5	0.3	48.7	49.1	0.4	41.9	42.2	0.3	44.4	44.8	0.4	42.5	42.5	0	44.5	44.5	0
100100004588	20 YR OGOF HOLYHEAD LL65 2TN	Residential	48.9	49.2	0.3	49.3	49.7	0.4	44.6	44.9	0.3	45	45.3	0.4	44.5	45.5	1	45.5	45.5	0
100100004589	22 YR OGOF HOLYHEAD LL65 2TN	Residential	49.5	49.7	0.2	49.5	49.9	0.4	45.1	45.3	0.2	45.1	45.5	0.4	45.5	45.5	0	45.5	45.5	0
100100004590	23 YR OGOF HOLYHEAD LL65 2TN	Residential	48.1	48.3	0.2	48.1	48.5	0.4	43.8	44	0.2	43.8	44.2	0.4	44.5	44.5	0	44.5	44.5	0
100100004591	30 YR OGOF HOLYHEAD LL65 2TN	Residential	47.8	48	0.2	47.8	48.2	0.4	43.5	43.7	0.2	43.5	43.9	0.4	43.5	43.5	0	43.5	44.5	1
100100004592	ARWELKINGSLAND ROAD HOLYHEAD LL65 2SY	Residential	44.5	44.7	0.2	50.1	50.5	0.4	40.3	40.5	0.2	45.7	46.1	0.4	40.5	40.5	0	45.5	46.5	1
100100004593	1 LLAIN DELYN HOLYHEAD LL65 2TE	Residential	47.1	47.3	0.2	46.6	47	0.4	42.8	43	0.2	42.3	42.7	0.4	43.5	43.5	0	42.5	42.5	0
100100004594	2 LLAIN DELYN HOLYHEAD LL65 2TE	Residential	46.9	47.1	0.2	46.3	46.7	0.4	42.6	42.8	0.2	42	42.4	0.4	42.5	43.5	1	42.5	42.5	0
100100004595	3 LLAIN DELYN HOLYHEAD LL65 2TE	Residential	49.3	49.7	0.4	45.6	46.3	0.7	45	45.3	0.4	41.4	42	0.7	45.5	45.5	0	41.5	42.5	1
100100004596	4 LLAIN DELYN HOLYHEAD LL65 2TE	Residential	50.7	51.3	0.6	50.7	51.6	0.9	46.3	46.9	0.6	46.3	47.2	0.9	46.5	47.5	1	46.5	47.5	1
100100004597	5 LLAIN DELYN HOLYHEAD LL65 2TE	Residential	52.2	52.6	0.4	52.3	52.9	0.6	47.8	48.2	0.4	47.9	48.4	0.6	47.5	48.5	1	48.5	48.5	0
100100004598	6 LLAIN DELYN HOLYHEAD LL65 2TE	Residential	47.6	47.9	0.3	47.6	48.1	0.5	43.3	43.6	0.3	43.3	43.8	0.5	43.5	43.5	0	43.5	44.5	1
100100004599	7 LLAIN DELYN HOLYHEAD LL65 2TE	Residential	49	49.6	0.6	49	49.9	0.9	44.7	45.2	0.6	44.7	45.5	0.9	44.5	45.5	1	44.5	45.5	1
100100004600	1 MAES Y DELYN HOLYHEAD LL65 2TD	Residential	48	48.3	0.3	48	48.5	0.5	43.7	44	0.3	43.7	44.2	0.5	43.5	44.5	1	43.5	44.5	1
100100004601	9 MAES Y DELYN HOLYHEAD LL65 2TD	Residential	55.2	55.7	0.5	54.9	55.7	0.8	50.7	51.2	0.5	50.4	51.2	0.8	50.5	51.5	1	50.5	51.5	1
100100004602	10 MAES Y DELYN HOLYHEAD LL65 2TD	Residential	49.2	50.2	1	49.3	50.6	1.3	44.9	45.8	1	45	46.2	1.3	45.5	46.5	1	45.5	46.5	1
100100004603	5 MAES Y DELYN HOLYHEAD LL65 2TD	Residential	49.7	50.6	0.9	49.8	51	1.2	45.3	46.2	0.9	45.4	46.6	1.2	45.5	46.5	1	45.5	46.5	1
100100004604	1 BRYN AWELMILL ROAD HOLYHEAD LL65 2TA	Residential	47.1	47.4	0.3	47.1	47.6	0.5	42.8	43.1	0.3	42.8	43.3	0.5	43.5	43.5	0	43.5	43.5	0
100100004605	2 ISLWYNMILL ROAD HOLYHEAD LL65 2TA	Residential	48.3	48.6	0.3	48.3	48.8	0.5	44	44.3	0.3	44	44.5	0.5	44.5	44.5	0	44.5	44.5	0
100100004606	3 MILL ROAD HOLYHEAD LL65 2TA	Residential	48.4	48.7	0.3	48.4	48.9	0.5	44.1	44.4	0.3	44.1	44.6	0.5	44.5	44.5	0	44.5	44.5	0
100100004607	4 TY CANOLMILL ROAD HOLYHEAD LL65 2TA	Residential	50.3	50.6	0.3	50.3	50.8	0.5	45.9	46.2	0.3	45.9	46.4	0.5	46.5	46.5	0	46.5	46.5	0
100100004608	5 MILL ROAD HOLYHEAD LL65 2TA	Residential	48.1	48.5	0.4	49.6	50.1	0.5	43.8	44.2	0.4	45.2	45.7	0.5	44.5	44.5	0	45.5	45.5	0
100100004609	6 MILL ROAD HOLYHEAD LL65 2TA	Residential	50.5	51	0.5	50.5	51.2	0.7	46.1	46.6	0.5	46.1	46.8	0.7	46.5	46.5	0	46.5	46.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100004610	7 ISLAND VIEWMILL ROAD HOLYHEAD LL65 2	Residential	47.5	47.9	0.4	51.9	52.5	0.6	43.2	43.6	0.4	47.5	48.1	0.6	43.5	43.5	0	47.5	48.5	1
100100004611	8 MILL ROAD HOLYHEAD LL65 2TA	Residential	50	50.5	0.5	50	50.7	0.7	45.6	46.1	0.5	45.6	46.3	0.7	45.5	46.5	1	45.5	46.5	1
100100004612	9 HILL CRESTMILL ROAD HOLYHEAD LL65 2T	Residential	44.1	44.5	0.4	44.1	44.7	0.6	39.9	40.3	0.4	39.9	40.5	0.6	40.5	40.5	0	40.5	40.5	0
100100004613	10 MILL ROAD HOLYHEAD LL65 2TA	Residential	51.4	51.7	0.3	51.7	52.2	0.5	47	47.3	0.3	47.3	47.8	0.5	47.5	47.5	0	47.5	47.5	0
100100004614	11 BRYNHYFRYDMILL ROAD HOLYHEAD LL65 2	Residential	52.5	52.9	0.4	51.9	52.5	0.6	48.1	48.4	0.4	47.5	48.1	0.6	48.5	48.5	0	47.5	48.5	1
100100004615	12 MILL ROAD HOLYHEAD LL65 2TA	Residential	48.8	49.1	0.3	49.2	49.7	0.5	44.5	44.8	0.3	44.9	45.3	0.5	44.5	44.5	0	45.5	45.5	0
100100004616	13 HEATHCLIFFEMILL ROAD HOLYHEAD LL65	Residential	53.3	53.7	0.4	43.1	43.8	0.7	48.8	49.2	0.4	38.9	39.6	0.7	48.5	49.5	1	39.5	39.5	0
100100004617	14 MILL ROAD HOLYHEAD LL65 2TA	Residential	43.4	43.7	0.3	49.1	49.6	0.5	39.2	39.5	0.3	44.8	45.2	0.5	39.5	39.5	0	44.5	45.5	1
100100004618	15 MILL ROAD HOLYHEAD LL65 2TA	Residential	52.4	52.7	0.3	52.4	52.9	0.5	48	48.2	0.3	48	48.4	0.5	48.5	48.5	0	48.5	48.5	0
100100004619	16 CARMELMILL ROAD HOLYHEAD LL65 2TA	Residential	47.5	47.8	0.3	47.5	48	0.5	43.2	43.5	0.3	43.2	43.7	0.5	43.5	43.5	0	43.5	43.5	0
100100004620	17 MILL ROAD HOLYHEAD LL65 2TA	Residential	45.8	46.2	0.4	45.8	46.4	0.6	41.6	41.9	0.4	41.6	42.1	0.6	41.5	42.5	1	41.5	42.5	1
100100004621	18 GRAIG FELINMILL ROAD HOLYHEAD LL65	Residential	47.1	47.6	0.5	47.1	47.8	0.7	42.8	43.3	0.5	42.8	43.5	0.7	43.5	43.5	0	43.5	43.5	0
100100004622	19 MILL ROAD HOLYHEAD LL65 2TA	Residential	52.8	53.2	0.4	53	53.6	0.6	48.3	48.7	0.4	48.5	49.1	0.6	48.5	48.5	0	48.5	49.5	1
100100004623	20 TALGWYNEDDMILL ROAD HOLYHEAD LL65 2	Residential	51.3	51.7	0.4	52	52.5	0.5	46.9	47.3	0.4	47.6	48.1	0.5	47.5	47.5	0	47.5	48.5	1
100100004624	21 HAUL A GWYNTMILL ROAD HOLYHEAD LL65	Residential	52.5	52.9	0.4	52.5	53.1	0.6	48.1	48.4	0.4	48.1	48.6	0.6	48.5	48.5	0	48.5	48.5	0
100100004625	22 HAWENMILL ROAD HOLYHEAD LL65 2TA	Residential	50.9	51.2	0.3	42.5	43	0.5	46.5	46.8	0.3	38.4	38.8	0.5	46.5	46.5	0	38.5	39.5	1
100100004626	23 MILL ROAD HOLYHEAD LL65 2TA	Residential	51	51.4	0.4	50.5	51.1	0.6	46.6	47	0.4	46.1	46.7	0.6	46.5	47.5	1	46.5	46.5	0
100100004627	24 LINKSWAYMILL ROAD HOLYHEAD LL65 2TA	Residential	45.9	46.2	0.3	45.9	46.4	0.5	41.7	41.9	0.3	41.7	42.1	0.5	41.5	42.5	1	41.5	42.5	1
100100004628	25 DAVNORMILL ROAD HOLYHEAD LL65 2TA	Residential	46.6	46.9	0.3	44.2	44.8	0.6	42.3	42.6	0.3	40	40.6	0.6	42.5	42.5	0	40.5	40.5	0
100100004629	27 MILL ROAD HOLYHEAD LL65 2TA	Residential	44.8	45.2	0.4	44.9	45.4	0.5	40.6	41	0.4	40.7	41.2	0.5	40.5	41.5	1	40.5	41.5	1
100100004630	29 MILL ROAD HOLYHEAD LL65 2TA	Residential	40.8	41.1	0.3	43.7	44.2	0.5	36.7	37	0.3	39.5	40	0.5	37.5	37.5	0	39.5	40.5	1
100100004631	1 LLAIN BRYNIAU HOLYHEAD LL65 2JG	Residential	52	52.1	0.1	52.2	52.5	0.3	47.6	47.7	0.1	47.8	48.1	0.3	47.5	47.5	0	47.5	48.5	1
100100004706	5 LLAIN BRYNIAU HOLYHEAD LL65 2JG	Residential	63.4	63.5	0.1	53.9	54.2	0.3	58.6	58.7	0.1	49.4	49.7	0.3	58.5	58.5	0	49.5	49.5	0
100100004707	2 LLAIN BRYNIAU HOLYHEAD LL65 2JG	Residential	52.9	53	0.1	52.9	53.2	0.3	48.4	48.5	0.1	48.4	48.7	0.3	48.5	48.5	0	48.5	48.5	0
100100004708	3 LLAIN BRYNIAU HOLYHEAD LL65 2JG	Residential	55.4	55.5	0.1	55.4	55.7	0.3	50.9	51	0.1	50.9	51.2	0.3	50.5	51.5	1	50.5	51.5	1
100100004711	17 LLAIN BRYNIAU HOLYHEAD LL65 2JG	Residential	52.8	52.9	0.1	52.8	53.1	0.3	48.3	48.4	0.1	48.3	48.6	0.3	48.5	48.5	0	48.5	48.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100004712	16 LLAIN BRYNIAU HOLYHEAD LL65 2JG	Residential	55.6	55.7	0.1	53.5	53.7	0.2	51.1	51.2	0.1	49	49.2	0.2	51.5	51.5	0	49.5	49.5	0
100100004713	11 LLAIN BRYNIAU HOLYHEAD LL65 2JG	Residential	61.4	61.4	0	61.4	61.6	0.2	56.7	56.7	0	56.7	56.9	0.2	56.5	56.5	0	56.5	56.5	0
100100004715	6 LLAIN BRYNIAU HOLYHEAD LL65 2JG	Residential	63.6	63.7	0.1	62.4	62.6	0.2	58.8	58.9	0.1	57.7	57.9	0.2	58.5	58.5	0	57.5	57.5	0
100100004716	7 LLAIN BRYNIAU HOLYHEAD LL65 2JG	Residential	59.8	59.9	0.1	55.4	55.7	0.3	55.1	55.2	0.1	50.9	51.2	0.3	55.5	55.5	0	50.5	51.5	1
100100004717	8 LLAIN BRYNIAU HOLYHEAD LL65 2JG	Residential	58.6	58.7	0.1	58.6	58.9	0.3	54	54.1	0.1	54	54.3	0.3	54.5	54.5	0	54.5	54.5	0
100100004718	9 LLAIN BRYNIAU HOLYHEAD LL65 2JG	Residential	63.5	63.6	0.1	54.8	55.1	0.3	58.7	58.8	0.1	50.3	50.6	0.3	58.5	58.5	0	50.5	50.5	0
100100004719	15 LLAIN BRYNIAU HOLYHEAD LL65 2JG	Residential	51.5	51.6	0.1	50.3	50.6	0.3	47.1	47.2	0.1	45.9	46.2	0.3	47.5	47.5	0	46.5	46.5	0
100100004720	14 LLAIN BRYNIAU HOLYHEAD LL65 2JG	Residential	56	56.1	0.1	56	56.3	0.3	51.5	51.5	0.1	51.5	51.7	0.3	51.5	51.5	0	51.5	51.5	0
100100004721	12 LLAIN BRYNIAU HOLYHEAD LL65 2JG	Residential	51.4	51.5	0.1	60.3	60.5	0.2	47	47.1	0.1	55.6	55.8	0.2	47.5	47.5	0	55.5	55.5	0
100100004722	13 LLAIN BRYNIAU HOLYHEAD LL65 2JG	Residential	56.1	56.2	0.1	56.1	56.4	0.3	51.5	51.6	0.1	51.5	51.8	0.3	51.5	51.5	0	51.5	51.5	0
100100004723	10 LLAIN BRYNIAU HOLYHEAD LL65 2JG	Residential	62.5	62.6	0.1	65.3	65.5	0.2	57.8	57.9	0.1	60.5	60.7	0.2	57.5	57.5	0	60.5	60.5	0
100100004724	SEACROFTPENRHOS BEACH ROAD HOLYHEAD LL	Residential	49.3	49.5	0.2	49.3	49.5	0.2	45	45.1	0.2	45	45.1	0.2	45.5	45.5	0	45.5	45.5	0
100100004740	1 YR OGOF HOLYHEAD LL65 2TN	Residential	43.3	43.5	0.2	45.4	45.7	0.3	39.1	39.3	0.2	41.2	41.5	0.3	39.5	39.5	0	41.5	41.5	0
100100004799	11 YR OGOF HOLYHEAD LL65 2TN	Residential	45.6	45.9	0.3	45.6	46.1	0.5	41.4	41.7	0.3	41.4	41.8	0.5	41.5	41.5	0	41.5	42.5	1
100100004866	3 YR OGOF HOLYHEAD LL65 2TN	Residential	46.4	46.6	0.2	46.4	46.8	0.4	42.1	42.3	0.2	42.1	42.5	0.4	42.5	42.5	0	42.5	42.5	0
100100004869	4 YR OGOF HOLYHEAD LL65 2TN	Residential	47.8	48	0.2	47.4	47.8	0.4	43.5	43.7	0.2	43.1	43.5	0.4	43.5	43.5	0	43.5	43.5	0
100100004870	29 YR OGOF HOLYHEAD LL65 2TN	Residential	49.8	50	0.2	49.8	50.2	0.4	45.4	45.6	0.2	45.4	45.8	0.4	45.5	45.5	0	45.5	46.5	1
100100004889	27 YR OGOF HOLYHEAD LL65 2TN	Residential	50	50.2	0.2	49.8	50.2	0.4	45.6	45.8	0.2	45.4	45.8	0.4	45.5	46.5	1	45.5	46.5	1
100100004894	18 YR OGOF HOLYHEAD LL65 2TN	Residential	48.5	48.7	0.2	45.8	46.2	0.4	44.2	44.4	0.2	41.6	41.9	0.4	44.5	44.5	0	41.5	42.5	1
100100004925	6 YR OGOF HOLYHEAD LL65 2TN	Residential	49.4	49.7	0.3	49.7	50.2	0.5	45	45.3	0.3	45.3	45.8	0.5	45.5	45.5	0	45.5	46.5	1
100100004926	16 YR OGOF HOLYHEAD LL65 2TN	Residential	46.8	47.1	0.3	46.8	47.3	0.5	42.5	42.8	0.3	42.5	43	0.5	42.5	43.5	1	42.5	43.5	1
100100004930	15 YR OGOF HOLYHEAD LL65 2TN	Residential	51.3	51.6	0.3	49.8	50.2	0.4	46.9	47.2	0.3	45.4	45.8	0.4	47.5	47.5	0	45.5	46.5	1
100100004932	12 YR OGOF HOLYHEAD LL65 2TN	Residential	44.2	44.5	0.3	45	45.5	0.5	40	40.3	0.3	40.8	41.3	0.5	40.5	40.5	0	41.5	41.5	0
100100004933	YR OGOF HOLYHEAD LL65 2TN	Residential	48.7	49	0.3	48.8	49.2	0.4	44.4	44.7	0.3	44.5	44.9	0.4	44.5	44.5	0	44.5	45.5	1
100100004935	YR OGOF HOLYHEAD LL65 2TN	Residential	47	47.3	0.3	47.3	47.7	0.4	42.7	43	0.3	43	43.4	0.4	42.5	43.5	1	43.5	43.5	0
100100004936	7 YR OGOF HOLYHEAD LL65 2TN	Residential	50.4	50.7	0.3	50.6	51.1	0.5	46	46.3	0.3	46.2	46.7	0.5	46.5	46.5	0	46.5	46.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100004939	8 YR OGOF HOLYHEAD LL65 2TN	Residential	51.9	52.2	0.3	52.7	53.2	0.5	47.5	47.8	0.3	48.2	48.7	0.5	47.5	47.5	0	48.5	48.5	0
100100004940	11 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	54	54.2	0.2	57.8	58	0.2	49.5	49.7	0.2	53.2	53.4	0.2	49.5	49.5	0	53.5	53.5	0
100100004960	12 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	56.5	56.7	0.2	54.9	55.2	0.3	51.9	52.1	0.2	50.4	50.7	0.3	52.5	52.5	0	50.5	50.5	0
100100004961	13 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	54.2	54.5	0.3	57.3	57.5	0.2	49.7	50	0.3	52.7	52.9	0.2	49.5	50.5	1	52.5	52.5	0
100100004962	1 MAES GARNEDD TREGELE CEMAES BAY LL67	Residential	48.3	49	0.7	48.3	49.2	0.9	44	44.7	0.7	44	44.9	0.9	44.5	44.5	0	44.5	45.5	1
100100008482	2 MAES GARNEDD TREGELE CEMAES BAY LL67	Residential	49.6	50.2	0.6	49.6	50.4	0.8	45.2	45.8	0.6	45.2	46	0.8	45.5	46.5	1	45.5	46.5	1
100100008483	3 MAES GARNEDD TREGELE CEMAES BAY LL67	Residential	49.9	50.5	0.6	49.9	50.6	0.7	45.5	46.1	0.6	45.5	46.2	0.7	45.5	46.5	1	45.5	46.5	1
100100008484	4 MAES GARNEDD TREGELE CEMAES BAY LL67	Residential	47.5	48.2	0.7	48.6	49.5	0.9	43.2	43.9	0.7	44.3	45.1	0.9	43.5	44.5	1	44.5	45.5	1
100100008485	5 MAES GARNEDD TREGELE CEMAES BAY LL67	Residential	47	47.7	0.7	47.2	48.1	0.9	42.7	43.4	0.7	42.9	43.8	0.9	42.5	43.5	1	43.5	44.5	1
100100008486	6 MAES GARNEDD TREGELE CEMAES BAY LL67	Residential	47.3	48	0.7	47.3	48.2	0.9	43	43.7	0.7	43	43.9	0.9	43.5	43.5	0	43.5	44.5	1
100100008487	7 MAES GARNEDD TREGELE CEMAES BAY LL67	Residential	50.4	51.3	0.9	50.4	51.4	1	46	46.9	0.9	46	47	1	46.5	47.5	1	46.5	47.5	1
100100008488	8 BERLLANMAES GARNEDD TREGELE CEMAES BA	Residential	53.5	54.4	0.9	49.5	50.4	0.9	49	49.9	0.9	45.1	46	0.9	49.5	50.5	1	45.5	46.5	1
100100008489	9 MAES GARNEDD TREGELE CEMAES BAY LL67	Residential	49.1	50	0.9	49.1	50.1	1	44.8	45.6	0.9	44.8	45.7	1	44.5	45.5	1	44.5	45.5	1
100100008490	10 MAES GARNEDD TREGELE CEMAES BAY LL67	Residential	49.2	50	0.8	49.2	50.1	0.9	44.9	45.6	0.8	44.9	45.7	0.9	45.5	45.5	0	45.5	45.5	0
100100008491	11 MAES GARNEDD TREGELE CEMAES BAY LL67	Residential	54	54.9	0.9	54	55	1	49.5	50.4	0.9	49.5	50.5	1	49.5	50.5	1	49.5	50.5	1
100100008492	12 MAES GARNEDD TREGELE CEMAES BAY LL67	Residential	54	54.9	0.9	54	55.4	1.4	49.5	50.4	0.9	49.5	50.9	1.4	49.5	50.5	1	49.5	50.5	1
100100008493	13 MAES GARNEDD TREGELE CEMAES BAY LL67	Residential	54.1	54.9	0.8	54	55	1	49.6	50.4	0.8	49.5	50.5	1	49.5	50.5	1	49.5	50.5	1
100100008494	14 MAES GARNEDD TREGELE CEMAES BAY LL67	Residential	53.2	54.1	0.9	53.2	54.6	1.4	48.7	49.6	0.9	48.7	50.1	1.4	48.5	49.5	1	48.5	50.5	2
100100008495	15 MAES GARNEDD TREGELE CEMAES BAY LL67	Residential	53.6	54.5	0.9	53.6	54.7	1.1	49.1	50	0.9	49.1	50.2	1.1	49.5	50.5	1	49.5	50.5	1
100100008496	16 MAES GARNEDD TREGELE CEMAES BAY LL67	Residential	51	51.9	0.9	51	52	1	46.6	47.5	0.9	46.6	47.6	1	46.5	47.5	1	46.5	47.5	1
100100008497	17 MAES GARNEDD TREGELE CEMAES BAY LL67	Residential	49.9	50.7	0.8	50.2	51.2	1	45.5	46.3	0.8	45.8	46.8	1	45.5	46.5	1	46.5	46.5	0
100100008498	18 MAES GARNEDD TREGELE CEMAES BAY LL67	Residential	52	52.9	0.9	50.6	51.6	1	47.6	48.4	0.9	46.2	47.2	1	47.5	48.5	1	46.5	47.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100008499	3 CAE GARNEDD ESTATE TREGELE CEMAES BAY	Residential	58.1	59	0.9	58	59.1	1.1	53.5	54.4	0.9	53.4	54.5	1.1	53.5	54.5	1	53.5	54.5	1
100100008671	2 GARN VIEWCAE GARNEDD ESTATE TREGELE C	Residential	59.3	60.2	0.9	62.4	63.4	1	54.7	55.5	0.9	57.7	58.6	1	54.5	55.5	1	57.5	58.5	1
100100008672	4 CAE GARNEDD ESTATE TREGELE CEMAES BAY	Residential	55.3	56.2	0.9	55.3	56.3	1	50.8	51.6	0.9	50.8	51.7	1	50.5	51.5	1	50.5	51.5	1
100100008677	5 CAE GARNEDD ESTATE TREGELE CEMAES BAY	Residential	54.1	55	0.9	53.9	55	1.1	49.6	50.5	0.9	49.4	50.5	1.1	49.5	50.5	1	49.5	50.5	1
100100008678	7 CAE GARNEDD ESTATE TREGELE CEMAES BAY	Residential	55.8	56.7	0.9	62.1	63.1	1	51.3	52.1	0.9	57.4	58.3	1	51.5	52.5	1	57.5	58.5	1
100100008683	8 CAE GARNEDD ESTATE TREGELE CEMAES BAY	Residential	58.8	59.7	0.9	57.2	58.3	1.1	54.2	55	0.9	52.6	53.7	1.1	54.5	55.5	1	52.5	53.5	1
100100008684	9 INIS CLYDCAE GARNEDD ESTATE TREGELE C	Residential	52.3	53.2	0.9	52.3	53.3	1	47.9	48.7	0.9	47.9	48.8	1	48.5	48.5	0	48.5	48.5	0
100100008689	10 CAE GARNEDD ESTATE TREGELE CEMAES BA	Residential	56.3	57.2	0.9	54.4	55.5	1.1	51.7	52.6	0.9	49.9	51	1.1	51.5	52.5	1	50.5	51.5	1
100100008690	11 CAE GARNEDD ESTATE TREGELE CEMAES BA	Residential	54.8	55.7	0.9	50.1	51.1	1	50.3	51.2	0.9	45.7	46.7	1	50.5	51.5	1	45.5	46.5	1
100100008693	1 CAE GARNEDD ESTATE TREGELE CEMAES BAY	Residential	65	65.9	0.9	56.1	57.2	1.1	60.2	61.1	0.9	51.5	52.6	1.1	60.5	60.5	0	51.5	52.5	1
100100008703	CAE GARNEDD ESTATE TREGELE CEMAES BAY L	Residential	54.3	55.2	0.9	48.8	49.7	0.9	49.8	50.7	0.9	44.5	45.3	0.9	49.5	50.5	1	44.5	45.5	1
100100008706	14 CAE GARNEDD ESTATE TREGELE CEMAES BA	Residential	55.3	56.2	0.9	55.5	56.5	1	50.8	51.6	0.9	51	51.9	1	50.5	51.5	1	51.5	52.5	1
100100008708	15 CAE GARNEDD ESTATE TREGELE CEMAES BA	Residential	55.3	56.2	0.9	55.3	56.3	1	50.8	51.6	0.9	50.8	51.7	1	50.5	51.5	1	50.5	51.5	1
100100008712	1 MAES MACHRAETH LLANFACHRAETH HOLYHEAD	Residential	67.5	68.9	1.4	62.8	56.4	-6.4	62.6	64	1.4	58	51.8	-6.2	62.5	63.5	1	58.5	51.5	-7
100100009964	2 MAES MACHRAETH LLANFACHRAETH HOLYHEAD	Residential	67.3	68.6	1.3	67.3	60.5	-6.8	62.4	63.7	1.3	62.4	55.8	-6.6	62.5	63.5	1	62.5	55.5	-7
100100009965	3 MAES MACHRAETH LLANFACHRAETH HOLYHEAD	Residential	67.2	68.6	1.4	67.2	60.5	-6.7	62.3	63.7	1.4	62.3	55.8	-6.5	62.5	63.5	1	62.5	55.5	-7
100100009966	4 MAES MACHRAETH LLANFACHRAETH HOLYHEAD	Residential	66.8	68.2	1.4	63.8	57.5	-6.3	61.9	63.3	1.4	59	52.9	-6.1	61.5	63.5	2	58.5	52.5	-6
100100009967	5 MAES MACHRAETH LLANFACHRAETH HOLYHEAD	Residential	57.5	58.9	1.4	57.5	52.6	-4.9	52.9	54.3	1.4	52.9	48.2	-4.8	52.5	54.5	2	52.5	48.5	-4
100100009968	6 MAES MACHRAETH LLANFACHRAETH HOLYHEAD	Residential	57.2	58.6	1.4	56.7	52.1	-4.6	52.6	54	1.4	52.1	47.7	-4.5	52.5	54.5	2	52.5	47.5	-5
100100009969	7 MAES MACHRAETH LLANFACHRAETH HOLYHEAD	Residential	56	57.4	1.4	56	51.7	-4.3	51.5	52.8	1.4	51.5	47.3	-4.2	51.5	52.5	1	51.5	47.5	-4
100100009970	8 MAES MACHRAETH LLANFACHRAETH HOLYHEAD	Residential	56	57.4	1.4	56	51.7	-4.3	51.5	52.8	1.4	51.5	47.3	-4.2	51.5	52.5	1	51.5	47.5	-4
100100009971	9 MAES MACHRAETH LLANFACHRAETH HOLYHEAD	Residential	55.4	56.8	1.4	55.4	51.2	-4.2	50.9	52.2	1.4	50.9	46.8	-4.1	50.5	52.5	2	50.5	46.5	-4
100100009972	10 MAES MACHRAETH LLANFACHRAETH HOLYHEA	Residential	55.5	56.9	1.4	52.4	48.4	-4	51	52.3	1.4	48	44.1	-3.9	51.5	52.5	1	48.5	44.5	-4

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100009973	11 MAES MACHRAETH LLANFACHRAETH HOLYHEA	Residential	57.6	58.9	1.3	47.3	44.5	-2.8	53	54.3	1.3	43	40.3	-2.7	53.5	54.5	1	43.5	40.5	-3
100100009974	12 MAES MACHRAETH LLANFACHRAETH HOLYHEA	Residential	57	58.4	1.4	49	46.4	-2.6	52.4	53.8	1.4	44.7	42.1	-2.5	52.5	53.5	1	44.5	42.5	-2
100100009975	13 MAES MACHRAETH LLANFACHRAETH HOLYHEA	Residential	55.9	57.3	1.4	47.2	44.5	-2.7	51.4	52.7	1.4	42.9	40.3	-2.6	51.5	52.5	1	43.5	40.5	-3
100100009976	14 MAES MACHRAETH LLANFACHRAETH HOLYHEA	Residential	55.7	57	1.3	48.5	45.9	-2.6	51.2	52.4	1.3	44.2	41.7	-2.5	51.5	52.5	1	44.5	41.5	-3
100100009977	15 MAES MACHRAETH LLANFACHRAETH HOLYHEA	Residential	55.1	56.5	1.4	47.6	44.9	-2.7	50.6	51.9	1.4	43.3	40.7	-2.6	50.5	52.5	2	43.5	40.5	-3
100100009978	16 MAES MACHRAETH LLANFACHRAETH HOLYHEA	Residential	54.8	56.2	1.4	47.8	45.4	-2.4	50.3	51.6	1.4	43.5	41.2	-2.3	50.5	51.5	1	43.5	41.5	-2
100100009979	17 MAES MACHRAETH LLANFACHRAETH HOLYHEA	Residential	51.8	53.2	1.4	47.6	44.9	-2.7	47.4	48.7	1.4	43.3	40.7	-2.6	47.5	48.5	1	43.5	40.5	-3
100100009980	18 MAES MACHRAETH LLANFACHRAETH HOLYHEA	Residential	56.2	57.6	1.4	47.8	45.2	-2.6	51.6	53	1.4	43.5	41	-2.5	51.5	53.5	2	43.5	41.5	-2
100100009981	19 MAES MACHRAETH LLANFACHRAETH HOLYHEA	Residential	56.5	57.8	1.3	48.5	46	-2.5	51.9	53.2	1.3	44.2	41.8	-2.4	52.5	53.5	1	44.5	42.5	-2
100100009982	20 MAES MACHRAETH LLANFACHRAETH HOLYHEA	Residential	56.7	58.1	1.4	48.7	45.8	-2.9	52.1	53.5	1.4	44.4	41.6	-2.8	52.5	53.5	1	44.5	41.5	-3
100100009983	21 MAES MACHRAETH LLANFACHRAETH HOLYHEA	Residential	66	67.4	1.4	51.9	48	-3.9	61.2	62.5	1.4	47.5	43.7	-3.8	61.5	62.5	1	47.5	43.5	-4
100100009984	22 MAES MACHRAETH LLANFACHRAETH HOLYHEA	Residential	66	67.4	1.4	51.7	47.6	-4.1	61.2	62.5	1.4	47.3	43.3	-4	61.5	62.5	1	47.5	43.5	-4
100100009985	23 MAES MACHRAETH LLANFACHRAETH HOLYHEA	Residential	66.1	67.5	1.4	51.4	47.5	-3.9	61.2	62.6	1.4	47	43.2	-3.8	61.5	62.5	1	47.5	43.5	-4
100100009986	24 MAES MACHRAETH LLANFACHRAETH HOLYHEA	Residential	51.2	52.6	1.4	51.2	47.3	-3.9	46.8	48.2	1.4	46.8	43	-3.8	46.5	48.5	2	46.5	43.5	-3
100100009987	25 MAES MACHRAETH LLANFACHRAETH HOLYHEA	Residential	59.3	60.7	1.4	51.1	47.2	-3.9	54.7	56	1.4	46.7	42.9	-3.8	54.5	56.5	2	46.5	43.5	-3
100100009988	1 MAES MAETHLU LLANFAETHLU HOLYHEAD LL6	Residential	46.6	46.9	0.3	55	55.2	0.2	42.3	42.6	0.3	50.5	50.7	0.2	42.5	42.5	0	50.5	50.5	0
100100010333	2 MAES MAETHLU LLANFAETHLU HOLYHEAD LL6	Residential	46.2	46.5	0.3	60.1	60.2	0.1	41.9	42.2	0.3	55.4	55.5	0.1	42.5	42.5	0	55.5	55.5	0
100100010334	3 MAES MAETHLU LLANFAETHLU HOLYHEAD LL6	Residential	46.1	46.5	0.4	60.5	60.8	0.3	41.8	42.2	0.4	55.8	56.1	0.3	42.5	42.5	0	55.5	56.5	1
100100010335	4 MAES MAETHLU LLANFAETHLU HOLYHEAD LL6	Residential	49.3	49.7	0.4	60	60.4	0.4	45	45.3	0.4	55.3	55.7	0.4	45.5	45.5	0	55.5	55.5	0
100100010336	5 MAES MAETHLU LLANFAETHLU HOLYHEAD LL6	Residential	45.3	45.9	0.6	57	57.2	0.2	41.1	41.7	0.6	52.4	52.6	0.2	41.5	41.5	0	52.5	52.5	0
100100010337	6 ANNEDD WENMAES MAETHLU LLANFAETHLU HO	Residential	45.6	46.2	0.6	58	58.2	0.2	41.4	41.9	0.6	53.4	53.6	0.2	41.5	42.5	1	53.5	53.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100010338	7 MAES MAETHLU LLANFAETHLU HOLYHEAD LL6	Residential	45.1	45.8	0.7	57.5	57.7	0.2	40.9	41.6	0.7	52.9	53.1	0.2	41.5	41.5	0	52.5	53.5	1
100100010339	8 MAES MAETHLU LLANFAETHLU HOLYHEAD LL6	Residential	45	45.6	0.6	54.5	54.7	0.2	40.8	41.4	0.6	50	50.2	0.2	41.5	41.5	0	50.5	50.5	0
100100010340	9 MAES MAETHLU LLANFAETHLU HOLYHEAD LL6	Residential	51.4	52	0.6	47.6	48.3	0.7	47	47.6	0.6	43.3	44	0.7	47.5	47.5	0	43.5	44.5	1
100100010341	10 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	51.8	52.5	0.7	48	48.7	0.7	47.4	48.1	0.7	43.7	44.4	0.7	47.5	48.5	1	43.5	44.5	1
100100010342	11 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	46.3	47.1	0.8	46.3	47.1	0.8	42	42.8	0.8	42	42.8	0.8	42.5	43.5	1	42.5	43.5	1
100100010343	12 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	45.2	46.2	1	44.9	45.4	0.5	41	41.9	1	40.7	41.2	0.5	41.5	42.5	1	40.5	41.5	1
100100010344	13 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	47.7	48.7	1	48	48.7	0.7	43.4	44.4	1	43.7	44.4	0.7	43.5	44.5	1	43.5	44.5	1
100100010345	14 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	45.4	46.2	0.8	45.4	46.2	0.8	41.2	41.9	0.8	41.2	41.9	0.8	41.5	42.5	1	41.5	42.5	1
100100010346	15 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	47.8	48.6	0.8	48.7	49.1	0.4	43.5	44.3	0.8	44.4	44.8	0.4	43.5	44.5	1	44.5	44.5	0
100100010347	16 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	50.1	50.8	0.7	48.1	48.9	0.8	45.7	46.4	0.7	43.8	44.6	0.8	45.5	46.5	1	44.5	44.5	0
100100010348	17 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	48.9	49.8	0.9	51.2	51.6	0.4	44.6	45.4	0.9	46.8	47.2	0.4	44.5	45.5	1	46.5	47.5	1
100100010349	18 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	48.3	49.2	0.9	48.3	48.6	0.3	44	44.9	0.9	44	44.3	0.3	44.5	45.5	1	44.5	44.5	0
100100010350	19 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	47.3	48.3	1	47.3	47.8	0.5	43	44	1	43	43.5	0.5	43.5	44.5	1	43.5	43.5	0
100100010351	20 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	47.1	48.1	1	47.1	47.6	0.5	42.8	43.8	1	42.8	43.3	0.5	43.5	44.5	1	43.5	43.5	0
100100010352	21 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	46.8	47.8	1	46.5	47.1	0.6	42.5	43.5	1	42.2	42.8	0.6	42.5	43.5	1	42.5	43.5	1
100100010353	22 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	46.3	47.4	1.1	46.5	47.1	0.6	42	43.1	1.1	42.2	42.8	0.6	42.5	43.5	1	42.5	43.5	1
100100010354	23 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	46.3	47.4	1.1	46	46.9	0.9	42	43.1	1.1	41.8	42.6	0.9	42.5	43.5	1	42.5	42.5	0
100100010355	24 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	45.8	46.9	1.1	45.8	46.6	0.8	41.6	42.6	1.1	41.6	42.3	0.8	41.5	42.5	1	41.5	42.5	1
100100010356	25 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	47	48	1	45.2	46.3	1.1	42.7	43.7	1	41	42	1.1	42.5	43.5	1	41.5	42.5	1
100100010357	26 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	42.3	43.2	0.9	42.2	42.5	0.3	38.2	39	0.9	38.1	38.4	0.3	38.5	39.5	1	38.5	38.5	0
100100010358	27 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	47	48	1	42.7	43.2	0.5	42.7	43.7	1	38.5	39	0.5	42.5	43.5	1	38.5	39.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100010359	28 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	46.3	47.3	1	42.3	42.7	0.4	42	43	1	38.2	38.5	0.4	42.5	43.5	1	38.5	38.5	0
100100010360	29 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	47.1	48.1	1	47	47.3	0.3	42.8	43.8	1	42.7	43	0.3	43.5	44.5	1	42.5	43.5	1
100100010361	30 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	46.9	48.1	1.2	47.3	47.7	0.4	42.6	43.8	1.2	43	43.4	0.4	42.5	44.5	2	43.5	43.5	0
100100010362	31 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	44.6	45.8	1.2	42	42.3	0.3	40.4	41.6	1.2	37.9	38.2	0.3	40.5	41.5	1	38.5	38.5	0
100100010363	32 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	43	44.1	1.1	42.4	42.7	0.3	38.8	39.9	1.1	38.3	38.5	0.3	39.5	40.5	1	38.5	38.5	0
100100010364	33 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	45.8	46.9	1.1	45.8	46.3	0.5	41.6	42.6	1.1	41.6	42	0.5	41.5	42.5	1	41.5	42.5	1
100100010365	34 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	45.2	46.4	1.2	44.7	45.4	0.7	41	42.1	1.2	40.5	41.2	0.7	41.5	42.5	1	40.5	41.5	1
100100010366	35 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	44.4	45.5	1.1	44.4	45.2	0.8	40.2	41.3	1.1	40.2	41	0.8	40.5	41.5	1	40.5	41.5	1
100100010367	36 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	40.8	41.9	1.1	40.8	41.1	0.3	36.7	37.8	1.1	36.7	37	0.3	37.5	38.5	1	37.5	37.5	0
100100010368	37 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	40.5	41.6	1.1	40.5	40.7	0.2	36.4	37.5	1.1	36.4	36.6	0.2	36.5	37.5	1	36.5	36.5	0
100100010369	38 MAES MAETHLU LLANFAETHLU HOLYHEAD LL	Residential	45.7	46.9	1.2	45.3	45.4	0.1	41.5	42.6	1.2	41.1	41.2	0.1	41.5	42.5	1	41.5	41.5	0
100100010370	1 TYN MERDDYNTRE IFAN ESTATE CAERGEILIO	Residential	54.4	54.7	0.3	54.4	54.9	0.5	49.9	50.2	0.3	49.9	50.4	0.5	50.5	50.5	0	50.5	50.5	0
100100010371	2 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	54.9	55.2	0.3	54.9	55.3	0.4	50.4	50.7	0.3	50.4	50.8	0.4	50.5	50.5	0	50.5	50.5	0
100100010372	3 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	55.2	55.5	0.3	55.2	55.6	0.4	50.7	51	0.3	50.7	51.1	0.4	50.5	51.5	1	50.5	51.5	1
100100010373	4 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	54.4	54.8	0.4	54.4	54.9	0.5	49.9	50.3	0.4	49.9	50.4	0.5	50.5	50.5	0	50.5	50.5	0
100100010374	5 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	54	54.3	0.3	55.4	55.8	0.4	49.5	49.8	0.3	50.9	51.3	0.4	49.5	49.5	0	50.5	51.5	1
100100010375	6 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	52.9	53.2	0.3	55.3	55.8	0.5	48.4	48.7	0.3	50.8	51.3	0.5	48.5	48.5	0	50.5	51.5	1
100100010376	7 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	55.4	55.7	0.3	55.2	55.7	0.5	50.9	51.2	0.3	50.7	51.2	0.5	50.5	51.5	1	50.5	51.5	1
100100010377	8 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	55.3	55.6	0.3	52.2	52.7	0.5	50.8	51.1	0.3	47.8	48.2	0.5	50.5	51.5	1	47.5	48.5	1
100100010378	9 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	55.4	55.7	0.3	55.3	55.8	0.5	50.9	51.2	0.3	50.8	51.3	0.5	50.5	51.5	1	50.5	51.5	1
100100010379	10 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	55.3	55.6	0.3	55.2	55.7	0.5	50.8	51.1	0.3	50.7	51.2	0.5	50.5	51.5	1	50.5	51.5	1
100100010380	11 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	55.1	55.5	0.4	55.5	56	0.5	50.6	51	0.4	51	51.5	0.5	50.5	51.5	1	51.5	51.5	0
100100010381	12 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	52.4	52.8	0.4	55.5	56	0.5	48	48.3	0.4	51	51.5	0.5	48.5	48.5	0	51.5	51.5	0
100100010382	13 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	53.2	53.6	0.4	55.7	56.2	0.5	48.7	49.1	0.4	51.2	51.6	0.5	48.5	49.5	1	51.5	51.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100010383	14 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	55.4	55.7	0.3	55.4	55.9	0.5	50.9	51.2	0.3	50.9	51.4	0.5	50.5	51.5	1	50.5	51.5	1
100100010384	15 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	55.7	56.1	0.4	55.7	56.3	0.6	51.2	51.5	0.4	51.2	51.7	0.6	51.5	51.5	0	51.5	51.5	0
100100010385	16 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	53.3	53.6	0.3	55.1	55.6	0.5	48.8	49.1	0.3	50.6	51.1	0.5	48.5	49.5	1	50.5	51.5	1
100100010386	17 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	55.3	55.7	0.4	56.8	57.4	0.6	50.8	51.2	0.4	52.2	52.8	0.6	50.5	51.5	1	52.5	52.5	0
100100010387	18 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	57	57.4	0.4	57	57.5	0.5	52.4	52.8	0.4	52.4	52.9	0.5	52.5	52.5	0	52.5	52.5	0
100100010388	19 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	56.9	57.2	0.3	56.9	57.5	0.6	52.3	52.6	0.3	52.3	52.9	0.6	52.5	52.5	0	52.5	52.5	0
100100010389	20 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	51.4	51.7	0.3	57	57.5	0.5	47	47.3	0.3	52.4	52.9	0.5	47.5	47.5	0	52.5	52.5	0
100100010390	21 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	56.9	57.2	0.3	56.9	57.5	0.6	52.3	52.6	0.3	52.3	52.9	0.6	52.5	52.5	0	52.5	52.5	0
100100010391	22 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	56.4	56.8	0.4	56.4	56.9	0.5	51.8	52.2	0.4	51.8	52.3	0.5	51.5	52.5	1	51.5	52.5	1
100100010392	23 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	56.3	56.6	0.3	56.3	56.8	0.5	51.7	52	0.3	51.7	52.2	0.5	51.5	52.5	1	51.5	52.5	1
100100010393	24 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	56.1	56.4	0.3	56	56.6	0.6	51.5	51.8	0.3	51.5	52	0.6	51.5	51.5	0	51.5	52.5	1
100100010394	25 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	55.9	56.2	0.3	55.8	56.4	0.6	51.4	51.6	0.3	51.3	51.8	0.6	51.5	51.5	0	51.5	51.5	0
100100010395	26 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	53.4	53.8	0.4	55.6	56.1	0.5	48.9	49.3	0.4	51.1	51.5	0.5	49.5	49.5	0	51.5	51.5	0
100100010396	27 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	53.3	53.7	0.4	54	54.5	0.5	48.8	49.2	0.4	49.5	50	0.5	48.5	49.5	1	49.5	50.5	1
100100010397	28 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	53.8	54.1	0.3	53.7	54.2	0.5	49.3	49.6	0.3	49.2	49.7	0.5	49.5	49.5	0	49.5	49.5	0
100100010398	29 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	53.7	54.1	0.4	53.7	54.2	0.5	49.2	49.6	0.4	49.2	49.7	0.5	49.5	49.5	0	49.5	49.5	0
100100010399	30 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	50.8	51.1	0.3	54	54.5	0.5	46.4	46.7	0.3	49.5	50	0.5	46.5	46.5	0	49.5	50.5	1
100100010400	31 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	54.5	54.9	0.4	54.5	55	0.5	50	50.4	0.4	50	50.5	0.5	50.5	50.5	0	50.5	50.5	0
100100010401	32 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	53.4	53.7	0.3	53.4	53.9	0.5	48.9	49.2	0.3	48.9	49.4	0.5	49.5	49.5	0	49.5	49.5	0
100100010402	33 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	53.7	54	0.3	53.6	54.1	0.5	49.2	49.5	0.3	49.1	49.6	0.5	49.5	49.5	0	49.5	49.5	0
100100010403	34 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	53.9	54.2	0.3	53.8	54.3	0.5	49.4	49.7	0.3	49.3	49.8	0.5	49.5	49.5	0	49.5	49.5	0
100100010404	35 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	55.1	55.4	0.3	55	55.5	0.5	50.6	50.9	0.3	50.5	51	0.5	50.5	50.5	0	50.5	51.5	1
100100010405	36 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	53.9	54.2	0.3	53.8	54.2	0.4	49.4	49.7	0.3	49.3	49.7	0.4	49.5	49.5	0	49.5	49.5	0
100100010406	37 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	53.1	53.4	0.3	53.9	54.3	0.4	48.6	48.9	0.3	49.4	49.8	0.4	48.5	49.5	1	49.5	49.5	0
100100010407	38 TRE IFAN ESTATE CAERGEILIOG HOLYHEAD	Residential	53.5	53.8	0.3	53.5	54	0.5	49	49.3	0.3	49	49.5	0.5	49.5	49.5	0	49.5	49.5	0
100100010408	1 RHEN YSGOL CAERGEILIOG HOLYHEAD LL65	Residential	50.9	51.2	0.3	51.3	51.7	0.4	46.5	46.8	0.3	46.9	47.3	0.4	46.5	46.5	0	47.5	47.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100010411	2 RHEN YSGOL CAERGEILIOG HOLYHEAD LL65	Residential	50.6	50.9	0.3	50.6	51	0.4	46.2	46.5	0.3	46.2	46.6	0.4	46.5	46.5	0	46.5	46.5	0
100100010412	3 RHEN YSGOL CAERGEILIOG HOLYHEAD LL65	Residential	50.7	51	0.3	50.7	51.1	0.4	46.3	46.6	0.3	46.3	46.7	0.4	46.5	46.5	0	46.5	46.5	0
100100010413	16 WARDENS HOUSERHEN YSGOL CAERGEILIOG	Residential	54.9	55.2	0.3	50.8	51.2	0.4	50.4	50.7	0.3	46.4	46.8	0.4	50.5	50.5	0	46.5	46.5	0
100100010426	THE WILLOWSGORAD ROAD VALLEY HOLYHEAD L	Residential	54.7	54.9	0.2	56.4	56.6	0.2	50.2	50.4	0.2	51.8	52	0.2	50.5	50.5	0	51.5	52.5	1
100100010480	5 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	52.8	53	0.2	54.8	55	0.2	48.3	48.5	0.2	50.3	50.5	0.2	48.5	48.5	0	50.5	50.5	0
100100010493	6 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	52.7	52.9	0.2	52.6	52.9	0.3	48.2	48.4	0.2	48.2	48.4	0.3	48.5	48.5	0	48.5	48.5	0
100100010494	7 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	50.8	51	0.2	57.8	58	0.2	46.4	46.6	0.2	53.2	53.4	0.2	46.5	46.5	0	53.5	53.5	0
100100010495	8 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	55	55.2	0.2	51.8	52.1	0.3	50.5	50.7	0.2	47.4	47.7	0.3	50.5	50.5	0	47.5	47.5	0
100100010496	9 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	50.6	50.9	0.3	50.6	50.9	0.3	46.2	46.5	0.3	46.2	46.5	0.3	46.5	46.5	0	46.5	46.5	0
100100010497	10 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	51.6	51.9	0.3	52.3	52.6	0.3	47.2	47.5	0.3	47.9	48.2	0.3	47.5	47.5	0	48.5	48.5	0
100100010498	11 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	51.7	52	0.3	54.3	54.5	0.2	47.3	47.6	0.3	49.8	50	0.2	47.5	47.5	0	49.5	50.5	1
100100010499	12 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	56.5	56.7	0.2	52.1	52.4	0.3	51.9	52.1	0.2	47.7	48	0.3	52.5	52.5	0	47.5	48.5	1
100100010500	13 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	51.9	52.2	0.3	51.9	52.2	0.3	47.5	47.8	0.3	47.5	47.8	0.3	47.5	47.5	0	47.5	47.5	0
100100010501	14 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	52	52.3	0.3	52	52.3	0.3	47.6	47.9	0.3	47.6	47.9	0.3	47.5	48.5	1	47.5	48.5	1
100100010502	15 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	52.1	52.4	0.3	52.1	52.4	0.3	47.7	48	0.3	47.7	48	0.3	47.5	48.5	1	47.5	48.5	1
100100010503	16 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	53.6	53.9	0.3	52	52.3	0.3	49.1	49.4	0.3	47.6	47.9	0.3	49.5	49.5	0	47.5	48.5	1
100100010504	17 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	51.7	52	0.3	51.9	52.2	0.3	47.3	47.6	0.3	47.5	47.8	0.3	47.5	47.5	0	47.5	47.5	0
100100010505	18 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	50.7	51.1	0.4	52	52.3	0.3	46.3	46.7	0.4	47.6	47.9	0.3	46.5	46.5	0	47.5	48.5	1
100100010506	19 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	50.3	50.7	0.4	50.4	50.7	0.3	45.9	46.3	0.4	46	46.3	0.3	46.5	46.5	0	46.5	46.5	0
100100010507	20 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	50.2	50.5	0.3	50.2	50.5	0.3	45.8	46.1	0.3	45.8	46.1	0.3	46.5	46.5	0	46.5	46.5	0
100100010508	21 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	50.1	50.4	0.3	50.1	50.4	0.3	45.7	46	0.3	45.7	46	0.3	45.5	46.5	1	45.5	46.5	1
100100010509	22 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	50.6	50.9	0.3	50.7	51	0.3	46.2	46.5	0.3	46.3	46.6	0.3	46.5	46.5	0	46.5	46.5	0
100100010510	23 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	50	50.4	0.4	50.1	50.4	0.3	45.6	46	0.4	45.7	46	0.3	45.5	46.5	1	45.5	46.5	1
100100010511	24 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	55.8	56	0.2	52.4	52.7	0.3	51.3	51.5	0.2	48	48.2	0.3	51.5	51.5	0	48.5	48.5	0
100100010512	15 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	51.9	52.5	0.6	53.4	53.6	0.2	47.5	48.1	0.6	48.9	49.1	0.2	47.5	48.5	1	49.5	49.5	0

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			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100010545	13 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	52.1	52.6	0.5	51.2	51.5	0.3	47.7	48.2	0.5	46.8	47.1	0.3	47.5	48.5	1	46.5	47.5	1
100100010546	11 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	52.2	52.7	0.5	54	54.2	0.2	47.8	48.2	0.5	49.5	49.7	0.2	47.5	48.5	1	49.5	49.5	0
100100010547	9 PENMORFAFFORDD PENDYFFRYN VALLEY HOLY	Residential	51.9	52.3	0.4	56	56.2	0.2	47.5	47.9	0.4	51.5	51.6	0.2	47.5	48.5	1	51.5	51.5	0
100100010548	7 BRYN GOLEUFFORDD PENDYFFRYN VALLEY HO	Residential	53.2	53.6	0.4	57.5	57.7	0.2	48.7	49.1	0.4	52.9	53.1	0.2	48.5	49.5	1	52.5	53.5	1
100100010549	5 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL6	Residential	54.8	55	0.2	61.8	62	0.2	50.3	50.5	0.2	57.1	57.3	0.2	50.5	50.5	0	57.5	57.5	0
100100010550	3 BROADLANDSFFORDD PENDYFFRYN VALLEY HO	Residential	53.6	53.9	0.3	60.4	60.6	0.2	49.1	49.4	0.3	55.7	55.9	0.2	49.5	49.5	0	55.5	55.5	0
100100010551	1 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL6	Residential	54	54.3	0.3	61.4	61.6	0.2	49.5	49.8	0.3	56.7	56.9	0.2	49.5	49.5	0	56.5	56.5	0
100100010552	12 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	52.5	53.2	0.7	52.8	53	0.2	48.1	48.7	0.7	48.3	48.5	0.2	48.5	48.5	0	48.5	48.5	0
100100010553	14 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	52.9	53.6	0.7	50.9	51.1	0.2	48.4	49.1	0.7	46.5	46.7	0.2	48.5	49.5	1	46.5	46.5	0
100100010554	9 LON GARDENER VALLEY HOLYHEAD LL65 3DN	Residential	53.3	53.7	0.4	50.8	51.1	0.3	48.8	49.2	0.4	46.4	46.7	0.3	48.5	49.5	1	46.5	46.5	0
100100010555	7 LON GARDENER VALLEY HOLYHEAD LL65 3DN	Residential	50.8	51.1	0.3	56.4	56.6	0.2	46.4	46.7	0.3	51.8	52	0.2	46.5	46.5	0	51.5	52.5	1
100100010556	5 LON GARDENER VALLEY HOLYHEAD LL65 3DN	Residential	51.3	51.7	0.4	51.1	51.4	0.3	46.9	47.3	0.4	46.7	47	0.3	47.5	47.5	0	46.5	47.5	1
100100010557	3 LON GARDENER VALLEY HOLYHEAD LL65 3DN	Residential	51.3	51.7	0.4	52.4	52.7	0.3	46.9	47.3	0.4	48	48.2	0.3	47.5	47.5	0	48.5	48.5	0
100100010558	1 LON GARDENER VALLEY HOLYHEAD LL65 3DN	Residential	51.4	51.8	0.4	57.8	58	0.2	47	47.4	0.4	53.2	53.4	0.2	47.5	47.5	0	53.5	53.5	0
100100010559	2 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL6	Residential	52	52.5	0.5	57.9	58.1	0.2	47.6	48.1	0.5	53.3	53.5	0.2	47.5	48.5	1	53.5	53.5	0
100100010560	10 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	50.2	50.7	0.5	54	54.2	0.2	45.8	46.3	0.5	49.5	49.7	0.2	46.5	46.5	0	49.5	49.5	0
100100010561	8 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL6	Residential	52.3	52.8	0.5	53.3	53.5	0.2	47.9	48.3	0.5	48.8	49	0.2	48.5	48.5	0	48.5	49.5	1
100100010562	6 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL6	Residential	51.4	52	0.6	51.3	51.6	0.3	47	47.6	0.6	46.9	47.2	0.3	47.5	47.5	0	47.5	47.5	0
100100010563	4 DWYLANFFORDD PENDYFFRYN VALLEY HOLYHE	Residential	52.8	53.2	0.4	53.8	54	0.2	48.3	48.7	0.4	49.3	49.5	0.2	48.5	48.5	0	49.5	49.5	0
100100010564	6 LON GARDENER VALLEY HOLYHEAD LL65 3DN	Residential	52.5	53.1	0.6	52.6	52.8	0.2	48.1	48.6	0.6	48.2	48.3	0.2	48.5	48.5	0	48.5	48.5	0
100100010565	8 LON GARDENER VALLEY HOLYHEAD LL65 3DN	Residential	53.1	53.7	0.6	53.3	53.5	0.2	48.6	49.2	0.6	48.8	49	0.2	48.5	49.5	1	48.5	49.5	1
100100010566	38 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	51.5	52.1	0.6	48.4	48.7	0.3	47.1	47.7	0.6	44.1	44.4	0.3	47.5	47.5	0	44.5	44.5	0
100100010567	27 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	51	51.7	0.7	49.7	50	0.3	46.6	47.3	0.7	45.3	45.6	0.3	46.5	47.5	1	45.5	45.5	0
100100010568	25 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	49.9	50.6	0.7	49.9	50.2	0.3	45.5	46.2	0.7	45.5	45.8	0.3	45.5	46.5	1	45.5	46.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100010569	34 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	52.5	53.2	0.7	48.9	49.1	0.2	48.1	48.7	0.7	44.6	44.8	0.2	48.5	48.5	0	44.5	44.5	0
100100010570	FIELD STREET VALLEY HOLYHEAD LL65 3EG	Residential	54.1	54.5	0.4	53.5	53.8	0.3	49.6	50	0.4	49	49.3	0.3	49.5	50.5	1	49.5	49.5	0
100100010571	ISALLTFIELD STREET VALLEY HOLYHEAD LL65	Residential	53.8	54.2	0.4	53.9	54.1	0.2	49.3	49.7	0.4	49.4	49.6	0.2	49.5	49.5	0	49.5	49.5	0
100100010572	10 FIELD STREET VALLEY HOLYHEAD LL65 3E	Residential	53.4	53.8	0.4	52	52.3	0.3	48.9	49.3	0.4	47.6	47.9	0.3	49.5	49.5	0	47.5	48.5	1
100100010573	9 HERONS WAYFIELD STREET VALLEY HOLYHEA	Residential	53.6	54	0.4	52.3	52.5	0.2	49.1	49.5	0.4	47.9	48.1	0.2	49.5	49.5	0	48.5	48.5	0
100100010574	8 Y WERNFIELD STREET VALLEY HOLYHEAD LL	Residential	51.9	52.3	0.4	53.9	54.2	0.3	47.5	47.9	0.4	49.4	49.7	0.3	47.5	48.5	1	49.5	49.5	0
100100010575	MILL VIEWFIELD STREET VALLEY HOLYHEAD L	Residential	54.1	54.5	0.4	52	52.2	0.2	49.6	50	0.4	47.6	47.8	0.2	49.5	50.5	1	47.5	47.5	0
100100010576	5 FIELD STREET VALLEY HOLYHEAD LL65 3EG	Residential	54.2	54.6	0.4	54.3	54.5	0.2	49.7	50.1	0.4	49.8	50	0.2	49.5	50.5	1	49.5	50.5	1
100100010577	4 FIELD STREET VALLEY HOLYHEAD LL65 3EG	Residential	50.9	51.3	0.4	52.1	52.2	0.1	46.5	46.9	0.4	47.7	47.8	0.1	46.5	47.5	1	47.5	47.5	0
100100010578	3 FIELD STREET VALLEY HOLYHEAD LL65 3EG	Residential	54	54.4	0.4	54.1	54.3	0.2	49.5	49.9	0.4	49.6	49.8	0.2	49.5	50.5	1	49.5	49.5	0
100100010579	2 FIELD STREET VALLEY HOLYHEAD LL65 3EG	Residential	53.9	54.2	0.3	53.9	54.2	0.3	49.4	49.7	0.3	49.4	49.7	0.3	49.5	49.5	0	49.5	49.5	0
100100010580	GWENALLTFIELD STREET VALLEY HOLYHEAD LL	Residential	54.8	55.2	0.4	54.9	55.1	0.2	50.3	50.7	0.4	50.4	50.6	0.2	50.5	50.5	0	50.5	50.5	0
100100010581	1 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	52.8	53.2	0.4	54.3	54.6	0.3	48.3	48.7	0.4	49.8	50.1	0.3	48.5	48.5	0	49.5	50.5	1
100100010585	2 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	55.8	56.2	0.4	55.9	56.2	0.3	51.3	51.6	0.4	51.4	51.6	0.3	51.5	51.5	0	51.5	51.5	0
100100010586	3 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	52.9	53.3	0.4	55	55.2	0.2	48.4	48.8	0.4	50.5	50.7	0.2	48.5	48.5	0	50.5	50.5	0
100100010587	4 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	55.3	55.6	0.3	55.6	55.9	0.3	50.8	51.1	0.3	51.1	51.4	0.3	50.5	51.5	1	51.5	51.5	0
100100010588	5 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	53	53.4	0.4	52.9	53.2	0.3	48.5	48.9	0.4	48.4	48.7	0.3	48.5	49.5	1	48.5	48.5	0
100100010589	6 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	51.8	52.1	0.3	55.4	55.7	0.3	47.4	47.7	0.3	50.9	51.2	0.3	47.5	47.5	0	50.5	51.5	1
100100010590	7 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54	54.3	0.3	52.6	53	0.4	49.5	49.8	0.3	48.2	48.5	0.4	49.5	49.5	0	48.5	48.5	0
100100010591	8 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	53.2	53.5	0.3	53.3	53.6	0.3	48.7	49	0.3	48.8	49.1	0.3	48.5	49.5	1	48.5	49.5	1
100100010592	9 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	52.1	52.5	0.4	52.6	53	0.4	47.7	48.1	0.4	48.2	48.5	0.4	47.5	48.5	1	48.5	48.5	0
100100010593	10 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	55.3	55.6	0.3	55.4	55.7	0.3	50.8	51.1	0.3	50.9	51.2	0.3	50.5	51.5	1	50.5	51.5	1
100100010594	11 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	52.4	52.7	0.3	52.9	53.2	0.3	48	48.2	0.3	48.4	48.7	0.3	48.5	48.5	0	48.5	48.5	0
100100010595	12 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	52.1	52.4	0.3	55.6	55.9	0.3	47.7	48	0.3	51.1	51.4	0.3	47.5	48.5	1	51.5	51.5	0
100100010596	13 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	52.7	53.1	0.4	54	54.3	0.3	48.2	48.6	0.4	49.5	49.8	0.3	48.5	48.5	0	49.5	49.5	0
100100010597	14 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	52.3	52.7	0.4	54.8	55.1	0.3	47.9	48.2	0.4	50.3	50.6	0.3	48.5	48.5	0	50.5	50.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100010598	15 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.1	54.4	0.3	50.4	50.7	0.3	49.6	49.9	0.3	46	46.3	0.3	49.5	50.5	1	46.5	46.5	0
100100010599	16 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	52.4	52.7	0.3	52.4	52.7	0.3	48	48.2	0.3	48	48.2	0.3	48.5	48.5	0	48.5	48.5	0
100100010600	17 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	53.8	54.1	0.3	53.8	54.1	0.3	49.3	49.6	0.3	49.3	49.6	0.3	49.5	49.5	0	49.5	49.5	0
100100010601	18 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	52.1	52.4	0.3	52.4	52.7	0.3	47.7	48	0.3	48	48.2	0.3	47.5	48.5	1	48.5	48.5	0
100100010602	19 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	53.8	54.2	0.4	54.4	54.7	0.3	49.3	49.7	0.4	49.9	50.2	0.3	49.5	49.5	0	50.5	50.5	0
100100010603	20 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	52.5	52.9	0.4	53.9	54.2	0.3	48.1	48.4	0.4	49.4	49.7	0.3	48.5	48.5	0	49.5	49.5	0
100100010604	21 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.2	54.6	0.4	52	52.3	0.3	49.7	50.1	0.4	47.6	47.9	0.3	49.5	50.5	1	47.5	48.5	1
100100010605	22 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	53.3	53.6	0.3	53.4	53.7	0.3	48.8	49.1	0.3	48.9	49.2	0.3	48.5	49.5	1	49.5	49.5	0
100100010606	23 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	55.4	55.8	0.4	55.5	55.7	0.2	50.9	51.3	0.4	51	51.2	0.2	50.5	51.5	1	51.5	51.5	0
100100010607	24 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	51.9	52.3	0.4	53.3	53.6	0.3	47.5	47.9	0.4	48.8	49.1	0.3	47.5	48.5	1	48.5	49.5	1
100100010608	25 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	53.6	54	0.4	53.8	54.1	0.3	49.1	49.5	0.4	49.3	49.6	0.3	49.5	49.5	0	49.5	49.5	0
100100010609	26 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	53.9	54.2	0.3	53.4	53.7	0.3	49.4	49.7	0.3	48.9	49.2	0.3	49.5	49.5	0	49.5	49.5	0
100100010610	27 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.7	55.1	0.4	54.1	54.4	0.3	50.2	50.6	0.4	49.6	49.9	0.3	50.5	50.5	0	49.5	50.5	1
100100010611	28 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	54	54.4	0.4	55.4	55.7	0.3	49.5	49.9	0.4	50.9	51.2	0.3	49.5	50.5	1	50.5	51.5	1
100100010612	29 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.8	55.2	0.4	54.9	55.2	0.3	50.3	50.7	0.4	50.4	50.7	0.3	50.5	50.5	0	50.5	50.5	0
100100010613	30 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	53.8	54.1	0.3	52.8	53.1	0.3	49.3	49.6	0.3	48.3	48.6	0.3	49.5	49.5	0	48.5	48.5	0
100100010614	31 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.2	54.6	0.4	54.3	54.5	0.2	49.7	50.1	0.4	49.8	50	0.2	49.5	50.5	1	49.5	50.5	1
100100010615	32 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	54.2	54.6	0.4	53.6	53.9	0.3	49.7	50.1	0.4	49.1	49.4	0.3	49.5	50.5	1	49.5	49.5	0
100100010616	33 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54	54.3	0.3	54	54.3	0.3	49.5	49.8	0.3	49.5	49.8	0.3	49.5	49.5	0	49.5	49.5	0
100100010617	34 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	53.5	53.9	0.4	53.6	53.9	0.3	49	49.4	0.4	49.1	49.4	0.3	49.5	49.5	0	49.5	49.5	0
100100010618	35 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.1	54.5	0.4	54.3	54.6	0.3	49.6	50	0.4	49.8	50.1	0.3	49.5	50.5	1	49.5	50.5	1
100100010619	36 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	54	54.4	0.4	51.8	52.1	0.3	49.5	49.9	0.4	47.4	47.7	0.3	49.5	50.5	1	47.5	47.5	0
100100010620	37 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	53.8	54.2	0.4	53.5	53.8	0.3	49.3	49.7	0.4	49	49.3	0.3	49.5	49.5	0	49.5	49.5	0
100100010621	38 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	53.3	53.7	0.4	50.8	51.1	0.3	48.8	49.2	0.4	46.4	46.7	0.3	48.5	49.5	1	46.5	46.5	0
100100010622	39 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.1	54.5	0.4	51.3	51.5	0.2	49.6	50	0.4	46.9	47.1	0.2	49.5	50.5	1	47.5	47.5	0
100100010623	40 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	54.6	55	0.4	54.3	54.6	0.3	50.1	50.5	0.4	49.8	50.1	0.3	50.5	50.5	0	49.5	50.5	1

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			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100010624	41 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.4	54.8	0.4	54.4	54.7	0.3	49.9	50.3	0.4	49.9	50.2	0.3	50.5	50.5	0	50.5	50.5	0
100100010625	42 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	54.5	54.9	0.4	54.5	54.9	0.4	50	50.4	0.4	50	50.4	0.4	50.5	50.5	0	50.5	50.5	0
100100010626	43 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.5	54.8	0.3	53.9	54.2	0.3	50	50.3	0.3	49.4	49.7	0.3	50.5	50.5	0	49.5	49.5	0
100100010627	44 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	54.3	54.7	0.4	54.4	54.7	0.3	49.8	50.2	0.4	49.9	50.2	0.3	49.5	50.5	1	50.5	50.5	0
100100010628	45 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.8	55.2	0.4	54.9	55.2	0.3	50.3	50.7	0.4	50.4	50.7	0.3	50.5	50.5	0	50.5	50.5	0
100100010629	46 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	54.3	54.7	0.4	54.4	54.7	0.3	49.8	50.2	0.4	49.9	50.2	0.3	49.5	50.5	1	50.5	50.5	0
100100010630	47 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.7	55	0.3	51.8	52.1	0.3	50.2	50.5	0.3	47.4	47.7	0.3	50.5	50.5	0	47.5	47.5	0
100100010631	48 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	53.8	54.2	0.4	53.8	54.1	0.3	49.3	49.7	0.4	49.3	49.6	0.3	49.5	49.5	0	49.5	49.5	0
100100010632	49 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.4	54.7	0.3	54.4	54.7	0.3	49.9	50.2	0.3	49.9	50.2	0.3	50.5	50.5	0	50.5	50.5	0
100100010633	50 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	53.8	54.2	0.4	52.1	52.5	0.4	49.3	49.7	0.4	47.7	48.1	0.4	49.5	49.5	0	47.5	48.5	1
100100010634	51 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.4	54.7	0.3	54.4	54.7	0.3	49.9	50.2	0.3	49.9	50.2	0.3	50.5	50.5	0	50.5	50.5	0
100100010635	52 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	55.3	55.7	0.4	55.4	55.7	0.3	50.8	51.2	0.4	50.9	51.2	0.3	50.5	51.5	1	50.5	51.5	1
100100010636	53 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.8	55.2	0.4	52.1	52.5	0.4	50.3	50.7	0.4	47.7	48.1	0.4	50.5	50.5	0	47.5	48.5	1
100100010637	54 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	51.8	52.1	0.3	55.2	55.5	0.3	47.4	47.7	0.3	50.7	51	0.3	47.5	47.5	0	50.5	51.5	1
100100010638	55 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.5	54.9	0.4	54.6	54.9	0.3	50	50.4	0.4	50.1	50.4	0.3	50.5	50.5	0	50.5	50.5	0
100100010639	56 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	55	55.3	0.3	55	55.3	0.3	50.5	50.8	0.3	50.5	50.8	0.3	50.5	50.5	0	50.5	50.5	0
100100010640	57 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.6	55	0.4	54.7	55	0.3	50.1	50.5	0.4	50.2	50.5	0.3	50.5	50.5	0	50.5	50.5	0
100100010641	58 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	53.8	54.2	0.4	54.6	54.9	0.3	49.3	49.7	0.4	50.1	50.4	0.3	49.5	49.5	0	50.5	50.5	0
100100010642	59 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	55.1	55.5	0.4	54.9	55.2	0.3	50.6	51	0.4	50.4	50.7	0.3	50.5	51.5	1	50.5	50.5	0
100100010643	60 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	54.4	54.7	0.3	54.4	54.7	0.3	49.9	50.2	0.3	49.9	50.2	0.3	50.5	50.5	0	50.5	50.5	0
100100010644	61 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	52.3	52.6	0.3	52.4	52.7	0.3	47.9	48.2	0.3	48	48.2	0.3	48.5	48.5	0	48.5	48.5	0
100100010645	62 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	54.4	54.8	0.4	54.4	54.7	0.3	49.9	50.3	0.4	49.9	50.2	0.3	50.5	50.5	0	50.5	50.5	0
100100010646	63 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	55.8	56.2	0.4	52	52.3	0.3	51.3	51.6	0.4	47.6	47.9	0.3	51.5	51.5	0	47.5	48.5	1
100100010647	64 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	54.4	54.8	0.4	53.4	53.7	0.3	49.9	50.3	0.4	48.9	49.2	0.3	50.5	50.5	0	49.5	49.5	0
100100010648	65 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	56.6	57	0.4	52	52.4	0.4	52	52.4	0.4	47.6	48	0.4	52.5	52.5	0	47.5	48.5	1
100100010649	66 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	56.8	57.2	0.4	52.1	52.6	0.5	52.2	52.6	0.4	47.7	48.2	0.5	52.5	52.5	0	47.5	48.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100010650	67 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	56	56.4	0.4	55.8	56.1	0.3	51.5	51.8	0.4	51.3	51.5	0.3	51.5	51.5	0	51.5	51.5	0
100100010651	68 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	56.8	57.2	0.4	52.3	52.7	0.4	52.2	52.6	0.4	47.9	48.2	0.4	52.5	52.5	0	48.5	48.5	0
100100010652	69 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	55.3	55.7	0.4	55.4	55.7	0.3	50.8	51.2	0.4	50.9	51.2	0.3	50.5	51.5	1	50.5	51.5	1
100100010653	70 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	52.1	52.5	0.4	52.2	52.6	0.4	47.7	48.1	0.4	47.8	48.2	0.4	47.5	48.5	1	47.5	48.5	1
100100010654	71 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	53.1	53.5	0.4	56	56.3	0.3	48.6	49	0.4	51.5	51.7	0.3	48.5	49.5	1	51.5	51.5	0
100100010655	72 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	56.7	57.1	0.4	52.3	52.7	0.4	52.1	52.5	0.4	47.9	48.2	0.4	52.5	52.5	0	48.5	48.5	0
100100010656	73 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.8	55.2	0.4	52.3	52.6	0.3	50.3	50.7	0.4	47.9	48.2	0.3	50.5	50.5	0	48.5	48.5	0
100100010657	74 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	56.8	57.2	0.4	52.2	52.6	0.4	52.2	52.6	0.4	47.8	48.2	0.4	52.5	52.5	0	47.5	48.5	1
100100010658	75 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	56.8	57.2	0.4	56.8	57.1	0.3	52.2	52.6	0.4	52.2	52.5	0.3	52.5	52.5	0	52.5	52.5	0
100100010659	76 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	52.2	52.6	0.4	52.2	52.6	0.4	47.8	48.2	0.4	47.8	48.2	0.4	47.5	48.5	1	47.5	48.5	1
100100010660	78 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	53.3	53.6	0.3	52	52.5	0.5	48.8	49.1	0.3	47.6	48.1	0.5	48.5	49.5	1	47.5	48.5	1
100100010661	79 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	58.8	59.2	0.4	58.8	59.1	0.3	54.2	54.6	0.4	54.2	54.5	0.3	54.5	54.5	0	54.5	54.5	0
100100010662	80 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	52.1	52.5	0.4	57.1	57.4	0.3	47.7	48.1	0.4	52.5	52.8	0.3	47.5	48.5	1	52.5	52.5	0
100100010663	81 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	61.4	61.9	0.5	60.9	61.2	0.3	56.7	57.2	0.5	56.2	56.5	0.3	56.5	57.5	1	56.5	56.5	0
100100010664	82 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	51.8	52.2	0.4	51.9	52.3	0.4	47.4	47.8	0.4	47.5	47.9	0.4	47.5	47.5	0	47.5	48.5	1
100100010665	83 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	62.1	62.6	0.5	60.3	60.6	0.3	57.4	57.9	0.5	55.6	55.9	0.3	57.5	57.5	0	55.5	55.5	0
100100010666	84 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	56.2	56.6	0.4	56.3	56.6	0.3	51.6	52	0.4	51.7	52	0.3	51.5	52.5	1	51.5	52.5	1
100100010667	85 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	57.2	57.7	0.5	64.1	64.4	0.3	52.6	53.1	0.5	59.3	59.6	0.3	52.5	53.5	1	59.5	59.5	0
100100010668	86 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	55.2	55.6	0.4	55.4	55.7	0.3	50.7	51.1	0.4	50.9	51.2	0.3	50.5	51.5	1	50.5	51.5	1
100100010669	87 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	69.1	69.6	0.5	69.1	69.4	0.3	64.2	64.6	0.5	64.2	64.4	0.3	64.5	64.5	0	64.5	64.5	0
100100010670	88 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	56.7	57.1	0.4	56.7	57	0.3	52.1	52.5	0.4	52.1	52.4	0.3	52.5	52.5	0	52.5	52.5	0
100100010671	90 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	56.7	57.1	0.4	51.4	51.7	0.3	52.1	52.5	0.4	47	47.3	0.3	52.5	52.5	0	47.5	47.5	0
100100010672	92 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	57.4	57.8	0.4	57.4	57.7	0.3	52.8	53.2	0.4	52.8	53.1	0.3	52.5	53.5	1	52.5	53.5	1
100100010673	94 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	59.3	59.7	0.4	59.3	59.6	0.3	54.7	55	0.4	54.7	54.9	0.3	54.5	55.5	1	54.5	54.5	0
100100010674	96 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	57.8	58.2	0.4	52.9	53.3	0.4	53.2	53.6	0.4	48.4	48.8	0.4	53.5	53.5	0	48.5	48.5	0
100100010675	98 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	61.8	62.2	0.4	61.8	62.1	0.3	57.1	57.5	0.4	57.1	57.4	0.3	57.5	57.5	0	57.5	57.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100010676	99 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54	54.4	0.4	52.9	53.2	0.3	49.5	49.9	0.4	48.4	48.7	0.3	49.5	50.5	1	48.5	48.5	0
100100010677	100 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	66.3	66.8	0.5	66.3	66.6	0.3	61.4	61.9	0.5	61.4	61.7	0.3	61.5	61.5	0	61.5	61.5	0
100100010678	89 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	55.3	55.7	0.4	51.9	52.3	0.4	50.8	51.2	0.4	47.5	47.9	0.4	50.5	51.5	1	47.5	48.5	1
100100010681	91 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.4	54.7	0.3	54.5	54.8	0.3	49.9	50.2	0.3	50	50.3	0.3	50.5	50.5	0	50.5	50.5	0
100100010682	93 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.4	54.8	0.4	54.4	54.7	0.3	49.9	50.3	0.4	49.9	50.2	0.3	50.5	50.5	0	50.5	50.5	0
100100010683	95 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.4	54.8	0.4	54.4	54.7	0.3	49.9	50.3	0.4	49.9	50.2	0.3	50.5	50.5	0	50.5	50.5	0
100100010684	97 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.5	54.9	0.4	51.9	52.2	0.3	50	50.4	0.4	47.5	47.8	0.3	50.5	50.5	0	47.5	47.5	0
100100010685	TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.2	54.7	0.5	52.7	53.2	0.5	49.7	50.2	0.5	48.2	48.7	0.5	49.5	50.5	1	48.5	48.5	0
100100010686	102 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	54.3	54.7	0.4	51.9	52.2	0.3	49.8	50.2	0.4	47.5	47.8	0.3	49.5	50.5	1	47.5	47.5	0
100100010687	VALLEY HOLYHEAD LL65 3ER	Residential	54.2	54.6	0.4	51.9	52.3	0.4	49.7	50.1	0.4	47.5	47.9	0.4	49.5	50.5	1	47.5	48.5	1
100100010688	104 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	54.9	55.3	0.4	55	55.3	0.3	50.4	50.8	0.4	50.5	50.8	0.3	50.5	50.5	0	50.5	50.5	0
100100010689	105 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	55.3	55.7	0.4	55.4	55.7	0.3	50.8	51.2	0.4	50.9	51.2	0.3	50.5	51.5	1	50.5	51.5	1
100100010690	106 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	55.1	55.5	0.4	53.9	54.2	0.3	50.6	51	0.4	49.4	49.7	0.3	50.5	51.5	1	49.5	49.5	0
100100010691	107 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	58.3	58.7	0.4	53.3	53.7	0.4	53.7	54.1	0.4	48.8	49.2	0.4	53.5	54.5	1	48.5	49.5	1
100100010692	108 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	54.8	55.1	0.3	54.8	55.1	0.3	50.3	50.6	0.3	50.3	50.6	0.3	50.5	50.5	0	50.5	50.5	0
100100010693	109 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	58.3	58.7	0.4	53.3	53.7	0.4	53.7	54.1	0.4	48.8	49.2	0.4	53.5	54.5	1	48.5	49.5	1
100100010694	110 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	54.9	55.3	0.4	54.9	55.2	0.3	50.4	50.8	0.4	50.4	50.7	0.3	50.5	50.5	0	50.5	50.5	0
100100010695	111 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	58.3	58.7	0.4	53.3	53.7	0.4	53.7	54.1	0.4	48.8	49.2	0.4	53.5	54.5	1	48.5	49.5	1
100100010696	112 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	55.3	55.7	0.4	55.3	55.6	0.3	50.8	51.2	0.4	50.8	51.1	0.3	50.5	51.5	1	50.5	51.5	1
100100010697	113 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	58.3	58.7	0.4	53.3	53.7	0.4	53.7	54.1	0.4	48.8	49.2	0.4	53.5	54.5	1	48.5	49.5	1
100100010698	114 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	55.3	55.7	0.4	55.4	55.7	0.3	50.8	51.2	0.4	50.9	51.2	0.3	50.5	51.5	1	50.5	51.5	1
100100010699	116 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	55.1	55.5	0.4	52.9	53.2	0.3	50.6	51	0.4	48.4	48.7	0.3	50.5	51.5	1	48.5	48.5	0
100100010700	117 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	68	68.4	0.4	68	68.3	0.3	63.1	63.5	0.4	63.1	63.4	0.3	62.5	63.5	1	62.5	63.5	1
100100010701	118 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	55.1	55.5	0.4	52.9	53.2	0.3	50.6	51	0.4	48.4	48.7	0.3	50.5	51.5	1	48.5	48.5	0
100100010702	120 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	55.1	55.5	0.4	52.9	53.2	0.3	50.6	51	0.4	48.4	48.7	0.3	50.5	51.5	1	48.5	48.5	0
100100010703	121 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	67.3	67.8	0.5	67.1	67.4	0.3	62.4	62.9	0.5	62.2	62.5	0.3	62.5	62.5	0	62.5	62.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100010704	122 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	55.1	55.5	0.4	52.9	53.2	0.3	50.6	51	0.4	48.4	48.7	0.3	50.5	51.5	1	48.5	48.5	0
100100010705	124 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	53.8	54.2	0.4	53.9	54.2	0.3	49.3	49.7	0.4	49.4	49.7	0.3	49.5	49.5	0	49.5	49.5	0
100100010706	126 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	53.9	54.2	0.3	53.9	54.2	0.3	49.4	49.7	0.3	49.4	49.7	0.3	49.5	49.5	0	49.5	49.5	0
100100010707	128 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	52.4	52.7	0.3	53.7	54	0.3	48	48.2	0.3	49.2	49.5	0.3	48.5	48.5	0	49.5	49.5	0
100100010708	130 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	53.9	54.2	0.3	53.8	54.1	0.3	49.4	49.7	0.3	49.3	49.6	0.3	49.5	49.5	0	49.5	49.5	0
100100010709	132 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	56.4	56.8	0.4	55.8	56.2	0.4	51.8	52.2	0.4	51.3	51.6	0.4	51.5	52.5	1	51.5	51.5	0
100100010710	133 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	55.3	55.6	0.3	55.4	55.7	0.3	50.8	51.1	0.3	50.9	51.2	0.3	50.5	51.5	1	50.5	51.5	1
100100010711	134 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	55.3	55.6	0.3	55.4	55.7	0.3	50.8	51.1	0.3	50.9	51.2	0.3	50.5	51.5	1	50.5	51.5	1
100100010712	135 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	55.3	55.6	0.3	55.4	55.7	0.3	50.8	51.1	0.3	50.9	51.2	0.3	50.5	51.5	1	50.5	51.5	1
100100010713	136 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	55.3	55.6	0.3	55.4	55.7	0.3	50.8	51.1	0.3	50.9	51.2	0.3	50.5	51.5	1	50.5	51.5	1
100100010714	137 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	52.6	53	0.4	54.9	55.2	0.3	48.2	48.5	0.4	50.4	50.7	0.3	48.5	48.5	0	50.5	50.5	0
100100010715	138 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	52.6	53	0.4	54.9	55.2	0.3	48.2	48.5	0.4	50.4	50.7	0.3	48.5	48.5	0	50.5	50.5	0
100100010716	139 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	52.6	53	0.4	54.9	55.2	0.3	48.2	48.5	0.4	50.4	50.7	0.3	48.5	48.5	0	50.5	50.5	0
100100010717	140 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	52.6	53	0.4	54.9	55.2	0.3	48.2	48.5	0.4	50.4	50.7	0.3	48.5	48.5	0	50.5	50.5	0
100100010718	141 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.4	54.7	0.3	54.4	54.7	0.3	49.9	50.2	0.3	49.9	50.2	0.3	50.5	50.5	0	50.5	50.5	0
100100010719	142 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	54.4	54.7	0.3	54.4	54.7	0.3	49.9	50.2	0.3	49.9	50.2	0.3	50.5	50.5	0	50.5	50.5	0
100100010720	143 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.4	54.7	0.3	54.4	54.7	0.3	49.9	50.2	0.3	49.9	50.2	0.3	50.5	50.5	0	50.5	50.5	0
100100010721	144 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	54.4	54.7	0.3	54.4	54.7	0.3	49.9	50.2	0.3	49.9	50.2	0.3	50.5	50.5	0	50.5	50.5	0
100100010722	145 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.8	55.2	0.4	54.3	54.6	0.3	50.3	50.7	0.4	49.8	50.1	0.3	50.5	50.5	0	49.5	50.5	1
100100010723	146 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	54.8	55.2	0.4	54.3	54.6	0.3	50.3	50.7	0.4	49.8	50.1	0.3	50.5	50.5	0	49.5	50.5	1
100100010724	147 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	54.8	55.2	0.4	54.3	54.6	0.3	50.3	50.7	0.4	49.8	50.1	0.3	50.5	50.5	0	49.5	50.5	1
100100010725	148 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	54.8	55.2	0.4	54.3	54.6	0.3	50.3	50.7	0.4	49.8	50.1	0.3	50.5	50.5	0	49.5	50.5	1
100100010726	149 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	55.8	56.2	0.4	53.8	54.1	0.3	51.3	51.6	0.4	49.3	49.6	0.3	51.5	51.5	0	49.5	49.5	0
100100010727	150 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	55.8	56.2	0.4	53.8	54.1	0.3	51.3	51.6	0.4	49.3	49.6	0.3	51.5	51.5	0	49.5	49.5	0
100100010728	151 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	55.8	56.2	0.4	53.8	54.1	0.3	51.3	51.6	0.4	49.3	49.6	0.3	51.5	51.5	0	49.5	49.5	0
100100010729	152 TAN Y BRYN VALLEY HOLYHEAD LL65 3ES	Residential	55.8	56.2	0.4	53.8	54.1	0.3	51.3	51.6	0.4	49.3	49.6	0.3	51.5	51.5	0	49.5	49.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100010730	BRYN SIRIOLSTATION ROAD VALLEY HOLYHEAD	Residential	65.8	66.3	0.5	68.6	68.9	0.3	61	61.4	0.5	63.7	64	0.3	60.5	61.5	1	63.5	63.5	0
100100010733	TREFLYNSTATION ROAD VALLEY HOLYHEAD LL6	Residential	69	69.5	0.5	55.4	55.7	0.3	64.1	64.5	0.5	50.9	51.2	0.3	63.5	64.5	1	50.5	51.5	1
100100010734	GLYN GARTHSTATION ROAD VALLEY HOLYHEAD	Residential	69	69.5	0.5	55.4	55.7	0.3	64.1	64.5	0.5	50.9	51.2	0.3	63.5	64.5	1	50.5	51.5	1
100100010735	BRO DAWELSTATION ROAD VALLEY HOLYHEAD L	Residential	68.8	69.2	0.4	54.5	54.9	0.4	63.9	64.3	0.4	50	50.4	0.4	63.5	64.5	1	50.5	50.5	0
100100010736	BERWYNSTATION ROAD VALLEY HOLYHEAD LL65	Residential	66.8	67.3	0.5	65.1	65.4	0.3	61.9	62.4	0.5	60.3	60.6	0.3	61.5	62.5	1	60.5	60.5	0
100100010737	GLASFRYNSTATION ROAD VALLEY HOLYHEAD LL	Residential	68.8	69.3	0.5	53.3	53.6	0.3	63.9	64.4	0.5	48.8	49.1	0.3	63.5	64.5	1	48.5	49.5	1
100100010738	CERISSTATION ROAD VALLEY HOLYHEAD LL65	Residential	61.3	61.8	0.5	68.6	68.9	0.3	56.6	57.1	0.5	63.7	64	0.3	56.5	57.5	1	63.5	63.5	0
100100010739	HILLCRESTSTATION ROAD VALLEY HOLYHEAD L	Residential	61.7	62.2	0.5	66.1	66.4	0.3	57	57.5	0.5	61.2	61.5	0.3	56.5	57.5	1	61.5	61.5	0
100100010740	ANNEDDWENSTATION ROAD VALLEY HOLYHEAD L	Residential	68.3	68.8	0.5	64.6	64.9	0.3	63.4	63.9	0.5	59.8	60.1	0.3	63.5	63.5	0	59.5	60.5	1
100100010743	LONDON ROAD VALLEY HOLYHEAD LL65 3DP	Residential	52.4	52.7	0.3	62.5	62.6	0.1	48	48.2	0.3	57.8	57.9	0.1	48.5	48.5	0	57.5	57.5	0
100100010744	LONDON ROAD VALLEY HOLYHEAD LL65 3DP	Residential	57.9	58.2	0.3	56.9	57	0.1	53.3	53.6	0.3	52.3	52.4	0.1	53.5	53.5	0	52.5	52.5	0
100100010745	LONDON ROAD VALLEY HOLYHEAD LL65 3DP	Residential	52.4	52.7	0.3	62.5	62.6	0.1	48	48.2	0.3	57.8	57.9	0.1	48.5	48.5	0	57.5	57.5	0
100100010746	LONDON ROAD VALLEY HOLYHEAD LL65 3DP	Residential	57.9	58.2	0.3	56.9	57	0.1	53.3	53.6	0.3	52.3	52.4	0.1	53.5	53.5	0	52.5	52.5	0
100100010747	LONDON ROAD VALLEY HOLYHEAD LL65 3DP	Residential	57.1	57.5	0.4	56.6	56.8	0.2	52.5	52.9	0.4	52	52.2	0.2	52.5	52.5	0	52.5	52.5	0
100100010748	LONDON ROAD VALLEY HOLYHEAD LL65 3DP	Residential	54.2	55	0.8	54.4	54.5	0.1	49.7	50.5	0.8	49.9	50	0.1	49.5	50.5	1	50.5	50.5	0
100100010749	LONDON ROAD VALLEY HOLYHEAD LL65 3DP	Residential	57.1	57.5	0.4	56.6	56.8	0.2	52.5	52.9	0.4	52	52.2	0.2	52.5	52.5	0	52.5	52.5	0
100100010750	LONDON ROAD VALLEY HOLYHEAD LL65 3DP	Residential	54.2	55	0.8	54.4	54.5	0.1	49.7	50.5	0.8	49.9	50	0.1	49.5	50.5	1	50.5	50.5	0
100100010751	FIELD STREET VALLEY HOLYHEAD LL65 3EG	Residential	54.9	55.2	0.3	72.3	72.4	0.1	50.4	50.7	0.3	67.3	67.4	0.1	50.5	50.5	0	67.5	67.5	0
100100010752	FIELD STREET VALLEY HOLYHEAD LL65 3EG	Residential	54.9	55.2	0.3	72.3	72.4	0.1	50.4	50.7	0.3	67.3	67.4	0.1	50.5	50.5	0	67.5	67.5	0
100100010753	FIELD STREET VALLEY HOLYHEAD LL65 3EG	Residential	54.9	55.2	0.3	72.3	72.4	0.1	50.4	50.7	0.3	67.3	67.4	0.1	50.5	50.5	0	67.5	67.5	0
100100010754	FIELD STREET VALLEY HOLYHEAD LL65 3EG	Residential	54.9	55.2	0.3	72.3	72.4	0.1	50.4	50.7	0.3	67.3	67.4	0.1	50.5	50.5	0	67.5	67.5	0
100100010755	FIELD STREET VALLEY HOLYHEAD LL65 3EG	Residential	57	57.5	0.5	54.6	54.8	0.2	52.4	52.9	0.5	50.1	50.3	0.2	52.5	52.5	0	50.5	50.5	0
100100010756	FIELD STREET VALLEY HOLYHEAD LL65 3EG	Residential	56.9	57.4	0.5	55.3	55.5	0.2	52.3	52.8	0.5	50.8	51	0.2	52.5	52.5	0	50.5	51.5	1
100100010757	FIELD STREET VALLEY HOLYHEAD LL65 3EG	Residential	55.9	56.4	0.5	55.2	55.5	0.3	51.4	51.8	0.5	50.7	51	0.3	51.5	51.5	0	50.5	51.5	1
100100010758	FIELD STREET VALLEY HOLYHEAD LL65 3EG	Residential	55.9	56.4	0.5	55.2	55.5	0.3	51.4	51.8	0.5	50.7	51	0.3	51.5	51.5	0	50.5	51.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100010759	FIELD STREET VALLEY HOLYHEAD LL65 3EG	Residential	55.9	56.4	0.5	55.2	55.5	0.3	51.4	51.8	0.5	50.7	51	0.3	51.5	51.5	0	50.5	51.5	1
100100010760	FIELD STREET VALLEY HOLYHEAD LL65 3EG	Residential	55.9	56.4	0.5	55.2	55.5	0.3	51.4	51.8	0.5	50.7	51	0.3	51.5	51.5	0	50.5	51.5	1
100100010761	FIELD STREET VALLEY HOLYHEAD LL65 3EG	Residential	54.8	55.2	0.4	54.6	54.9	0.3	50.3	50.7	0.4	50.1	50.4	0.3	50.5	50.5	0	50.5	50.5	0
100100010762	FIELD STREET VALLEY HOLYHEAD LL65 3EG	Residential	54.8	55.2	0.4	54.6	54.9	0.3	50.3	50.7	0.4	50.1	50.4	0.3	50.5	50.5	0	50.5	50.5	0
100100010763	FIELD STREET VALLEY HOLYHEAD LL65 3EG	Residential	54.8	55.2	0.4	54.6	54.9	0.3	50.3	50.7	0.4	50.1	50.4	0.3	50.5	50.5	0	50.5	50.5	0
100100010764	FIELD STREET VALLEY HOLYHEAD LL65 3EG	Residential	54.8	55.2	0.4	54.6	54.9	0.3	50.3	50.7	0.4	50.1	50.4	0.3	50.5	50.5	0	50.5	50.5	0
100100010765	16 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	52.8	53.5	0.7	52.5	52.7	0.2	48.3	49	0.7	48.1	48.2	0.2	48.5	49.5	1	48.5	48.5	0
100100010766	9 RHODFA SHORNEY VALLEY HOLYHEAD LL65 3	Residential	51.3	51.8	0.5	52.6	52.9	0.3	46.9	47.4	0.5	48.2	48.4	0.3	47.5	47.5	0	48.5	48.5	0
100100010767	19 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	52.2	52.9	0.7	53	53.2	0.2	47.8	48.4	0.7	48.5	48.7	0.2	47.5	48.5	1	48.5	48.5	0
100100010768	17 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	53.1	53.6	0.5	51.2	51.5	0.3	48.6	49.1	0.5	46.8	47.1	0.3	48.5	49.5	1	46.5	47.5	1
100100010769	6 RHODFA SHORNEY VALLEY HOLYHEAD LL65 3	Residential	50.8	51.4	0.6	51.9	52.1	0.2	46.4	47	0.6	47.5	47.7	0.2	46.5	47.5	1	47.5	47.5	0
100100010770	8 RHODFA SHORNEY VALLEY HOLYHEAD LL65 3	Residential	50.4	51	0.6	51.9	52.1	0.2	46	46.6	0.6	47.5	47.7	0.2	46.5	46.5	0	47.5	47.5	0
100100010771	2 RHODFA SHORNEY VALLEY HOLYHEAD LL65 3	Residential	52.3	53	0.7	51.5	51.7	0.2	47.9	48.5	0.7	47.1	47.3	0.2	48.5	48.5	0	47.5	47.5	0
100100010772	4 RHODFA SHORNEY VALLEY HOLYHEAD LL65 3	Residential	50.1	50.7	0.6	51.4	51.6	0.2	45.7	46.3	0.6	47	47.2	0.2	45.5	46.5	1	47.5	47.5	0
100100010773	7 RHODFA SHORNEY VALLEY HOLYHEAD LL65 3	Residential	53.6	54.1	0.5	54	54.2	0.2	49.1	49.6	0.5	49.5	49.7	0.2	49.5	49.5	0	49.5	49.5	0
100100010774	5 RHODFA SHORNEY VALLEY HOLYHEAD LL65 3	Residential	50.4	51	0.6	53.9	54.1	0.2	46	46.6	0.6	49.4	49.6	0.2	46.5	46.5	0	49.5	49.5	0
100100010775	HAFANEDD VALLEY HOLYHEAD LL65 3EW	Residential	68.4	68.9	0.5	68.5	68.8	0.3	63.5	64	0.5	63.6	63.9	0.3	63.5	63.5	0	63.5	63.5	0
100100010776	17 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	50.7	51.2	0.5	52.5	52.7	0.2	46.3	46.8	0.5	48.1	48.2	0.2	46.5	46.5	0	48.5	48.5	0
100100010777	15 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	50.7	51.2	0.5	49.6	49.9	0.3	46.3	46.8	0.5	45.2	45.5	0.3	46.5	46.5	0	45.5	45.5	0
100100010778	13 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	50.9	51.4	0.5	50.5	50.8	0.3	46.5	47	0.5	46.1	46.4	0.3	46.5	47.5	1	46.5	46.5	0
100100010779	26 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	50.9	51.6	0.7	48.3	48.6	0.3	46.5	47.2	0.7	44	44.3	0.3	46.5	47.5	1	44.5	44.5	0
100100010780	24 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	52.3	53	0.7	50.3	50.5	0.2	47.9	48.5	0.7	45.9	46.1	0.2	48.5	48.5	0	46.5	46.5	0
100100010781	18 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	53.2	53.9	0.7	52.3	52.5	0.2	48.7	49.4	0.7	47.9	48.1	0.2	48.5	49.5	1	48.5	48.5	0
100100010784	20 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	52.7	53.5	0.8	50.1	50.2	0.1	48.2	49	0.8	45.7	45.8	0.1	48.5	49.5	1	45.5	46.5	1

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			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100010785	11 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	50.5	50.9	0.4	50.5	50.8	0.3	46.1	46.5	0.4	46.1	46.4	0.3	46.5	46.5	0	46.5	46.5	0
100100010786	19 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	51.4	52.1	0.7	50.9	51.1	0.2	47	47.7	0.7	46.5	46.7	0.2	47.5	47.5	0	46.5	46.5	0
100100010788	23 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	51	51.7	0.7	49.8	50.1	0.3	46.6	47.3	0.7	45.4	45.7	0.3	46.5	47.5	1	45.5	45.5	0
100100010789	32 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	50.9	51.7	0.8	49	49.2	0.2	46.5	47.3	0.8	44.7	44.9	0.2	46.5	47.5	1	44.5	45.5	1
100100010790	30 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	50.9	51.6	0.7	49.8	50	0.2	46.5	47.2	0.7	45.4	45.6	0.2	46.5	47.5	1	45.5	45.5	0
100100010791	28 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	51.2	51.9	0.7	50	50.2	0.2	46.8	47.5	0.7	45.6	45.8	0.2	46.5	47.5	1	45.5	46.5	1
100100010792	21 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	51.3	52	0.7	49.9	50.1	0.2	46.9	47.6	0.7	45.5	45.7	0.2	47.5	47.5	0	45.5	45.5	0
100100010794	29 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	50.6	51.3	0.7	50.6	50.9	0.3	46.2	46.9	0.7	46.2	46.5	0.3	46.5	47.5	1	46.5	46.5	0
100100010795	3 RHODFA SHORNEY VALLEY HOLYHEAD LL65 3	Residential	51	51.6	0.6	50.5	50.7	0.2	46.6	47.2	0.6	46.1	46.3	0.2	46.5	47.5	1	46.5	46.5	0
100100010797	1 RHODFA SHORNEY VALLEY HOLYHEAD LL65 3	Residential	51.4	52	0.6	50.8	51	0.2	47	47.6	0.6	46.4	46.6	0.2	47.5	47.5	0	46.5	46.5	0
100100010798	21 MANNING DRIVE VALLEY HOLYHEAD LL65 3	Residential	49.7	50.1	0.4	50.8	51.1	0.3	45.3	45.7	0.4	46.4	46.7	0.3	45.5	45.5	0	46.5	46.5	0
100100010803	23 MANNING DRIVE VALLEY HOLYHEAD LL65 3	Residential	48.8	49.1	0.3	50.9	51.2	0.3	44.5	44.8	0.3	46.5	46.8	0.3	44.5	44.5	0	46.5	46.5	0
100100010804	23 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	51.6	52.2	0.6	53.9	53.9	0	47.2	47.8	0.6	49.4	49.4	0	47.5	47.5	0	49.5	49.5	0
100100010809	25 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	50.9	51.4	0.5	50.9	51.1	0.2	46.5	47	0.5	46.5	46.7	0.2	46.5	47.5	1	46.5	46.5	0
100100010810	15 MANNING DRIVE VALLEY HOLYHEAD LL65 3	Residential	52.3	52.6	0.3	49.1	49.4	0.3	47.9	48.2	0.3	44.8	45	0.3	48.5	48.5	0	44.5	45.5	1
100100010811	17 MANNING DRIVE VALLEY HOLYHEAD LL65 3	Residential	49.9	50.2	0.3	49.9	50.2	0.3	45.5	45.8	0.3	45.5	45.8	0.3	45.5	46.5	1	45.5	46.5	1
100100010812	4 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	49.8	50.4	0.6	49.8	50.2	0.4	45.4	46	0.6	45.4	45.8	0.4	45.5	46.5	1	45.5	46.5	1
100100010819	2 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	52.6	53.2	0.6	49.7	50.1	0.4	48.2	48.7	0.6	45.3	45.7	0.4	48.5	48.5	0	45.5	45.5	0
100100010820	3 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	49.7	50.3	0.6	49.3	49.7	0.4	45.3	45.9	0.6	45	45.3	0.4	45.5	46.5	1	45.5	45.5	0
100100010821	1 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	52.7	53.3	0.6	50.3	50.6	0.3	48.2	48.8	0.6	45.9	46.2	0.3	48.5	48.5	0	46.5	46.5	0
100100010822	30 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	51	51.6	0.6	50.8	51	0.2	46.6	47.2	0.6	46.4	46.6	0.2	46.5	47.5	1	46.5	46.5	0
100100010823	28 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	52.4	52.9	0.5	50.8	51.1	0.3	48	48.4	0.5	46.4	46.7	0.3	48.5	48.5	0	46.5	46.5	0
100100010824	24 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	53.5	54	0.5	52.5	52.7	0.2	49	49.5	0.5	48.1	48.2	0.2	49.5	49.5	0	48.5	48.5	0
100100010825	18 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	52.8	53.3	0.5	50.5	50.7	0.2	48.3	48.8	0.5	46.1	46.3	0.2	48.5	48.5	0	46.5	46.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100010826	12 GERLANFFORDD PENDYFFRYN VALLEY HOLYH	Residential	53.4	54	0.6	51.1	51.3	0.2	48.9	49.5	0.6	46.7	46.9	0.2	49.5	49.5	0	46.5	47.5	1
100100010827	19 STANLEY AVENUE VALLEY HOLYHEAD LL65	Residential	50.8	51.1	0.3	50.8	51.1	0.3	46.4	46.7	0.3	46.4	46.7	0.3	46.5	46.5	0	46.5	46.5	0
100100010828	17 STANLEY AVENUE VALLEY HOLYHEAD LL65	Residential	48.9	49.3	0.4	50.8	51.1	0.3	44.6	45	0.4	46.4	46.7	0.3	44.5	45.5	1	46.5	46.5	0
100100010829	15 STANLEY AVENUE VALLEY HOLYHEAD LL65	Residential	50.1	50.5	0.4	50.1	50.4	0.3	45.7	46.1	0.4	45.7	46	0.3	45.5	46.5	1	45.5	46.5	1
100100010830	13 STANLEY AVENUE VALLEY HOLYHEAD LL65	Residential	49.3	49.7	0.4	49.3	49.7	0.4	45	45.3	0.4	45	45.3	0.4	45.5	45.5	0	45.5	45.5	0
100100010831	4 MANNING DRIVE VALLEY HOLYHEAD LL65 3B	Residential	52.9	53.2	0.3	52.9	53.2	0.3	48.4	48.7	0.3	48.4	48.7	0.3	48.5	48.5	0	48.5	48.5	0
100100010832	27 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	49.9	50.5	0.6	50.4	50.6	0.2	45.5	46.1	0.6	46	46.2	0.2	45.5	46.5	1	46.5	46.5	0
100100010833	3 MANNING DRIVE VALLEY HOLYHEAD LL65 3B	Residential	49.4	49.9	0.5	49.4	49.7	0.3	45	45.5	0.5	45	45.3	0.3	45.5	45.5	0	45.5	45.5	0
100100010834	5 MANNING DRIVE VALLEY HOLYHEAD LL65 3B	Residential	50	50.5	0.5	50.8	51.1	0.3	45.6	46.1	0.5	46.4	46.7	0.3	45.5	46.5	1	46.5	46.5	0
100100010835	7 MANNING DRIVE VALLEY HOLYHEAD LL65 3B	Residential	49.1	49.5	0.4	49.1	49.4	0.3	44.8	45.1	0.4	44.8	45	0.3	44.5	45.5	1	44.5	45.5	1
100100010836	9 MANNING DRIVE VALLEY HOLYHEAD LL65 3B	Residential	50	50.4	0.4	50	50.3	0.3	45.6	46	0.4	45.6	45.9	0.3	45.5	46.5	1	45.5	46.5	1
100100010837	11 MANNING DRIVE VALLEY HOLYHEAD LL65 3	Residential	49.3	49.7	0.4	49.3	49.6	0.3	45	45.3	0.4	45	45.2	0.3	45.5	45.5	0	45.5	45.5	0
100100010838	13 MANNING DRIVE VALLEY HOLYHEAD LL65 3	Residential	49.8	50.2	0.4	50.8	51.1	0.3	45.4	45.8	0.4	46.4	46.7	0.3	45.5	46.5	1	46.5	46.5	0
100100010839	37 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	50.5	51	0.5	51.3	51.6	0.3	46.1	46.6	0.5	46.9	47.2	0.3	46.5	46.5	0	47.5	47.5	0
100100010842	35 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	49.1	49.6	0.5	49.1	49.5	0.4	44.8	45.2	0.5	44.8	45.1	0.4	44.5	45.5	1	44.5	45.5	1
100100010843	33 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	51.3	51.7	0.4	51.3	51.6	0.3	46.9	47.3	0.4	46.9	47.2	0.3	47.5	47.5	0	47.5	47.5	0
100100010844	31 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	52.2	52.7	0.5	51.4	51.6	0.2	47.8	48.2	0.5	47	47.2	0.2	47.5	48.5	1	47.5	47.5	0
100100010845	29 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	52.1	52.6	0.5	51.9	52.1	0.2	47.7	48.2	0.5	47.5	47.7	0.2	47.5	48.5	1	47.5	47.5	0
100100010846	8 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	50.2	50.9	0.7	49.6	50	0.4	45.8	46.5	0.7	45.2	45.6	0.4	46.5	46.5	0	45.5	45.5	0
100100010847	7 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	51.8	52.4	0.6	49.8	50.2	0.4	47.4	48	0.6	45.4	45.8	0.4	47.5	48.5	1	45.5	46.5	1
100100010848	11 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	49.6	50.2	0.6	49.6	50	0.4	45.2	45.8	0.6	45.2	45.6	0.4	45.5	46.5	1	45.5	45.5	0
100100010849	13 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	50.8	51.3	0.5	50.8	51.1	0.3	46.4	46.9	0.5	46.4	46.7	0.3	46.5	47.5	1	46.5	46.5	0
100100010850	15 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	49.1	49.7	0.6	49.1	49.5	0.4	44.8	45.3	0.6	44.8	45.1	0.4	44.5	45.5	1	44.5	45.5	1
100100010851	39 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	52.1	52.7	0.6	50.4	50.6	0.2	47.7	48.2	0.6	46	46.2	0.2	47.5	48.5	1	46.5	46.5	0
100100010852	16 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	51.9	52.5	0.6	49.7	50.1	0.4	47.5	48.1	0.6	45.3	45.7	0.4	47.5	48.5	1	45.5	45.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100010853	2 GLASFRYNMANNING DRIVE VALLEY HOLYHEAD	Residential	51.6	52	0.4	49.8	50.1	0.3	47.2	47.6	0.4	45.4	45.7	0.3	47.5	47.5	0	45.5	45.5	0
100100010854	20 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	49.5	50.1	0.6	49.5	49.9	0.4	45.1	45.7	0.6	45.1	45.5	0.4	45.5	45.5	0	45.5	45.5	0
100100010855	12 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	49.7	50.3	0.6	48.3	48.7	0.4	45.3	45.9	0.6	44	44.4	0.4	45.5	46.5	1	44.5	44.5	0
100100010856	40 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	48.9	49.6	0.7	49	49.3	0.3	44.6	45.2	0.7	44.7	45	0.3	44.5	45.5	1	44.5	45.5	1
100100010857	58 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	50.7	51.3	0.6	49.1	49.6	0.5	46.3	46.9	0.6	44.8	45.2	0.5	46.5	47.5	1	44.5	45.5	1
100100010858	54 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	50.1	50.7	0.6	48.8	49.3	0.5	45.7	46.3	0.6	44.5	45	0.5	45.5	46.5	1	44.5	45.5	1
100100010859	52 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	49.2	49.8	0.6	50.6	50.9	0.3	44.9	45.4	0.6	46.2	46.5	0.3	45.5	45.5	0	46.5	46.5	0
100100010860	48 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	50	50.5	0.5	50.3	50.6	0.3	45.6	46.1	0.5	45.9	46.2	0.3	45.5	46.5	1	46.5	46.5	0
100100010861	42 PENYBRYNFFORDD PENDYFFRYN VALLEY HOL	Residential	50.7	51.2	0.5	50	50.3	0.3	46.3	46.8	0.5	45.6	45.9	0.3	46.5	46.5	0	45.5	46.5	1
100100010862	40 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	49.8	50.3	0.5	49.8	50.2	0.4	45.4	45.9	0.5	45.4	45.8	0.4	45.5	46.5	1	45.5	46.5	1
100100010863	47 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	49.5	50	0.5	49.8	50.1	0.3	45.1	45.6	0.5	45.4	45.7	0.3	45.5	45.5	0	45.5	45.5	0
100100010868	45 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	49.8	50.3	0.5	49.3	49.6	0.3	45.4	45.9	0.5	45	45.2	0.3	45.5	46.5	1	45.5	45.5	0
100100010869	34 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	49.8	50.4	0.6	49.9	50.3	0.4	45.4	46	0.6	45.5	45.9	0.4	45.5	46.5	1	45.5	46.5	1
100100010871	43 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	49.8	50.4	0.6	48.9	49.3	0.4	45.4	46	0.6	44.6	45	0.4	45.5	46.5	1	44.5	45.5	1
100100010872	41 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	50.9	51.4	0.5	50.8	51.2	0.4	46.5	47	0.5	46.4	46.8	0.4	46.5	47.5	1	46.5	46.5	0
100100010873	35 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	52.6	53.2	0.6	49.4	49.6	0.2	48.2	48.7	0.6	45	45.2	0.2	48.5	48.5	0	45.5	45.5	0
100100010874	41 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	49.4	50.1	0.7	49.4	49.8	0.4	45	45.7	0.7	45	45.4	0.4	45.5	45.5	0	45.5	45.5	0
100100010875	19 MANNING DRIVE VALLEY HOLYHEAD LL65 3	Residential	49.2	49.6	0.4	49.3	49.6	0.3	44.9	45.2	0.4	45	45.2	0.3	45.5	45.5	0	45.5	45.5	0
100100010878	1 MANNING DRIVE VALLEY HOLYHEAD LL65 3B	Residential	50.2	50.7	0.5	51	51.3	0.3	45.8	46.3	0.5	46.6	46.9	0.3	46.5	46.5	0	46.5	47.5	1
100100010879	26 DISGWYLFAFFORDD PENDYFFRYN VALLEY HO	Residential	53.3	53.8	0.5	50.6	50.9	0.3	48.8	49.3	0.5	46.2	46.5	0.3	48.5	49.5	1	46.5	46.5	0
100100010880	22 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	53.2	53.8	0.6	49.8	50.1	0.3	48.7	49.3	0.6	45.4	45.7	0.3	48.5	49.5	1	45.5	45.5	0
100100010881	20 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	53	53.5	0.5	50.9	51.1	0.2	48.5	49	0.5	46.5	46.7	0.2	48.5	49.5	1	46.5	46.5	0
100100010882	16 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	53.7	54.2	0.5	50.9	51.1	0.2	49.2	49.7	0.5	46.5	46.7	0.2	49.5	49.5	0	46.5	46.5	0
100100010883	14 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	52.6	53.2	0.6	50.9	51.2	0.3	48.2	48.7	0.6	46.5	46.8	0.3	48.5	48.5	0	46.5	46.5	0
100100010884	21 STANLEY AVENUE VALLEY HOLYHEAD LL65	Residential	51.5	51.9	0.4	53.6	53.9	0.3	47.1	47.5	0.4	49.1	49.4	0.3	47.5	47.5	0	49.5	49.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100010885	6 MANNING DRIVE VALLEY HOLYHEAD LL65 3B	Residential	53.4	53.7	0.3	49.9	50.2	0.3	48.9	49.2	0.3	45.5	45.8	0.3	49.5	49.5	0	45.5	46.5	1
100100010886	39 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	51.3	51.8	0.5	50.2	50.6	0.4	46.9	47.4	0.5	45.8	46.2	0.4	47.5	47.5	0	46.5	46.5	0
100100010887	6 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	49.1	49.7	0.6	49.1	49.5	0.4	44.8	45.3	0.6	44.8	45.1	0.4	44.5	45.5	1	44.5	45.5	1
100100010888	5 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	51.8	52.4	0.6	51.6	51.9	0.3	47.4	48	0.6	47.2	47.5	0.3	47.5	48.5	1	47.5	47.5	0
100100010889	9 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	51.9	52.4	0.5	51.9	52.1	0.2	47.5	48	0.5	47.5	47.7	0.2	47.5	48.5	1	47.5	47.5	0
100100010890	31 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	52.7	53.3	0.6	49	49.2	0.2	48.2	48.8	0.6	44.7	44.9	0.2	48.5	48.5	0	44.5	45.5	1
100100010891	18 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	51.6	52.2	0.6	50.5	50.7	0.2	47.2	47.8	0.6	46.1	46.3	0.2	47.5	47.5	0	46.5	46.5	0
100100010892	24 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	49.3	49.9	0.6	49.3	49.8	0.5	45	45.5	0.6	45	45.4	0.5	45.5	45.5	0	45.5	45.5	0
100100010894	44 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	50.5	51.2	0.7	49.3	49.6	0.3	46.1	46.8	0.7	45	45.2	0.3	46.5	46.5	0	45.5	45.5	0
100100010895	43 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	52.3	52.9	0.6	48.4	48.6	0.2	47.9	48.4	0.6	44.1	44.3	0.2	48.5	48.5	0	44.5	44.5	0
100100010898	33 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	48.8	49.5	0.7	48.9	49.2	0.3	44.5	45.1	0.7	44.6	44.9	0.3	44.5	45.5	1	44.5	45.5	1
100100010900	56 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	51	51.5	0.5	51.1	51.4	0.3	46.6	47.1	0.5	46.7	47	0.3	46.5	47.5	1	46.5	47.5	1
100100010901	38 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	51.7	52.2	0.5	49.4	49.7	0.3	47.3	47.8	0.5	45	45.3	0.3	47.5	47.5	0	45.5	45.5	0
100100010902	32 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	50.4	51	0.6	47.1	47.6	0.5	46	46.6	0.6	42.8	43.3	0.5	46.5	46.5	0	43.5	43.5	0
100100010903	10 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	52.6	53.2	0.6	50	50.2	0.2	48.2	48.7	0.6	45.6	45.8	0.2	48.5	48.5	0	45.5	46.5	1
100100010905	36 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	50.8	51.5	0.7	49.6	49.9	0.3	46.4	47.1	0.7	45.2	45.5	0.3	46.5	47.5	1	45.5	45.5	0
100100010906	42 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	50.3	50.9	0.6	48.7	49	0.3	45.9	46.5	0.6	44.4	44.7	0.3	46.5	46.5	0	44.5	44.5	0
100100010907	50 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	50.1	50.6	0.5	48.7	49.2	0.5	45.7	46.2	0.5	44.4	44.9	0.5	45.5	46.5	1	44.5	45.5	1
100100010916	46 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	50	50.5	0.5	48.9	49.2	0.3	45.6	46.1	0.5	44.6	44.9	0.3	45.5	46.5	1	44.5	45.5	1
100100010917	44 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	50.4	50.9	0.5	50.4	50.7	0.3	46	46.5	0.5	46	46.3	0.3	46.5	46.5	0	46.5	46.5	0
100100010918	36 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	51.7	52.2	0.5	51.3	51.6	0.3	47.3	47.8	0.5	46.9	47.2	0.3	47.5	47.5	0	47.5	47.5	0
100100010919	14 SILYNFFORDD LLEWELYN VALLEY HOLYHEAD	Residential	51.7	52.4	0.7	51	51.2	0.2	47.3	48	0.7	46.6	46.8	0.2	47.5	48.5	1	46.5	46.5	0
100100010922	48 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	50.3	51	0.7	50.4	50.7	0.3	45.9	46.6	0.7	46	46.3	0.3	46.5	46.5	0	46.5	46.5	0
100100010924	25 MANNING DRIVE VALLEY HOLYHEAD LL65 3	Residential	50.4	50.7	0.3	50.4	50.7	0.3	46	46.3	0.3	46	46.3	0.3	46.5	46.5	0	46.5	46.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100010929	22 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	51.8	52.4	0.6	48.8	49	0.2	47.4	48	0.6	44.5	44.7	0.2	47.5	48.5	1	44.5	44.5	0
100100010931	37 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	49.5	50.2	0.7	48.8	49.2	0.4	45.1	45.8	0.7	44.5	44.9	0.4	45.5	46.5	1	44.5	45.5	1
100100010932	46 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	49.5	50.2	0.7	49.5	49.9	0.4	45.1	45.8	0.7	45.1	45.5	0.4	45.5	46.5	1	45.5	45.5	0
100100010934	45 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	49.1	49.8	0.7	49.1	49.6	0.5	44.8	45.4	0.7	44.8	45.2	0.5	44.5	45.5	1	44.5	45.5	1
100100010935	49 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	49	49.7	0.7	49.1	49.6	0.5	44.7	45.3	0.7	44.8	45.2	0.5	44.5	45.5	1	44.5	45.5	1
100100010938	GWYNANTLON SPENCER VALLEY HOLYHEAD LL65	Residential	54.9	55.1	0.2	53.1	53.4	0.3	50.4	50.6	0.2	48.6	48.9	0.3	50.5	50.5	0	48.5	49.5	1
100100010939	23 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	49.3	49.9	0.6	48	48.3	0.3	45	45.5	0.6	43.7	44	0.3	45.5	45.5	0	43.5	44.5	1
100100010944	51 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	51.9	52.4	0.5	48	48.2	0.2	47.5	48	0.5	43.7	43.9	0.2	47.5	48.5	1	43.5	44.5	1
100100010945	53 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	49.3	50	0.7	49.3	49.6	0.3	45	45.6	0.7	45	45.2	0.3	45.5	45.5	0	45.5	45.5	0
100100010946	2 DORADALON GARDENER VALLEY HOLYHEAD LL	Residential	54.8	55	0.2	62.8	63	0.2	50.3	50.5	0.2	58	58.2	0.2	50.5	50.5	0	58.5	58.5	0
100100010947	57 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	48.9	49.6	0.7	48.9	49.4	0.5	44.6	45.2	0.7	44.6	45	0.5	44.5	45.5	1	44.5	45.5	1
100100010948	21 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	50	50.5	0.5	47.3	47.6	0.3	45.6	46.1	0.5	43	43.3	0.3	45.5	46.5	1	43.5	43.5	0
100100010949	50 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	50.4	51.1	0.7	50.4	50.7	0.3	46	46.7	0.7	46	46.3	0.3	46.5	46.5	0	46.5	46.5	0
100100010950	19 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	50.3	50.9	0.6	48.7	49.2	0.5	45.9	46.5	0.6	44.4	44.9	0.5	46.5	46.5	0	44.5	45.5	1
100100010951	17 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	50.2	50.7	0.5	50.2	50.5	0.3	45.8	46.3	0.5	45.8	46.1	0.3	46.5	46.5	0	46.5	46.5	0
100100010952	32 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	49.9	50.5	0.6	47.6	47.9	0.3	45.5	46.1	0.6	43.3	43.6	0.3	45.5	46.5	1	43.5	43.5	0
100100010954	30 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	50.1	50.8	0.7	51.2	51.4	0.2	45.7	46.4	0.7	46.8	47	0.2	45.5	46.5	1	46.5	47.5	1
100100010955	54 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	49.9	50.6	0.7	49.9	50.3	0.4	45.5	46.2	0.7	45.5	45.9	0.4	45.5	46.5	1	45.5	46.5	1
100100010956	55 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	47.4	48	0.6	47.4	47.8	0.4	43.1	43.7	0.6	43.1	43.5	0.4	43.5	43.5	0	43.5	43.5	0
100100010957	62 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	50.9	51.6	0.7	48.2	48.6	0.4	46.5	47.2	0.7	43.9	44.3	0.4	46.5	47.5	1	44.5	44.5	0
100100010958	52 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	50	50.7	0.7	48.9	49.2	0.3	45.6	46.3	0.7	44.6	44.9	0.3	45.5	46.5	1	44.5	45.5	1
100100010959	28 FFORDD LLEWELYN VALLEY HOLYHEAD LL65	Residential	48.7	49.3	0.6	48.7	49.2	0.5	44.4	45	0.6	44.4	44.9	0.5	44.5	45.5	1	44.5	45.5	1
100100010960	58 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	49.6	50.3	0.7	49.6	50	0.4	45.2	45.9	0.7	45.2	45.6	0.4	45.5	46.5	1	45.5	45.5	0

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			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100010962	119 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	67.6	68.1	0.5	53.3	53.6	0.3	62.7	63.2	0.5	48.8	49.1	0.3	62.5	63.5	1	48.5	49.5	1
100100010963	56 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	50	50.8	0.8	49.6	50	0.4	45.6	46.4	0.8	45.2	45.6	0.4	45.5	46.5	1	45.5	45.5	0
100100010965	22 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	52.7	53.4	0.7	49.8	50	0.2	48.2	48.9	0.7	45.4	45.6	0.2	48.5	49.5	1	45.5	45.5	0
100100010968	26 SHIRALEEFFORDD LLEWELYN VALLEY HOLYH	Residential	50.9	51.5	0.6	51.3	51.5	0.2	46.5	47.1	0.6	46.9	47.1	0.2	46.5	47.5	1	47.5	47.5	0
100100010971	PARC BACHSTATION ROAD VALLEY HOLYHEAD L	Residential	56	56.4	0.4	58.8	59.1	0.3	51.5	51.8	0.4	54.2	54.5	0.3	51.5	51.5	0	54.5	54.5	0
100100010994	LLYS DYFFRYNLONDON ROAD HOLYHEAD LL65	Residential	55.3	55.5	0.2	66.6	66.7	0.1	50.8	51	0.2	61.7	61.8	0.1	50.5	51.5	1	61.5	61.5	0
100100010999	LLYS DYFFRYNLONDON ROAD HOLYHEAD LL65	Residential	54.3	54.6	0.3	55.2	55.3	0.1	49.8	50.1	0.3	50.7	50.8	0.1	49.5	50.5	1	50.5	50.5	0
100100011000	LLYS DYFFRYNLONDON ROAD HOLYHEAD LL65	Residential	53	53.3	0.3	66.4	66.5	0.1	48.5	48.8	0.3	61.5	61.6	0.1	48.5	48.5	0	61.5	61.5	0
100100011001	LLYS DYFFRYNLONDON ROAD HOLYHEAD LL65	Residential	53.3	53.6	0.3	64	64.1	0.1	48.8	49.1	0.3	59.2	59.3	0.1	48.5	49.5	1	59.5	59.5	0
100100011002	LLYS DYFFRYNLONDON ROAD HOLYHEAD LL65	Residential	54.3	54.6	0.3	59.6	59.8	0.2	49.8	50.1	0.3	54.9	55.1	0.2	49.5	50.5	1	54.5	55.5	1
100100011003	LLYS DYFFRYNLONDON ROAD HOLYHEAD LL65	Residential	56.6	56.9	0.3	54	54.2	0.2	52	52.3	0.3	49.5	49.7	0.2	52.5	52.5	0	49.5	49.5	0
100100011004	FLAT 4VALLEY MEWSSTATION ROAD VALLEY HO	Residential	55.6	56.1	0.5	55.6	55.5	-0.1	51.1	51.5	0.5	51.1	51	-0.1	51.5	51.5	0	51.5	51.5	0
100100011006	LON GARDENER VALLEY HOLYHEAD LL65 3DN	Residential	51.6	52.1	0.5	56.3	56.5	0.2	47.2	47.7	0.5	51.7	51.9	0.2	47.5	47.5	0	51.5	52.5	1
100100011007	21 FFORDD PENDYFFRYN VALLEY HOLYHEAD LL	Residential	51.9	52.6	0.7	51.5	51.8	0.3	47.5	48.2	0.7	47.1	47.4	0.3	47.5	48.5	1	47.5	47.5	0
100100011008	4 PENRHYNLON GARDENER VALLEY HOLYHEAD L	Residential	53	53.4	0.4	53.7	54	0.3	48.5	48.9	0.4	49.2	49.5	0.3	48.5	49.5	1	49.5	49.5	0
100100011009	TY NEWYDDKINGSLAND ROAD HOLYHEAD LL65	Residential	46	46.3	0.3	46	46.5	0.5	41.8	42	0.3	41.8	42.2	0.5	42.5	42.5	0	42.5	42.5	0
100100961933	28 YR OGOF HOLYHEAD LL65 2TN	Residential	50.3	50.5	0.2	50.2	50.6	0.4	45.9	46.1	0.2	45.8	46.2	0.4	46.5	46.5	0	46.5	46.5	0
100100961966	DELFRYNLONDON ROAD HOLYHEAD LL65 2RB	Residential	48.6	48.7	0.1	45.3	45.6	0.3	44.3	44.4	0.1	41.1	41.4	0.3	44.5	44.5	0	41.5	41.5	0
100100961985	HOLYHEAD BOXING CLUBPARC BUSNES PENRHOS	Community	53.5	53.7	0.2	52.3	52.6	0.3	49	49.2	0.2	47.9	48.2	0.3	49.5	49.5	0	48.5	48.5	0
100100961987	17 KIPPAXYR OGOF HOLYHEAD LL65 2TN	Residential	48.9	49.2	0.3	46.7	47.2	0.5	44.6	44.9	0.3	42.4	42.9	0.5	44.5	45.5	1	42.5	43.5	1
100100961995	TESCO STORES LTDPENRHOS INDUSTRIAL ESTA	Commercial	47.8	48.1	0.3	50.8	51.2	0.4	43.5	43.8	0.3	46.4	46.8	0.4	43.5	44.5	1	46.5	46.5	0
100100961998	BERWYN HOLYHEAD LL65 2SB	Commercial	41.3	41.4	0.1	36.9	37.2	0.3	37.2	37.3	0.1	32.9	33.2	0.3	37.5	37.5	0	33.5	33.5	0
100100962000	156 BRON AWELLONDON ROAD HOLYHEAD LL65	Residential	46.8	47	0.2	46.8	47.1	0.3	42.5	42.7	0.2	42.5	42.8	0.3	42.5	42.5	0	42.5	43.5	1
100100962032	14 PENRHOS VIEW HOLYHEAD LL65 2SW	Residential	48.5	48.6	0.1	48.5	48.8	0.3	44.2	44.3	0.1	44.2	44.5	0.3	44.5	44.5	0	44.5	44.5	0

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			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100962034	2 PENRHOS VIEW HOLYHEAD LL65 2SW	Residential	49.8	50	0.2	49.8	50.2	0.4	45.4	45.6	0.2	45.4	45.8	0.4	45.5	45.5	0	45.5	46.5	1
100100962035	8 PENRHOS VIEW HOLYHEAD LL65 2SW	Residential	51.4	51.6	0.2	51.4	51.8	0.4	47	47.2	0.2	47	47.4	0.4	47.5	47.5	0	47.5	47.5	0
100100962036	AEL Y MORLLANFAWR ROAD HOLYHEAD LL65 2	Residential	50.3	50.5	0.2	44.6	44.9	0.3	45.9	46.1	0.2	40.4	40.7	0.3	46.5	46.5	0	40.5	40.5	0
100100962070	COEDLYSLLANFAWR ROAD HOLYHEAD LL65 2PP	Residential	49.7	49.9	0.2	47.2	47.5	0.3	45.3	45.5	0.2	42.9	43.2	0.3	45.5	45.5	0	43.5	43.5	0
100100962071	TAN Y FRONLLANFAWR ROAD HOLYHEAD LL65	Residential	51	51.2	0.2	49	49.3	0.3	46.6	46.8	0.2	44.7	45	0.3	46.5	46.5	0	44.5	45.5	1
100100962072	HAFAN DEGLLANFAWR ROAD HOLYHEAD LL65 2	Residential	50.9	51	0.1	46.4	46.6	0.2	46.5	46.6	0.1	42.1	42.3	0.2	46.5	46.5	0	42.5	42.5	0
100100962073	HADDEFKINGSLAND ROAD HOLYHEAD LL65 2SP	Residential	43.9	44.1	0.2	48.7	49.1	0.4	39.7	39.9	0.2	44.4	44.8	0.4	40.5	40.5	0	44.5	44.5	0
100100962081	SUNNYMEADKINGSLAND ROAD HOLYHEAD LL65	Residential	48.8	49	0.2	48.8	49.2	0.4	44.5	44.7	0.2	44.5	44.9	0.4	44.5	44.5	0	44.5	45.5	1
100100962082	TEGFRYNKINGSLAND ROAD HOLYHEAD LL65 2S	Residential	49.9	50.1	0.2	49.8	50.2	0.4	45.5	45.7	0.2	45.4	45.8	0.4	45.5	45.5	0	45.5	46.5	1
100100962083	CERISKINGSLAND ROAD HOLYHEAD LL65 2SY	Residential	48.5	48.7	0.2	47.5	47.9	0.4	44.2	44.4	0.2	43.2	43.6	0.4	44.5	44.5	0	43.5	43.5	0
100100962084	CYNLASKINGSLAND ROAD HOLYHEAD LL65 2SY	Residential	50	50.2	0.2	50	50.4	0.4	45.6	45.8	0.2	45.6	46	0.4	45.5	46.5	1	45.5	46.5	1
100100962085	CLOVELLYKINGSLAND ROAD HOLYHEAD LL65 2	Residential	53.4	54	0.6	53.5	54.3	0.8	48.9	49.5	0.6	49	49.8	0.8	49.5	49.5	0	49.5	49.5	0
100100962086	HAFRYNKINGSLAND ROAD HOLYHEAD LL65 2TB	Residential	54.2	54.7	0.5	54.3	55	0.7	49.7	50.2	0.5	49.8	50.5	0.7	49.5	50.5	1	49.5	50.5	1
100100962087	HILLANDALEKINGSLAND ROAD HOLYHEAD LL65	Residential	54.3	54.9	0.6	53.7	54.6	0.9	49.8	50.4	0.6	49.2	50.1	0.9	49.5	50.5	1	49.5	50.5	1
100100962088	MONEIFIONKINGSLAND ROAD HOLYHEAD LL65	Residential	54.4	54.9	0.5	54.4	55.1	0.7	49.9	50.4	0.5	49.9	50.6	0.7	50.5	50.5	0	50.5	50.5	0
100100962089	TREMARFONKINGSLAND ROAD HOLYHEAD LL65	Residential	54.3	54.8	0.5	54.3	55	0.7	49.8	50.3	0.5	49.8	50.5	0.7	49.5	50.5	1	49.5	50.5	1
100100962090	TREWYNKINGSLAND ROAD HOLYHEAD LL65 2TB	Residential	54.3	54.7	0.4	54.3	55	0.7	49.8	50.2	0.4	49.8	50.5	0.7	49.5	50.5	1	49.5	50.5	1
100100962091	3 TYN PWLL ROAD HOLYHEAD LL65 2TL	Residential	51.4	51.6	0.2	51.5	51.8	0.3	47	47.2	0.2	47.1	47.4	0.3	47.5	47.5	0	47.5	47.5	0
100100962092	6 TYN PWLL ROAD HOLYHEAD LL65 2TL	Residential	47.8	48.1	0.3	47.8	48.3	0.5	43.5	43.8	0.3	43.5	44	0.5	43.5	44.5	1	43.5	44.5	1
100100962093	4 ALTEALLAIN BRYNIAU HOLYHEAD LL65 2JG	Residential	55.3	55.4	0.1	55.3	55.6	0.3	50.8	50.9	0.1	50.8	51.1	0.3	50.5	50.5	0	50.5	51.5	1
100100962151	PENRHOS HOUSELLANFAWR ROAD HOLYHEAD LL	Residential	48.3	48.5	0.2	48.3	48.6	0.3	44	44.2	0.2	44	44.3	0.3	44.5	44.5	0	44.5	44.5	0
100100962153	SEA VIEWLLANFAWR ROAD HOLYHEAD LL65 2P	Residential	49.4	49.6	0.2	49.3	49.6	0.3	45	45.2	0.2	45	45.2	0.3	45.5	45.5	0	45.5	45.5	0
100100962154	REFAIL BACHPENRHOS BEACH ROAD HOLYHEAD	Residential	52.9	53	0.1	52.9	53	0.1	48.4	48.5	0.1	48.4	48.5	0.1	48.5	48.5	0	48.5	48.5	0
100100962155	GWYNANTPENRHOS BEACH ROAD HOLYHEAD LL6	Residential	48.8	49	0.2	48.6	48.8	0.2	44.5	44.7	0.2	44.3	44.5	0.2	44.5	44.5	0	44.5	44.5	0
100100962156	HOMEFIELDPENRHOS BEACH ROAD HOLYHEAD L	Residential	51.4	51.5	0.1	46.8	47	0.2	47	47.1	0.1	42.5	42.7	0.2	47.5	47.5	0	42.5	42.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100962157	TY GWYNPENRHOS BEACH ROAD HOLYHEAD LL6	Residential	55.4	55.5	0.1	48.6	48.7	0.1	50.9	51	0.1	44.3	44.4	0.1	50.5	51.5	1	44.5	44.5	0
100100962159	1 TAN YR ALLT HOLYHEAD LL65 2RG	Residential	52.9	53.1	0.2	52.9	53.3	0.4	48.4	48.6	0.2	48.4	48.8	0.4	48.5	48.5	0	48.5	48.5	0
100100962161	2 TAN YR ALLT HOLYHEAD LL65 2RG	Residential	52.9	53.1	0.2	52.9	53.2	0.3	48.4	48.6	0.2	48.4	48.7	0.3	48.5	48.5	0	48.5	48.5	0
100100962162	3 TAN YR ALLT HOLYHEAD LL65 2RG	Residential	53.5	53.7	0.2	53.6	54	0.4	49	49.2	0.2	49.1	49.5	0.4	49.5	49.5	0	49.5	49.5	0
100100962163	4 TAN YR ALLT HOLYHEAD LL65 2RG	Residential	53.4	53.6	0.2	53.3	53.7	0.4	48.9	49.1	0.2	48.8	49.2	0.4	49.5	49.5	0	48.5	49.5	1
100100962164	5 TAN YR ALLT HOLYHEAD LL65 2RG	Residential	53.5	53.7	0.2	53.6	54	0.4	49	49.2	0.2	49.1	49.5	0.4	49.5	49.5	0	49.5	49.5	0
100100962165	6 TAN YR ALLT HOLYHEAD LL65 2RG	Residential	53.8	54	0.2	53.8	54.2	0.4	49.3	49.5	0.2	49.3	49.7	0.4	49.5	49.5	0	49.5	49.5	0
100100962166	7 TAN YR ALLT HOLYHEAD LL65 2RG	Residential	54.8	55	0.2	54.8	55.2	0.4	50.3	50.5	0.2	50.3	50.7	0.4	50.5	50.5	0	50.5	50.5	0
100100962167	ANGLESEY PET CLINICKINGSLAND ROAD HOLY	Commercial	43.8	44.1	0.3	45.6	46.1	0.5	39.6	39.9	0.3	41.4	41.8	0.5	39.5	40.5	1	41.5	42.5	1
100100962170	TY RARDD HOLYHEAD LL65 2TJ	Residential	48.3	48.5	0.2	48.4	48.7	0.3	44	44.2	0.2	44.1	44.4	0.3	44.5	44.5	0	44.5	44.5	0
100100962172	AFALLONMILL ROAD HOLYHEAD LL65 2YD	Residential	45.9	46.2	0.3	46	46.5	0.5	41.7	41.9	0.3	41.8	42.2	0.5	41.5	42.5	1	42.5	42.5	0
100100962174	HOLYHEAD LL65 2PD	Residential	45	45.2	0.2	45.9	46.2	0.3	40.8	41	0.2	41.7	41.9	0.3	41.5	41.5	0	41.5	42.5	1
100100962181	THE BARNLLANFAWR ROAD HOLYHEAD LL65 2P	Residential	48	48.2	0.2	45.4	45.6	0.2	43.7	43.9	0.2	41.2	41.4	0.2	43.5	44.5	1	41.5	41.5	0
100100962185	2 CAE CAPELCAE CAPEL HOLYHEAD LL65 2SU	Residential	53.6	54.1	0.5	53.6	54.3	0.7	49.1	49.6	0.5	49.1	49.8	0.7	49.5	49.5	0	49.5	49.5	0
100100962187	3 CAE CAPELCAE CAPEL HOLYHEAD LL65 2SU	Residential	50.5	51.1	0.6	50.5	51.4	0.9	46.1	46.7	0.6	46.1	47	0.9	46.5	46.5	0	46.5	47.5	1
100100962188	4 CAE CAPELCAE CAPEL HOLYHEAD LL65 2SU	Residential	50.1	50.7	0.6	50.1	51	0.9	45.7	46.3	0.6	45.7	46.6	0.9	45.5	46.5	1	45.5	46.5	1
100100962189	5 CAE CAPELCAE CAPEL HOLYHEAD LL65 2SU	Residential	47.6	47.9	0.3	47.6	48.1	0.5	43.3	43.6	0.3	43.3	43.8	0.5	43.5	43.5	0	43.5	44.5	1
100100962190	6 CAE CAPELCAE CAPEL HOLYHEAD LL65 2SU	Residential	47.8	48	0.2	48.7	49.1	0.4	43.5	43.7	0.2	44.4	44.8	0.4	43.5	43.5	0	44.5	44.5	0
100100962191	DERLWYNKINGSLAND ROAD HOLYHEAD LL65 2S	Residential	44.3	44.6	0.3	44.3	44.9	0.6	40.1	40.4	0.3	40.1	40.7	0.6	40.5	40.5	0	40.5	40.5	0
100100962230	HILLSIDEKINGSLAND ROAD HOLYHEAD LL65 2	Residential	50.6	50.7	0.1	45.9	46.2	0.3	46.2	46.3	0.1	41.7	41.9	0.3	46.5	46.5	0	41.5	42.5	1
100100962231	SWISS COTTAGELONDON ROAD HOLYHEAD LL65	Residential	49	49.2	0.2	48.8	49.2	0.4	44.7	44.9	0.2	44.5	44.9	0.4	44.5	45.5	1	44.5	45.5	1
100100962232	1 BRYN ERW ROAD HOLYHEAD LL65 2PY	Residential	49.8	50	0.2	49.9	50.2	0.3	45.4	45.6	0.2	45.5	45.8	0.3	45.5	45.5	0	45.5	46.5	1
100100962247	13 CERISBRYN ERW ROAD HOLYHEAD LL65 2P	Residential	48.3	48.5	0.2	49.7	50.1	0.4	44	44.2	0.2	45.3	45.7	0.4	44.5	44.5	0	45.5	45.5	0
100100962248	16 PENCOEDBRYN ERW ROAD HOLYHEAD LL65	Residential	48.5	48.7	0.2	49.8	50.1	0.3	44.2	44.4	0.2	45.4	45.7	0.3	44.5	44.5	0	45.5	45.5	0
100100962249	3 BRYN ERW ROAD HOLYHEAD LL65 2PY	Residential	49.5	49.7	0.2	48.6	49	0.4	45.1	45.3	0.2	44.3	44.7	0.4	45.5	45.5	0	44.5	44.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100962250	5 SALINASBRYN ERW ROAD HOLYHEAD LL65 2	Residential	47.1	47.3	0.2	48.9	49.2	0.3	42.8	43	0.2	44.6	44.9	0.3	43.5	43.5	0	44.5	45.5	1
100100962251	ALLT NEWYDDLONDON ROAD HOLYHEAD LL65 2	Residential	49.1	49.2	0.1	50.2	50.5	0.3	44.8	44.9	0.1	45.8	46.1	0.3	44.5	45.5	1	46.5	46.5	0
100100962302	ALLT NEWYDDLONDON ROAD HOLYHEAD LL65 2	Residential	52	52.2	0.2	49.5	49.7	0.2	47.6	47.8	0.2	45.1	45.3	0.2	47.5	47.5	0	45.5	45.5	0
100100962303	ALLT NEWYDDLONDON ROAD HOLYHEAD LL65 2	Residential	58.7	58.7	0	58.7	58.6	-0.1	54.1	54.1	0	54.1	54	-0.1	54.5	54.5	0	54.5	54.5	0
100100962304	5 YR OGOF HOLYHEAD LL65 2TN	Residential	49.1	49.4	0.3	48.5	49	0.5	44.8	45	0.3	44.2	44.7	0.5	44.5	45.5	1	44.5	44.5	0
100100962309	21 TAN Y FELINYR OGOF HOLYHEAD LL65 2T	Residential	43.2	43.5	0.3	43.2	43.8	0.6	39	39.3	0.3	39	39.6	0.6	39.5	39.5	0	39.5	39.5	0
100100962310	BRYN MYFYRKINGSLAND ROAD HOLYHEAD LL65	Residential	47.8	48	0.2	47.8	48.2	0.4	43.5	43.7	0.2	43.5	43.9	0.4	43.5	43.5	0	43.5	44.5	1
100100962311	BEECHWOODPENRHOS BEACH ROAD HOLYHEAD L	Residential	47.6	47.8	0.2	47.4	47.6	0.2	43.3	43.5	0.2	43.1	43.3	0.2	43.5	43.5	0	43.5	43.5	0
100100962313	GWERYD COTTAGESKINGSLAND ROAD HOLYHEAD	Residential	52.9	53.4	0.5	52.7	53.5	0.8	48.4	48.9	0.5	48.2	49	0.8	48.5	49.5	1	48.5	49.5	1
100100962316	PARC BUSNES PENRHOS HOLYHEAD LL65 2FD	Industrial	50.8	51	0.2	50.9	51.1	0.2	46.4	46.6	0.2	46.5	46.7	0.2	46.5	46.5	0	46.5	46.5	0
100100962446	ROSE COTTAGEPENRHOS BEACH ROAD HOLYHEA	Residential	53.1	53.2	0.1	48.4	48.6	0.2	48.6	48.7	0.1	44.1	44.3	0.2	48.5	48.5	0	44.5	44.5	0
100100962471	HERMON CHAPEL VALLEY HOLYHEAD LL65 3EG	Place of Worship	49.7	50.2	0.5	51.9	52.2	0.3	45.3	45.8	0.5	47.5	47.8	0.3	45.5	46.5	1	47.5	47.5	0
100100962477	PURE BEAUTYSTATION ROAD VALLEY HOLYHEAD	Commercial	71.8	73	1.2	63.2	63.5	0.3	66.8	67.9	1.2	58.4	58.7	0.3	66.5	67.5	1	58.5	58.5	0
100100962480	VALLEY PRECINCTSTATION ROAD VALLEY HOLY	Commercial	57.8	58.6	0.8	54.7	54.7	0	53.2	54	0.8	50.2	50.2	0	53.5	54.5	1	50.5	50.5	0
100100962481	BRYN AWELSTATION ROAD VALLEY HOLYHEAD L	Residential	66.7	67.2	0.5	67.6	67.9	0.3	61.8	62.3	0.5	62.7	63	0.3	61.5	62.5	1	62.5	62.5	0
100100962482	FAIRVIEWMINFFORDD ROAD CAERGEILIOG HOLY	Residential	49.3	49.7	0.4	51.7	52.2	0.5	45	45.3	0.4	47.3	47.8	0.5	45.5	45.5	0	47.5	47.5	0
100100962521	1 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	57.6	57.7	0.1	51	51.2	0.2	53	53.1	0.1	46.6	46.8	0.2	53.5	53.5	0	46.5	46.5	0
100100962546	2 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	49.4	49.7	0.3	52.7	53	0.3	45	45.3	0.3	48.2	48.5	0.3	45.5	45.5	0	48.5	48.5	0
100100962547	3 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	50.9	51.2	0.3	50.9	51.2	0.3	46.5	46.8	0.3	46.5	46.8	0.3	46.5	46.5	0	46.5	46.5	0
100100962548	4 BRON HEULOG VALLEY HOLYHEAD LL65 3AH	Residential	49.5	49.8	0.3	49.5	49.8	0.3	45.1	45.4	0.3	45.1	45.4	0.3	45.5	45.5	0	45.5	45.5	0
100100962549	10 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	53.1	53.8	0.7	53.5	53.7	0.2	48.6	49.3	0.7	49	49.2	0.2	48.5	49.5	1	49.5	49.5	0
100100962554	47 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	52.1	52.7	0.6	48.5	48.7	0.2	47.7	48.2	0.6	44.2	44.4	0.2	47.5	48.5	1	44.5	44.5	0
100100962555	60 LON GARDENER VALLEY HOLYHEAD LL65 3D	Residential	50.5	51.2	0.7	49.9	50.1	0.2	46.1	46.8	0.7	45.5	45.7	0.2	46.5	46.5	0	45.5	45.5	0
100100962556	ANGORFASTATION ROAD VALLEY HOLYHEAD LL6	Residential	69.9	70.4	0.5	55.4	55.7	0.3	64.9	65.4	0.5	50.9	51.2	0.3	64.5	65.5	1	50.5	51.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100962557	CARTREFLESTATION ROAD VALLEY HOLYHEAD L	Residential	71.1	71.6	0.5	71.1	71.4	0.3	66.1	66.6	0.5	66.1	66.4	0.3	65.5	66.5	1	65.5	66.5	1
100100962558	GORPHWYSFASTATION ROAD VALLEY HOLYHEAD	Residential	56.9	57.4	0.5	56.9	57.2	0.3	52.3	52.8	0.5	52.3	52.6	0.3	52.5	52.5	0	52.5	52.5	0
100100962560	HYFRYDLESTATION ROAD VALLEY HOLYHEAD LL	Residential	70.1	70.6	0.5	70.1	70.4	0.3	65.1	65.6	0.5	65.1	65.4	0.3	64.5	65.5	1	64.5	65.5	1
100100962563	NANT GLYNSTATION ROAD VALLEY HOLYHEAD L	Residential	64.4	64.9	0.5	67.1	67.4	0.3	59.6	60.1	0.5	62.2	62.5	0.3	59.5	60.5	1	62.5	62.5	0
100100962565	RHIANFASTATION ROAD VALLEY HOLYHEAD LL6	Residential	68.6	69.1	0.5	68.6	68.9	0.3	63.7	64.2	0.5	63.7	64	0.3	63.5	64.5	1	63.5	63.5	0
100100962566	STATION HOUSE VALLEY HOLYHEAD LL65 3EB	Residential	57.9	58.4	0.5	52.7	53.2	0.5	53.3	53.8	0.5	48.2	48.7	0.5	53.5	53.5	0	48.5	48.5	0
100100962567	ARWELFASTATION ROAD VALLEY HOLYHEAD LL6	Residential	68.8	69.3	0.5	61.8	62.1	0.3	63.9	64.4	0.5	57.1	57.4	0.3	63.5	64.5	1	57.5	57.5	0
100100962568	CEIRIOSSTATION ROAD VALLEY HOLYHEAD LL6	Residential	68.2	68.7	0.5	62.9	63.2	0.3	63.3	63.8	0.5	58.1	58.4	0.3	63.5	63.5	0	58.5	58.5	0
100100962569	FRON DEGSTATION ROAD VALLEY HOLYHEAD LL	Residential	67.3	67.8	0.5	68.4	68.7	0.3	62.4	62.9	0.5	63.5	63.8	0.3	62.5	62.5	0	63.5	63.5	0
100100962571	RHOSLANSTATION ROAD VALLEY HOLYHEAD LL6	Residential	68.9	69.4	0.5	62.9	63.2	0.3	64	64.4	0.5	58.1	58.4	0.3	63.5	64.5	1	58.5	58.5	0
100100962573	WESTBURYSTATION ROAD VALLEY HOLYHEAD LL	Residential	68.3	68.8	0.5	55.4	55.7	0.3	63.4	63.9	0.5	50.9	51.2	0.3	63.5	63.5	0	50.5	51.5	1
100100962574	115 TAN Y BRYN VALLEY HOLYHEAD LL65 3ER	Residential	68.5	69	0.5	68.5	68.8	0.3	63.6	64.1	0.5	63.6	63.9	0.3	63.5	63.5	0	63.5	63.5	0
100100962575	TAN Y BRYN COTTAGESTATION ROAD VALLEY H	Residential	71.6	72.1	0.5	71.6	71.9	0.3	66.6	67.1	0.5	66.6	66.9	0.3	66.5	66.5	0	66.5	66.5	0
100100962585	TAN Y MARIANSTATION ROAD VALLEY HOLYHEA	Residential	59.2	59.6	0.4	58.9	59.2	0.3	54.6	54.9	0.4	54.3	54.6	0.3	54.5	54.5	0	54.5	54.5	0
100100962586	HSBC VALLEY HOLYHEAD LL65 3EB	Commercial	69.2	69.7	0.5	69.2	69.5	0.3	64.3	64.7	0.5	64.3	64.5	0.3	64.5	64.5	0	64.5	64.5	0
100100962592	AEL Y BRYNSTATION ROAD VALLEY HOLYHEAD	Residential	69.2	69.7	0.5	54.8	55.2	0.4	64.3	64.7	0.5	50.3	50.7	0.4	64.5	64.5	0	50.5	50.5	0
100100962597	GER Y NANTSTATION ROAD VALLEY HOLYHEAD	Residential	68.4	68.9	0.5	68.1	68.4	0.3	63.5	64	0.5	63.2	63.5	0.3	63.5	63.5	0	63.5	63.5	0
100100962598	COURTLANDSLON SPENCER VALLEY HOLYHEAD L	Residential	52.7	53	0.3	55	55.3	0.3	48.2	48.5	0.3	50.5	50.8	0.3	48.5	48.5	0	50.5	50.5	0
100100962605	FAIRWAYSLON SPENCER VALLEY HOLYHEAD LL6	Residential	53.6	54	0.4	54.4	54.7	0.3	49.1	49.5	0.4	49.9	50.2	0.3	49.5	49.5	0	50.5	50.5	0
100100962606	GRACELANDLON SPENCER VALLEY HOLYHEAD LL	Residential	53.4	53.7	0.3	55.5	55.7	0.2	48.9	49.2	0.3	51	51.2	0.2	49.5	49.5	0	51.5	51.5	0
100100962607	BOSTON TERRACELONDON ROAD VALLEY HOLYHE	Residential	53.6	53.9	0.3	53.6	53.8	0.2	49.1	49.4	0.3	49.1	49.3	0.2	49.5	49.5	0	49.5	49.5	0
100100962613	BOSTON TERRACELONDON ROAD VALLEY HOLYHE	Commercial	51.9	52.2	0.3	51.9	52.1	0.2	47.5	47.8	0.3	47.5	47.7	0.2	47.5	47.5	0	47.5	47.5	0
100100962615	GREEN ACRESFIELD STREET VALLEY HOLYHEAD	Residential	54.6	55	0.4	54.7	55	0.3	50.1	50.5	0.4	50.2	50.5	0.3	50.5	50.5	0	50.5	50.5	0
100100962621	OLD SMITHYFIELD STREET VALLEY HOLYHEAD	Industrial	51.1	51.5	0.4	48.8	49.2	0.4	46.7	47.1	0.4	44.5	44.9	0.4	46.5	47.5	1	44.5	45.5	1

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			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100100962625	POST OFFICESTATION ROAD VALLEY HOLYHEAD	Office	65.3	65.9	0.6	50.3	50.7	0.4	60.5	61.1	0.6	45.9	46.3	0.4	60.5	60.5	0	46.5	46.5	0
100100962647	STATION HOUSE VALLEY HOLYHEAD LL65 3EB	Residential	57.9	58.4	0.5	52.7	53.2	0.5	53.3	53.8	0.5	48.2	48.7	0.5	53.5	53.5	0	48.5	48.5	0
100100962648	VALLEY PRECINCTSTATION ROAD VALLEY HOLY	Commercial	57.2	57.9	0.7	46.3	46.3	0	52.6	53.3	0.7	42	42	0	52.5	53.5	1	42.5	42.5	0
100100962657	LLAIN Y WENNOL LLANRHYDDLAD HOLYHEAD LL	Residential	50.6	52.2	1.6	50.5	53	2.5	46.2	47.8	1.6	46.1	48.5	2.4	46.5	47.5	1	46.5	48.5	2
100100962659	BRYN TIRION LLANRHYDDLAD HOLYHEAD LL65	Residential	48.9	50.5	1.6	48.2	50.7	2.5	44.6	46.1	1.6	43.9	46.3	2.4	44.5	46.5	2	44.5	46.5	2
100100962660	ARFRYN LLANRHYDDLAD HOLYHEAD LL65 4HT	Residential	48	49.6	1.6	48.1	50.5	2.4	43.7	45.2	1.6	43.8	46.1	2.3	43.5	45.5	2	44.5	46.5	2
100100962661	PENLLYN LLANRHYDDLAD HOLYHEAD LL65 4HT	Residential	47.5	49.1	1.6	46.8	49.3	2.5	43.2	44.8	1.6	42.5	45	2.4	43.5	44.5	1	42.5	45.5	3
100100962662	ACHILLACH LLANRHYDDLAD HOLYHEAD LL65 4H	Residential	45.5	47.1	1.6	45.3	47.7	2.4	41.3	42.8	1.6	41.1	43.4	2.3	41.5	43.5	2	41.5	43.5	2
100100962663	AFALLON LLANRHYDDLAD HOLYHEAD LL65 4HT	Residential	46.4	48	1.6	46.3	48.7	2.4	42.1	43.7	1.6	42	44.4	2.3	42.5	43.5	1	42.5	44.5	2
100100962664	HILLCREST LLANRHYDDLAD HOLYHEAD LL65 4H	Residential	49.4	51	1.6	49.3	51.7	2.4	45	46.6	1.6	45	47.3	2.3	45.5	46.5	1	45.5	47.5	2
100100962665	DRYSLWYN LLANRHYDDLAD HOLYHEAD LL65 4HT	Residential	50.8	52.4	1.6	50.5	53	2.5	46.4	48	1.6	46.1	48.5	2.4	46.5	48.5	2	46.5	48.5	2
100100962666	HOLLAND PARK INDUSTRIAL ESTATECYTTIR RO	Commercial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
100101029755	MORSWYN PRIMARY SCHOOLCYTTIR ROAD HOLY	School	55.4	55.6	0.2	55.6	56	0.4	50.9	51.1	0.2	51.1	51.5	0.4	50.5	51.5	1	51.5	51.5	0
100101029760	PRINCE OF WALES HOTELLONDON ROAD HOLYH	Commercial	50.9	51.1	0.2	46.9	47.2	0.3	46.5	46.7	0.2	42.6	42.9	0.3	46.5	46.5	0	42.5	43.5	1
100101029765	GARDEN MACHINERY SERVICESPARC BUSNES PE	Commercial	51	51.2	0.2	51.8	52.1	0.3	46.6	46.8	0.2	47.4	47.7	0.3	46.5	46.5	0	47.5	47.5	0
100101029842	ANGLESEY KITCHENSPARC BUSNES PENRHOS H	Commercial	51	51.2	0.2	51.1	51.4	0.3	46.6	46.8	0.2	46.7	47	0.3	46.5	46.5	0	46.5	47.5	1
100101029851	PARC BUSNES PENRHOS HOLYHEAD LL65 2FD	Industrial	50.4	50.6	0.2	50.7	51	0.3	46	46.2	0.2	46.3	46.6	0.3	46.5	46.5	0	46.5	46.5	0
100101029852	PARC BUSNES PENRHOS HOLYHEAD LL65 2FD	Industrial	50.2	50.4	0.2	50.3	50.6	0.3	45.8	46	0.2	45.9	46.2	0.3	46.5	46.5	0	46.5	46.5	0
100101029853	PREMIER GRAPHICSPARC BUSNES PENRHOS HO	Industrial	49.9	50.1	0.2	49.5	49.7	0.2	45.5	45.7	0.2	45.1	45.3	0.2	45.5	45.5	0	45.5	45.5	0
100101029859	PARC BUSNES PENRHOS HOLYHEAD LL65 2FD	Industrial	50.9	51.1	0.2	53.9	54.1	0.2	46.5	46.7	0.2	49.4	49.6	0.2	46.5	46.5	0	49.5	49.5	0
100101029860	ROYAL MAIL SORTING OFFICE HOLYHEAD LL6	Industrial	50.9	51.2	0.3	50.9	51.4	0.5	46.5	46.8	0.3	46.5	47	0.5	46.5	46.5	0	46.5	47.5	1
100101029942	VALLEY HOTELLONDON ROAD VALLEY HOLYHEAD	Commercial	66	66.8	0.8	58.8	59.1	0.3	61.2	61.9	0.8	54.2	54.5	0.3	61.5	61.5	0	54.5	54.5	0
100101029943	GWERYD VILLAS HOLYHEAD LL65 2YF	Residential	51.3	51.7	0.4	44.3	44.9	0.6	46.9	47.3	0.4	40.1	40.7	0.6	47.5	47.5	0	40.5	40.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
100101054370	HOLLAND PARK INDUSTRIAL ESTATE HOLYHEA	Commercial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
100101054390	TYN COEDSTATION ROAD VALLEY HOLYHEAD LL	Residential	59.8	60.1	0.3	59.9	60.2	0.3	55.1	55.4	0.3	55.2	55.5	0.3	55.5	55.5	0	55.5	55.5	0
200001098232	ICELAND FOODS PLCCYTTIR ROAD HOLYHEAD	Commercial	49.4	49.6	0.2	46.3	46.7	0.4	45	45.2	0.2	42	42.4	0.4	45.5	45.5	0	42.5	42.5	0
200001499597	GORWYLPORTHDAFARCH ROAD HOLYHEAD LL65	Residential	47.3	47.6	0.3	47.6	48	0.4	43	43.3	0.3	43.3	43.7	0.4	43.5	43.5	0	43.5	43.5	0
200001650857	BETHLYNLLANFAWR ROAD HOLYHEAD LL65 2PP	Residential	48.8	49	0.2	45	45.3	0.3	44.5	44.7	0.2	40.8	41.1	0.3	44.5	44.5	0	41.5	41.5	0
200001650860	PLAS LLANFAWRLLANFAWR ROAD HOLYHEAD LL	Residential	44.7	44.9	0.2	44.7	45	0.3	40.5	40.7	0.2	40.5	40.8	0.3	40.5	40.5	0	40.5	41.5	1
200001650861	BRYNLLWYDKINGSLAND ROAD HOLYHEAD LL65	Residential	50.6	50.7	0.1	50.6	50.9	0.3	46.2	46.3	0.1	46.2	46.5	0.3	46.5	46.5	0	46.5	46.5	0
200001650866	MEIDREFKINGSLAND ROAD HOLYHEAD LL65 2S	Residential	49	49.2	0.2	49	49.4	0.4	44.7	44.9	0.2	44.7	45	0.4	44.5	45.5	1	44.5	45.5	1
200001650867	NEWBOROUGHKINGSLAND ROAD HOLYHEAD LL65	Residential	47.9	48.2	0.3	47.9	48.4	0.5	43.6	43.9	0.3	43.6	44.1	0.5	43.5	44.5	1	43.5	44.5	1
200001650868	ARLWYNKINGSLAND ROAD HOLYHEAD LL65 2SY	Residential	49.8	50	0.2	49.8	50.2	0.4	45.4	45.6	0.2	45.4	45.8	0.4	45.5	45.5	0	45.5	46.5	1
200001650869	KILOWEN COTTAGEKINGSLAND ROAD HOLYHEAD	Residential	49.2	49.7	0.5	49.2	50	0.8	44.9	45.3	0.5	44.9	45.6	0.8	45.5	45.5	0	45.5	45.5	0
200001650884	TYDDYN PIODENKINGSLAND ROAD HOLYHEAD L	Residential	53.4	54.1	0.7	53	54.1	1.1	48.9	49.6	0.7	48.5	49.6	1.1	49.5	49.5	0	48.5	49.5	1
200001650885	TAFARN CWCHMINFFORDD ROAD CAERGEILIOG H	Residential	51.3	51.7	0.4	51.3	51.8	0.5	46.9	47.3	0.4	46.9	47.4	0.5	47.5	47.5	0	47.5	47.5	0
200001650904	LLANFAWR LODGELLANFAWR ROAD HOLYHEAD L	Residential	45.4	45.6	0.2	46	46.2	0.2	41.2	41.4	0.2	41.8	41.9	0.2	41.5	41.5	0	42.5	42.5	0
200001703778	FRON ISALLTPENRHOS BEACH ROAD HOLYHEAD	Residential	48.8	49	0.2	47.9	48.2	0.3	44.5	44.7	0.2	43.6	43.9	0.3	44.5	44.5	0	43.5	44.5	1
200001703779	KENMONPENRHOS BEACH ROAD HOLYHEAD LL65	Residential	48.9	49.1	0.2	48.9	49.2	0.3	44.6	44.8	0.2	44.6	44.9	0.3	44.5	44.5	0	44.5	45.5	1
200001703780	LLANFAIR BACHPENRHOS BEACH ROAD HOLYHE	Residential	54.9	55	0.1	47.3	47.4	0.1	50.4	50.5	0.1	43	43.1	0.1	50.5	50.5	0	43.5	43.5	0
200001703781	BOSTON VILLAKINGSLAND ROAD HOLYHEAD LL	Residential	45.4	45.6	0.2	50.8	51.1	0.3	41.2	41.4	0.2	46.4	46.7	0.3	41.5	41.5	0	46.5	46.5	0
200001703783	BANK HEYKINGSLAND ROAD HOLYHEAD LL65 2	Residential	54.4	54.9	0.5	54.3	55.1	0.8	49.9	50.4	0.5	49.8	50.6	0.8	50.5	50.5	0	49.5	50.5	1
200001703784	BEECROFT VALLEY HOLYHEAD LL65 3EB	Residential	68.4	68.9	0.5	53	53.4	0.4	63.5	64	0.5	48.5	48.9	0.4	63.5	63.5	0	48.5	49.5	1
200001703785	CARNA HOUSESTATION ROAD VALLEY HOLYHEAD	Residential	68.7	69.2	0.5	68.6	68.9	0.3	63.8	64.3	0.5	63.7	64	0.3	63.5	64.5	1	63.5	63.5	0
200001703786	COMMELINSTATION ROAD VALLEY HOLYHEAD LL	Residential	66.1	66.6	0.5	66.1	66.4	0.3	61.2	61.7	0.5	61.2	61.5	0.3	61.5	61.5	0	61.5	61.5	0
200001703791	EDDISBURYSTATION ROAD VALLEY HOLYHEAD L	Residential	69.5	70	0.5	69.5	69.8	0.3	64.5	65	0.5	64.5	64.8	0.3	64.5	64.5	0	64.5	64.5	0
200001703793	GORSLWYDSTATION ROAD VALLEY HOLYHEAD LL	Residential	68	68.5	0.5	68.1	68.4	0.3	63.1	63.6	0.5	63.2	63.5	0.3	62.5	63.5	1	63.5	63.5	0

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			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
200001703794	HAULOGSTATION ROAD VALLEY HOLYHEAD LL65	Residential	69.2	69.7	0.5	67.6	67.9	0.3	64.3	64.7	0.5	62.7	63	0.3	64.5	64.5	0	62.5	62.5	0
200001703795	LARINASTATION ROAD VALLEY HOLYHEAD LL65	Residential	68.2	68.7	0.5	68.1	68.4	0.3	63.3	63.8	0.5	63.2	63.5	0.3	63.5	63.5	0	63.5	63.5	0
200001703797	PLAS DYFFRYNSTATION ROAD VALLEY HOLYHEA	Residential	62.6	63.1	0.5	62.4	62.7	0.3	57.9	58.3	0.5	57.7	57.9	0.3	57.5	58.5	1	57.5	57.5	0
200001703798	LITTLE NOOKSTATION ROAD VALLEY HOLYHEAD	Residential	67.3	67.7	0.4	70.7	71	0.3	62.4	62.8	0.4	65.7	66	0.3	62.5	62.5	0	65.5	65.5	0
200001730356	TANREFAIL COTTAGEPORTHDAFARCH ROAD HOL	Residential	41.6	41.7	0.1	41.2	41.5	0.3	37.5	37.6	0.1	37.1	37.4	0.3	37.5	37.5	0	37.5	37.5	0
200001735267	GROESLONBRYN ERW ROAD HOLYHEAD LL65 2P	Residential	50.9	51.2	0.3	51	51.4	0.4	46.5	46.8	0.3	46.6	47	0.4	46.5	46.5	0	46.5	47.5	1
200001749685	CYFYNWENKINGSLAND ROAD HOLYHEAD LL65 2	Residential	47.7	47.9	0.2	44.6	45	0.4	43.4	43.6	0.2	40.4	40.8	0.4	43.5	43.5	0	40.5	41.5	1
200001749688	BRYN MECHELLKINGSLAND ROAD HOLYHEAD LL	Residential	54.5	55	0.5	54.5	55.2	0.7	50	50.5	0.5	50	50.7	0.7	50.5	50.5	0	50.5	50.5	0
200001749689	BRYN GWYN LLANFAETHLU HOLYHEAD LL65 4NW	Residential	51.2	52.9	1.7	51.7	54.1	2.4	46.8	48.4	1.6	47.3	49.6	2.3	46.5	48.5	2	47.5	49.5	2
200001749698	BRYN MAETHLU LLANFAETHLU HOLYHEAD LL65	Residential	51.4	53	1.6	46.5	49.4	2.9	47	48.5	1.6	42.2	45	2.8	47.5	48.5	1	42.5	45.5	3
200001749699	PANT LLANFAETHLU HOLYHEAD LL65 4NW	Residential	65.8	67.4	1.6	66.2	68.5	2.3	61	62.5	1.6	61.3	63.6	2.2	60.5	62.5	2	61.5	63.5	2
200001749700	BRYN MAIR HOLYHEAD LL65 4PB	Residential	43.5	44.7	1.2	38.6	38.7	0.1	39.3	40.5	1.2	34.6	34.7	0.1	39.5	40.5	1	34.5	35.5	1
200001749701	THE WRENLON SPENCER VALLEY HOLYHEAD LL6	Residential	56.8	57.2	0.4	56.9	57.2	0.3	52.2	52.6	0.4	52.3	52.6	0.3	52.5	52.5	0	52.5	52.5	0
200001775673	4 YR ERWLONDON ROAD HOLYHEAD LL65 2PT	Residential	52	52.2	0.2	48.4	48.7	0.3	47.6	47.8	0.2	44.1	44.4	0.3	47.5	47.5	0	44.5	44.5	0
200001776999	9 YR OGOF HOLYHEAD LL65 2TN	Residential	46.4	46.7	0.3	47.5	47.9	0.4	42.1	42.4	0.3	43.2	43.6	0.4	42.5	42.5	0	43.5	43.5	0
200001781220	14 YR OGOF HOLYHEAD LL65 2TN	Residential	47.9	48.1	0.2	48.1	48.5	0.4	43.6	43.8	0.2	43.8	44.2	0.4	43.5	44.5	1	44.5	44.5	0
200001781222	BEWLEYPENRHOS BEACH ROAD HOLYHEAD LL65	Residential	52.1	52.2	0.1	48.3	48.5	0.2	47.7	47.8	0.1	44	44.2	0.2	47.5	47.5	0	44.5	44.5	0
200001781672	BRYN GERAINTFIELD STREET VALLEY HOLYHEA	Residential	53.4	53.8	0.4	53.5	53.7	0.2	48.9	49.3	0.4	49	49.2	0.2	49.5	49.5	0	49.5	49.5	0
200001810839	BURNHAM BEECHESFIELD STREET VALLEY HOLY	Residential	54.4	54.8	0.4	54.7	55	0.3	49.9	50.3	0.4	50.2	50.5	0.3	50.5	50.5	0	50.5	50.5	0
200001810842	6 PENBRYNCAE GARNEDD ESTATE TREGELE CEM	Residential	64.6	65.5	0.9	61.3	62.4	1.1	59.8	60.7	0.9	56.6	57.7	1.1	59.5	60.5	1	56.5	57.5	1
200001814345	12 TAMARISKCAE GARNEDD ESTATE TREGELE C	Residential	55.1	56	0.9	50.7	51.7	1	50.6	51.5	0.9	46.3	47.3	1	50.5	51.5	1	46.5	47.5	1
200001814346	Y DREFLAN VALLEY HOLYHEAD LL65 3DP	Residential	52.7	53	0.3	52.6	52.9	0.3	48.2	48.5	0.3	48.2	48.4	0.3	48.5	48.5	0	48.5	48.5	0
200001819077	BERWYN YARD HOLYHEAD LL65 2SB	Commercial	44.1	44.2	0.1	39.3	39.6	0.3	39.9	40	0.1	35.3	35.5	0.3	40.5	40.5	0	35.5	35.5	0
200001829395	NYTH HENRYDSTATION ROAD VALLEY HOLYHEAD	Commercial	65.9	66.4	0.5	55.4	55.7	0.3	61.1	61.5	0.5	50.9	51.2	0.3	60.5	61.5	1	50.5	51.5	1
200001847164	FLATOLD MAGISTRATES COURTSTATION ROAD V	Residential	69.9	70.4	0.5	67.1	67.4	0.3	64.9	65.4	0.5	62.2	62.5	0.3	64.5	65.5	1	62.5	62.5	0

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			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
200001847165	CORONA WORKSPORTHDAFARCH ROAD HOLYHEAD	Commercial	41.5	41.6	0.1	40	40.3	0.3	37.4	37.5	0.1	35.9	36.2	0.3	37.5	37.5	0	36.5	36.5	0
200001849857	FLAT 1VALLEY MEWSSTATION ROAD VALLEY HO	Residential	55.3	55.7	0.4	53.2	53.6	0.4	50.8	51.2	0.4	48.7	49.1	0.4	50.5	51.5	1	48.5	49.5	1
200001855369	FLAT 2VALLEY MEWSSTATION ROAD VALLEY HO	Residential	54.4	54.8	0.4	53	53.3	0.3	49.9	50.3	0.4	48.5	48.8	0.3	50.5	50.5	0	48.5	48.5	0
200001855370	FLAT 3VALLEY MEWSSTATION ROAD VALLEY HO	Residential	54.1	54.6	0.5	54.1	54.4	0.3	49.6	50.1	0.5	49.6	49.9	0.3	49.5	50.5	1	49.5	50.5	1
200001855371	FLAT 5VALLEY MEWSSTATION ROAD VALLEY HO	Residential	57.3	57.8	0.5	52.9	53	0.1	52.7	53.2	0.5	48.4	48.5	0.1	52.5	53.5	1	48.5	48.5	0
200001855372	FLAT 6VALLEY MEWSSTATION ROAD VALLEY HO	Residential	57.1	57.6	0.5	52	52.1	0.1	52.5	53	0.5	47.6	47.7	0.1	52.5	53.5	1	47.5	47.5	0
200001855373	YSGOL GYNRADD Y DYFFRYNLON SPENCER VALL	School	54.5	54.9	0.4	48	48.4	0.4	50	50.4	0.4	43.7	44.1	0.4	50.5	50.5	0	43.5	44.5	1
200001858850	FRAMPTONPENRHOS BEACH ROAD HOLYHEAD LL	Residential	48.9	49.1	0.2	46.8	47.1	0.3	44.6	44.8	0.2	42.5	42.8	0.3	44.5	44.5	0	42.5	43.5	1
200001916499	15 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	49.9	50.1	0.2	50.1	50.5	0.4	45.5	45.7	0.2	45.7	46.1	0.4	45.5	45.5	0	45.5	46.5	1
200002374022	OLD MAGISTRATES COURTSTATION ROAD VALLE	Office	68.9	69.4	0.5	65.1	65.4	0.3	64	64.4	0.5	60.3	60.6	0.3	63.5	64.5	1	60.5	60.5	0
200002504034	2 PENNANTCYTTIR ROAD HOLYHEAD LL65 2TF	Residential	47.7	48	0.3	47.7	48.2	0.5	43.4	43.7	0.3	43.4	43.9	0.5	43.5	43.5	0	43.5	44.5	1
200002640571	1 CYTTIR ROAD HOLYHEAD LL65 2TF	Residential	49.7	50	0.3	49.7	50.2	0.5	45.3	45.6	0.3	45.3	45.8	0.5	45.5	45.5	0	45.5	46.5	1
200002640596	4 WENALLTCYTTIR ROAD HOLYHEAD LL65 2TF	Residential	47.3	47.6	0.3	47.7	48.3	0.6	43	43.3	0.3	43.4	44	0.6	43.5	43.5	0	43.5	44.5	1
200002640597	3 PENMAENCYTTIR ROAD HOLYHEAD LL65 2TF	Residential	47.9	48.2	0.3	47.9	48.4	0.5	43.6	43.9	0.3	43.6	44.1	0.5	43.5	44.5	1	43.5	44.5	1
200002640946	KINGSLAND COMMUNITY CENTRE HOLYHEAD LL	Community	45.5	45.9	0.4	45.5	46.1	0.6	41.3	41.7	0.4	41.3	41.8	0.6	41.5	41.5	0	41.5	42.5	1
200002640997	TOPPS TILES HOLYHEAD LL65 2TJ	Commercial	52	52.1	0.1	46.2	46.5	0.3	47.6	47.7	0.1	41.9	42.2	0.3	47.5	47.5	0	42.5	42.5	0
200002641000	HOLLAND PARK INDUSTRIAL ESTATECYTTIR RO	Commercial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
200002641004	HOLLAND PARK INDUSTRIAL ESTATECYTTIR RO	Commercial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
200002641005	HOLLAND PARK INDUSTRIAL ESTATE HOLYHEA	Commercial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
200002641007	HOLLAND PARK INDUSTRIAL ESTATECYTTIR RO	Commercial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
200002641008	HOLLAND PARK INDUSTRIAL ESTATECYTTIR RO	Industrial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
200002641009	HOLLAND PARK INDUSTRIAL ESTATECYTTIR RO	Commercial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
200002641010	HOLLAND PARK INDUSTRIAL ESTATECYTTIR RO	Commercial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
200002641011	HOLLAND PARK INDUSTRIAL ESTATE HOLYHEA	Commercial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
200002641012	HOLLAND PARK INDUSTRIAL ESTATE HOLYHEA	Commercial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
200002641059	CAMOLFAN ADNODDAU MORSWYNCYTTIR ROAD H	Commercial	43.4	43.7	0.3	43.4	44	0.6	39.2	39.5	0.3	39.2	39.8	0.6	39.5	39.5	0	39.5	40.5	1
200002641065	PENRHOS INDUSTRIAL ESTATE HOLYHEAD LL6	Industrial	62.3	62.6	0.3	60.1	60.6	0.5	57.6	57.9	0.3	55.4	55.9	0.5	57.5	57.5	0	55.5	55.5	0
200002641071	30 TYN Y GONGLCYTTIR ROAD HOLYHEAD LL6	Residential	50.3	50.5	0.2	50.7	51.1	0.4	45.9	46.1	0.2	46.3	46.7	0.4	46.5	46.5	0	46.5	46.5	0
200002641115	31 BOD ERWCYTTIR ROAD HOLYHEAD LL65 2P	Residential	51.5	51.7	0.2	51.3	51.7	0.4	47.1	47.3	0.2	46.9	47.3	0.4	47.5	47.5	0	47.5	47.5	0
200002641116	32 RHOSFAIRCYTTIR ROAD HOLYHEAD LL65 2	Residential	52.8	53	0.2	52.6	53	0.4	48.3	48.5	0.2	48.2	48.5	0.4	48.5	48.5	0	48.5	48.5	0
200002641117	33 DOLIUSCYTTIR ROAD HOLYHEAD LL65 2PU	Residential	50.4	50.6	0.2	52.2	52.6	0.4	46	46.2	0.2	47.8	48.2	0.4	46.5	46.5	0	47.5	48.5	1
200002641118	34 HEULFRYNCYTTIR ROAD HOLYHEAD LL65 2	Residential	51.9	52.1	0.2	51.8	52.2	0.4	47.5	47.7	0.2	47.4	47.8	0.4	47.5	47.5	0	47.5	47.5	0
200002641119	35 ARBERTHCYTTIR ROAD HOLYHEAD LL65 2P	Residential	51.8	52	0.2	51.8	52.2	0.4	47.4	47.6	0.2	47.4	47.8	0.4	47.5	47.5	0	47.5	47.5	0
200002641120	36 KANTARACYTTIR ROAD HOLYHEAD LL65 2P	Residential	50.8	51	0.2	50.2	50.6	0.4	46.4	46.6	0.2	45.8	46.2	0.4	46.5	46.5	0	46.5	46.5	0
200002641121	1 GILFORLEWASCOTE HOLYHEAD LL65 2RF	Residential	44.5	44.7	0.2	50.9	51.1	0.2	40.3	40.5	0.2	46.5	46.7	0.2	40.5	40.5	0	46.5	46.5	0
200002641122	10 LEWASCOTE HOLYHEAD LL65 2RF	Residential	44.4	44.6	0.2	45.9	46.1	0.2	40.2	40.4	0.2	41.7	41.8	0.2	40.5	40.5	0	41.5	42.5	1
200002641123	11 LEWASCOTE HOLYHEAD LL65 2RF	Residential	48.8	49	0.2	47.8	48	0.2	44.5	44.7	0.2	43.5	43.7	0.2	44.5	44.5	0	43.5	43.5	0
200002641124	12 LEWASCOTE HOLYHEAD LL65 2RF	Residential	48.5	48.7	0.2	50.3	50.5	0.2	44.2	44.4	0.2	45.9	46.1	0.2	44.5	44.5	0	46.5	46.5	0
200002641125	13 PONTHIRLEWASCOTE HOLYHEAD LL65 2RF	Residential	44.8	45	0.2	45	45.3	0.3	40.6	40.8	0.2	40.8	41.1	0.3	40.5	41.5	1	41.5	41.5	0
200002641126	2 LEWASCOTE HOLYHEAD LL65 2RF	Residential	49.3	49.5	0.2	48.4	48.6	0.2	45	45.1	0.2	44.1	44.3	0.2	45.5	45.5	0	44.5	44.5	0
200002641127	3 CRAIGLELEWASCOTE HOLYHEAD LL65 2RF	Residential	45.1	45.3	0.2	46.9	47.1	0.2	40.9	41.1	0.2	42.6	42.8	0.2	41.5	41.5	0	42.5	43.5	1
200002641128	10 TOROCACYTTIR ROAD HOLYHEAD LL65 2TF	Residential	46.7	47.1	0.4	46	46.7	0.7	42.4	42.8	0.4	41.8	42.4	0.7	42.5	43.5	1	42.5	42.5	0
200002641139	5 TYNEHOLMECYTTIR ROAD HOLYHEAD LL65 2	Residential	47.7	48	0.3	47.7	48.2	0.5	43.4	43.7	0.3	43.4	43.9	0.5	43.5	43.5	0	43.5	44.5	1
200002641140	6 CYTTIR ROAD HOLYHEAD LL65 2TF	Residential	46.8	47.1	0.3	46.8	47.3	0.5	42.5	42.8	0.3	42.5	43	0.5	42.5	43.5	1	42.5	43.5	1
200002641141	7 TREFLYNCYTTIR ROAD HOLYHEAD LL65 2TF	Residential	46.8	47.1	0.3	46.8	47.3	0.5	42.5	42.8	0.3	42.5	43	0.5	42.5	43.5	1	42.5	43.5	1
200002641142	8 BRYNTIRIONCYTTIR ROAD HOLYHEAD LL65	Residential	46.5	46.8	0.3	46.5	47	0.5	42.2	42.5	0.3	42.2	42.7	0.5	42.5	42.5	0	42.5	42.5	0
200002641143	9 THREE WAYSCYTTIR ROAD HOLYHEAD LL65	Residential	46.4	46.7	0.3	46.4	46.9	0.5	42.1	42.4	0.3	42.1	42.6	0.5	42.5	42.5	0	42.5	42.5	0
200002641144	MABRONCYTTIR ROAD HOLYHEAD LL65 2PU	Residential	50.4	50.6	0.2	50.4	50.7	0.3	46	46.2	0.2	46	46.3	0.3	46.5	46.5	0	46.5	46.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
200002641175	MIRAMARCYTTIR ROAD HOLYHEAD LL65 2PU	Residential	51.3	51.5	0.2	51.3	51.6	0.3	46.9	47.1	0.2	46.9	47.2	0.3	47.5	47.5	0	47.5	47.5	0
200002641176	TANRALLTCYTTIR ROAD HOLYHEAD LL65 2PU	Residential	52.5	52.7	0.2	52.6	53	0.4	48.1	48.2	0.2	48.2	48.5	0.4	48.5	48.5	0	48.5	48.5	0
200002641178	GARFIELDGREENFIELD TERRACE HOLYHEAD LL	Residential	52	52.1	0.1	46.7	47	0.3	47.6	47.7	0.1	42.4	42.7	0.3	47.5	47.5	0	42.5	42.5	0
200002641180	1 ARTHUR STREET EAST HOLYHEAD LL65 2SG	Residential	52.9	53	0.1	52.9	53.1	0.2	48.4	48.5	0.1	48.4	48.6	0.2	48.5	48.5	0	48.5	48.5	0
200002641181	10 ARTHUR STREET EAST HOLYHEAD LL65 2S	Residential	59.5	59.5	0	52.3	52.5	0.2	54.8	54.8	0	47.9	48.1	0.2	54.5	54.5	0	48.5	48.5	0
200002641182	2 ARTHUR STREET EAST HOLYHEAD LL65 2SG	Residential	56.8	56.8	0	56.8	57	0.2	52.2	52.2	0	52.2	52.4	0.2	52.5	52.5	0	52.5	52.5	0
200002641183	3 ARTHUR STREET EAST HOLYHEAD LL65 2SG	Residential	57.7	57.8	0.1	57.5	57.7	0.2	53.1	53.2	0.1	52.9	53.1	0.2	53.5	53.5	0	52.5	53.5	1
200002641184	4 ARTHUR STREET EAST HOLYHEAD LL65 2SG	Residential	57.5	57.5	0	57.5	57.7	0.2	52.9	52.9	0	52.9	53.1	0.2	52.5	52.5	0	52.5	53.5	1
200002641185	5 ARTHUR STREET EAST HOLYHEAD LL65 2SG	Residential	58.2	58.2	0	56.4	56.6	0.2	53.6	53.6	0	51.8	52	0.2	53.5	53.5	0	51.5	52.5	1
200002641186	6 ARTHUR STREET EAST HOLYHEAD LL65 2SG	Residential	58	58	0	58	58.2	0.2	53.4	53.4	0	53.4	53.6	0.2	53.5	53.5	0	53.5	53.5	0
200002641187	8 ARTHUR STREET EAST HOLYHEAD LL65 2SG	Residential	58.7	58.7	0	58.7	58.8	0.1	54.1	54.1	0	54.1	54.2	0.1	54.5	54.5	0	54.5	54.5	0
200002641188	1 PENLLECH NEST HOLYHEAD LL65 2SH	Residential	60.8	60.9	0.1	60.8	61	0.2	56.1	56.2	0.1	56.1	56.3	0.2	56.5	56.5	0	56.5	56.5	0
200002641189	10 PENLLECH NEST HOLYHEAD LL65 2SH	Residential	55.1	55.2	0.1	55.8	56	0.2	50.6	50.7	0.1	51.3	51.5	0.2	50.5	50.5	0	51.5	51.5	0
200002641190	11 PENLLECH NEST HOLYHEAD LL65 2SH	Residential	51.5	51.6	0.1	51.5	51.7	0.2	47.1	47.2	0.1	47.1	47.3	0.2	47.5	47.5	0	47.5	47.5	0
200002641191	12 PENLLECH NEST HOLYHEAD LL65 2SH	Residential	61.4	61.5	0.1	69.5	69.7	0.2	56.7	56.8	0.1	64.5	64.7	0.2	56.5	56.5	0	64.5	64.5	0
200002641192	2 PENLLECH NEST HOLYHEAD LL65 2SH	Residential	62.5	62.6	0.1	62.5	62.7	0.2	57.8	57.9	0.1	57.8	57.9	0.2	57.5	57.5	0	57.5	57.5	0
200002641196	7 PENLLECH NEST HOLYHEAD LL65 2SH	Residential	51.2	51.3	0.1	62.8	63	0.2	46.8	46.9	0.1	58	58.2	0.2	46.5	47.5	1	58.5	58.5	0
200002641197	8 PENLLECH NEST HOLYHEAD LL65 2SH	Residential	63.8	63.9	0.1	68	68.2	0.2	59	59.1	0.1	63.1	63.3	0.2	58.5	59.5	1	62.5	63.5	1
200002641198	9 PENLLECH NEST HOLYHEAD LL65 2SH	Residential	56.3	56.4	0.1	56.3	56.5	0.2	51.7	51.8	0.1	51.7	51.9	0.2	51.5	51.5	0	51.5	52.5	1
200002641199	TREWERINCYTTIR ROAD HOLYHEAD LL65 2TF	Residential	45.4	45.7	0.3	46.6	47.1	0.5	41.2	41.5	0.3	42.3	42.8	0.5	41.5	41.5	0	42.5	43.5	1
200002641200	BRYNIAU BACHCYTTIR ROAD HOLYHEAD LL65	Residential	55	55.2	0.2	54.9	55.2	0.3	50.5	50.7	0.2	50.4	50.7	0.3	50.5	50.5	0	50.5	50.5	0
200002641223	SEABANKCYTTIR ROAD HOLYHEAD LL65 2PU	Residential	53.3	53.6	0.3	53.3	53.7	0.4	48.8	49.1	0.3	48.8	49.2	0.4	48.5	49.5	1	48.5	49.5	1
200002641224	YR OGOFMILL ROAD HOLYHEAD LL65 2YD	Residential	44.3	44.5	0.2	44.3	44.7	0.4	40.1	40.3	0.2	40.1	40.5	0.4	40.5	40.5	0	40.5	40.5	0
200002641231	OGOF BACHMILL ROAD HOLYHEAD LL65 2YD	Residential	45.9	46.2	0.3	45.9	46.4	0.5	41.7	41.9	0.3	41.7	42.1	0.5	41.5	42.5	1	41.5	42.5	1
200002641232	1 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	49.9	50.5	0.6	49.9	50.8	0.9	45.5	46.1	0.6	45.5	46.4	0.9	45.5	46.5	1	45.5	46.5	1
200002641237	10 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	47.9	48.4	0.5	47.8	48.7	0.9	43.6	44.1	0.5	43.5	44.4	0.9	43.5	44.5	1	43.5	44.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
200002641238	11 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	48.8	49.4	0.6	48.7	49.7	1	44.5	45	0.6	44.4	45.3	1	44.5	45.5	1	44.5	45.5	1
200002641239	12 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	45.7	45.9	0.2	45.7	46.1	0.4	41.5	41.7	0.2	41.5	41.8	0.4	41.5	41.5	0	41.5	42.5	1
200002641240	13 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	45.8	46.1	0.3	45.8	46.3	0.5	41.6	41.8	0.3	41.6	42	0.5	41.5	42.5	1	41.5	42.5	1
200002641241	14 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	49.8	50	0.2	46.5	47	0.5	45.4	45.6	0.2	42.2	42.7	0.5	45.5	45.5	0	42.5	42.5	0
200002641242	16 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	50.2	50.4	0.2	50.2	50.6	0.4	45.8	46	0.2	45.8	46.2	0.4	46.5	46.5	0	46.5	46.5	0
200002641243	17 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	50	50.2	0.2	50	50.4	0.4	45.6	45.8	0.2	45.6	46	0.4	45.5	46.5	1	45.5	46.5	1
200002641244	18 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	48.8	49	0.2	48.8	49.2	0.4	44.5	44.7	0.2	44.5	44.9	0.4	44.5	44.5	0	44.5	45.5	1
200002641245	19 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	47.7	48	0.3	47.7	48.2	0.5	43.4	43.7	0.3	43.4	43.9	0.5	43.5	43.5	0	43.5	44.5	1
200002641246	2 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	49.6	50.2	0.6	49.7	50.6	0.9	45.2	45.8	0.6	45.3	46.2	0.9	45.5	46.5	1	45.5	46.5	1
200002641247	20 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	51.5	51.7	0.2	51.6	52	0.4	47.1	47.3	0.2	47.2	47.6	0.4	47.5	47.5	0	47.5	47.5	0
200002641248	21 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	48.8	49.3	0.5	48.8	49.5	0.7	44.5	45	0.5	44.5	45.1	0.7	44.5	45.5	1	44.5	45.5	1
200002641249	22 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	47.8	48.1	0.3	47.8	48.3	0.5	43.5	43.8	0.3	43.5	44	0.5	43.5	44.5	1	43.5	44.5	1
200002641250	23 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	47.8	48.1	0.3	47.9	48.4	0.5	43.5	43.8	0.3	43.6	44.1	0.5	43.5	44.5	1	43.5	44.5	1
200002641251	24 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	47.8	48.1	0.3	47.8	48.3	0.5	43.5	43.8	0.3	43.5	44	0.5	43.5	44.5	1	43.5	44.5	1
200002641252	25 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	47.8	48	0.2	47.8	48.2	0.4	43.5	43.7	0.2	43.5	43.9	0.4	43.5	43.5	0	43.5	44.5	1
200002641253	3 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	53.4	53.8	0.4	53.4	54	0.6	48.9	49.3	0.4	48.9	49.5	0.6	49.5	49.5	0	49.5	49.5	0
200002641254	4 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	53.2	53.5	0.3	53.1	53.7	0.6	48.7	49	0.3	48.6	49.2	0.6	48.5	49.5	1	48.5	49.5	1
200002641255	5 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	53.3	53.7	0.4	53.3	53.9	0.6	48.8	49.2	0.4	48.8	49.4	0.6	48.5	49.5	1	48.5	49.5	1
200002641256	6 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	53.7	54.1	0.4	53.7	54.3	0.6	49.2	49.6	0.4	49.2	49.8	0.6	49.5	49.5	0	49.5	49.5	0
200002641257	7 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	53.7	54.1	0.4	53.7	54.4	0.7	49.2	49.6	0.4	49.2	49.9	0.7	49.5	49.5	0	49.5	50.5	1
200002641258	8 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	49.4	50.1	0.7	49.4	50.4	1	45	45.7	0.7	45	46	1	45.5	45.5	0	45.5	46.5	1
200002641259	9 MAES CYTTIR HOLYHEAD LL65 2TH	Residential	48.8	49.5	0.7	48.8	49.8	1	44.5	45.1	0.7	44.5	45.4	1	44.5	45.5	1	44.5	45.5	1
200002641260	1 CAE CAPELCAE CAPEL HOLYHEAD LL65 2SU	Residential	53.8	54.2	0.4	53.5	54.2	0.7	49.3	49.7	0.4	49	49.7	0.7	49.5	49.5	0	49.5	49.5	0
200002641268	BRYNCYTTIR ROAD HOLYHEAD LL65 2TF	Residential	49.2	49.4	0.2	49.2	49.6	0.4	44.9	45	0.2	44.9	45.2	0.4	45.5	45.5	0	45.5	45.5	0
200002641378	ALLT NEWYDDLONDON ROAD HOLYHEAD LL65 2	Residential	51.3	51.5	0.2	51.4	51.6	0.2	46.9	47.1	0.2	47	47.2	0.2	47.5	47.5	0	47.5	47.5	0
200002641484	GWERYD COTTAGESKINGSLAND ROAD HOLYHEAD	Residential	51	51.6	0.6	50.8	51.7	0.9	46.6	47.2	0.6	46.4	47.3	0.9	46.5	47.5	1	46.5	47.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
200002641508	3 PENLLECH NEST HOLYHEAD LL65 2SH	Residential	57.9	58	0.1	58.5	58.7	0.2	53.3	53.4	0.1	53.9	54.1	0.2	53.5	53.5	0	53.5	54.5	1
200002641617	4 PENLLECH NEST HOLYHEAD LL65 2SH	Residential	59.7	59.7	0	58.9	59.1	0.2	55	55	0	54.3	54.5	0.2	55.5	55.5	0	54.5	54.5	0
200002641618	5 PENLLECH NEST HOLYHEAD LL65 2SH	Residential	65.1	65.1	0	65.1	65.3	0.2	60.3	60.3	0	60.3	60.5	0.2	60.5	60.5	0	60.5	60.5	0
200002641619	6 PENLLECH NEST HOLYHEAD LL65 2SH	Residential	66.8	66.9	0.1	67.7	67.9	0.2	61.9	62	0.1	62.8	63	0.2	61.5	61.5	0	62.5	62.5	0
200002641620	KINGSLAND PRIMARY SCHOOLMAES CYTTIR HO	School	46.9	47.3	0.4	46.9	47.6	0.7	42.6	43	0.4	42.6	43.3	0.7	42.5	43.5	1	42.5	43.5	1
200002641625	HOLYHEAD LEISURE CENTREKINGSLAND ROAD	Office	47.9	48.5	0.6	47.8	48.7	0.9	43.6	44.2	0.6	43.5	44.4	0.9	43.5	44.5	1	43.5	44.5	1
200002641693	THE SQUARELONDON ROAD VALLEY HOLYHEAD L	Commercial	55.4	56.3	0.9	58.7	58.7	0	50.9	51.7	0.9	54.1	54.1	0	50.5	51.5	1	54.5	54.5	0
200002641724	THE SQUARE VALLEY HOLYHEAD LL65 3DP	Commercial	55.7	56.8	1.1	62	62.1	0.1	51.2	52.2	1.1	57.3	57.4	0.1	51.5	52.5	1	57.5	57.5	0
200002641725	STERMAT HARDWARE LTDLONDON ROAD VALLEY	Commercial	55	56.2	1.2	51.6	51.7	0.1	50.5	51.6	1.2	47.2	47.3	0.1	50.5	51.5	1	47.5	47.5	0
200002641727	ORIENTAL EXPRESS HOLYHEAD LL65 3DP	Commercial	47.8	48.2	0.4	60.5	60.6	0.1	43.5	43.9	0.4	55.8	55.9	0.1	43.5	44.5	1	55.5	55.5	0
200002641728	VALLEY PRECINCTSTATION ROAD VALLEY HOLY	Commercial	50.6	51.4	0.8	54.8	55.1	0.3	46.2	47	0.8	50.3	50.6	0.3	46.5	47.5	1	50.5	50.5	0
200002641768	1 TYNRHOS ESTATE CAERGEILIOG HOLYHEAD L	Residential	54.3	54.6	0.3	54.3	54.8	0.5	49.8	50.1	0.3	49.8	50.3	0.5	49.5	50.5	1	49.5	50.5	1
200002641806	10 MARILLIONTYNRHOS ESTATE CAERGEILIOG	Residential	51.8	52.1	0.3	51.8	52.2	0.4	47.4	47.7	0.3	47.4	47.8	0.4	47.5	47.5	0	47.5	47.5	0
200002641807	11 TYNRHOS ESTATE CAERGEILIOG HOLYHEAD	Residential	55.2	55.5	0.3	55.2	55.6	0.4	50.7	51	0.3	50.7	51.1	0.4	50.5	51.5	1	50.5	51.5	1
200002641808	12 TYNRHOS ESTATE CAERGEILIOG HOLYHEAD	Residential	55.3	55.6	0.3	54.5	55	0.5	50.8	51.1	0.3	50	50.5	0.5	50.5	51.5	1	50.5	50.5	0
200002641809	13 GWENFROTYNRHOS ESTATE CAERGEILIOG HO	Residential	54.9	55.2	0.3	54.9	55.4	0.5	50.4	50.7	0.3	50.4	50.9	0.5	50.5	50.5	0	50.5	50.5	0
200002641810	14 TYNRHOS ESTATE CAERGEILIOG HOLYHEAD	Residential	53.8	54.1	0.3	53.9	54.4	0.5	49.3	49.6	0.3	49.4	49.9	0.5	49.5	49.5	0	49.5	50.5	1
200002641811	15 KIA ORATYNRHOS ESTATE CAERGEILIOG HO	Residential	53.8	54.2	0.4	53.9	54.4	0.5	49.3	49.7	0.4	49.4	49.9	0.5	49.5	49.5	0	49.5	50.5	1
200002641812	16 TYNRHOS ESTATE CAERGEILIOG HOLYHEAD	Residential	53.5	53.9	0.4	53.6	54.1	0.5	49	49.4	0.4	49.1	49.6	0.5	49.5	49.5	0	49.5	49.5	0
200002641813	17 EMALEATYNRHOS ESTATE CAERGEILIOG HOL	Residential	53.7	54.1	0.4	53.7	54.2	0.5	49.2	49.6	0.4	49.2	49.7	0.5	49.5	49.5	0	49.5	49.5	0
200002641814	2 TYNRHOS ESTATE CAERGEILIOG HOLYHEAD L	Residential	54.4	54.7	0.3	53.3	53.7	0.4	49.9	50.2	0.3	48.8	49.2	0.4	50.5	50.5	0	48.5	49.5	1
200002641815	21 TYNRHOS ESTATE CAERGEILIOG HOLYHEAD	Residential	51.8	52.1	0.3	54.2	54.7	0.5	47.4	47.7	0.3	49.7	50.2	0.5	47.5	47.5	0	49.5	50.5	1
200002641816	22 RHOSLANTYNRHOS ESTATE CAERGEILIOG HO	Residential	51.2	51.6	0.4	54.2	54.7	0.5	46.8	47.2	0.4	49.7	50.2	0.5	46.5	47.5	1	49.5	50.5	1
200002641817	3 TYNRHOS ESTATE CAERGEILIOG HOLYHEAD L	Residential	53.9	54.2	0.3	55.1	55.5	0.4	49.4	49.7	0.3	50.6	51	0.4	49.5	49.5	0	50.5	51.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
200002641818	4 TYNRHOS ESTATE CAERGEILIOG HOLYHEAD L	Residential	52.9	53.2	0.3	55.2	55.6	0.4	48.4	48.7	0.3	50.7	51.1	0.4	48.5	48.5	0	50.5	51.5	1
200002641819	5 TYNRHOS ESTATE CAERGEILIOG HOLYHEAD L	Residential	55.5	55.8	0.3	55.6	56	0.4	51	51.3	0.3	51.1	51.5	0.4	51.5	51.5	0	51.5	51.5	0
200002641820	6 TYNRHOS ESTATE CAERGEILIOG HOLYHEAD L	Residential	50.5	50.8	0.3	55.5	55.9	0.4	46.1	46.4	0.3	51	51.4	0.4	46.5	46.5	0	51.5	51.5	0
200002641821	7 TYNRHOS ESTATE CAERGEILIOG HOLYHEAD L	Residential	55.4	55.7	0.3	49.3	49.7	0.4	50.9	51.2	0.3	45	45.3	0.4	50.5	51.5	1	45.5	45.5	0
200002641822	8 TYNRHOS ESTATE CAERGEILIOG HOLYHEAD L	Residential	55.6	55.9	0.3	49.6	50.1	0.5	51.1	51.4	0.3	45.2	45.7	0.5	51.5	51.5	0	45.5	45.5	0
200002641823	9 TYNRHOS ESTATE CAERGEILIOG HOLYHEAD L	Residential	55.4	55.7	0.3	50.8	51.3	0.5	50.9	51.2	0.3	46.4	46.9	0.5	50.5	51.5	1	46.5	47.5	1
200002641824	4 GERLAN ESTATE CAERGEILIOG HOLYHEAD LL	Residential	52.3	52.6	0.3	52.3	52.7	0.4	47.9	48.2	0.3	47.9	48.2	0.4	48.5	48.5	0	48.5	48.5	0
200002641825	5 GERLAN ESTATE CAERGEILIOG HOLYHEAD LL	Residential	53.7	54	0.3	53.8	54.1	0.3	49.2	49.5	0.3	49.3	49.6	0.3	49.5	49.5	0	49.5	49.5	0
200002641826	6 GERLAN ESTATE CAERGEILIOG HOLYHEAD LL	Residential	54.2	54.5	0.3	54.3	54.6	0.3	49.7	50	0.3	49.8	50.1	0.3	49.5	50.5	1	49.5	50.5	1
200002641827	ANGORFACYMYRAN ROAD CAERGEILIOG HOLYHEA	Residential	54.6	55	0.4	53	53.5	0.5	50.1	50.5	0.4	48.5	49	0.5	50.5	50.5	0	48.5	49.5	1
200002642143	BERLEYCYMYRAN ROAD CAERGEILIOG HOLYHEAD	Residential	53.8	54.2	0.4	53.8	54.3	0.5	49.3	49.7	0.4	49.3	49.8	0.5	49.5	49.5	0	49.5	49.5	0
200002642144	FRON DIRIONCYMYRAN ROAD CAERGEILIOG HOL	Residential	51.8	52.2	0.4	52.3	52.8	0.5	47.4	47.8	0.4	47.9	48.3	0.5	47.5	47.5	0	48.5	48.5	0
200002642145	ROCKLANDSCYMYRAN ROAD CAERGEILIOG HOLYH	Residential	55.4	55.7	0.3	50.5	51	0.5	50.9	51.2	0.3	46.1	46.6	0.5	50.5	51.5	1	46.5	46.5	0
200002642146	ROSE VILLACYMYRAN ROAD CAERGEILIOG HOLY	Residential	56.3	56.6	0.3	56.3	56.7	0.4	51.7	52	0.3	51.7	52.1	0.4	51.5	52.5	1	51.5	52.5	1
200002642147	SIBRWD YR EITHINCYMYRAN ROAD CAERGEILIO	Residential	54.4	54.7	0.3	52.9	53.4	0.5	49.9	50.2	0.3	48.4	48.9	0.5	50.5	50.5	0	48.5	49.5	1
200002642148	TYN RHOSCYMYRAN ROAD CAERGEILIOG HOLYHE	Residential	54.3	54.7	0.4	52.1	52.6	0.5	49.8	50.2	0.4	47.7	48.2	0.5	49.5	50.5	1	47.5	48.5	1
200002642149	PANT Y CELYNSTATION ROAD VALLEY HOLYHEA	Residential	63.5	64	0.5	66.1	66.4	0.3	58.7	59.2	0.5	61.2	61.5	0.3	58.5	59.5	1	61.5	61.5	0
200002642185	TY CAPEL TABORSTATION ROAD VALLEY HOLYH	Place of Worship	66	66.4	0.4	58.8	59.1	0.3	61.2	61.5	0.4	54.2	54.5	0.3	61.5	61.5	0	54.5	54.5	0
200002642186	MOUNTAIN VIEWCYMYRAN ROAD CAERGEILIOG H	Residential	55.3	55.7	0.4	54.3	54.8	0.5	50.8	51.2	0.4	49.8	50.3	0.5	50.5	51.5	1	49.5	50.5	1
200002642196	11 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	49.3	49.7	0.4	51.7	52.2	0.5	45	45.3	0.4	47.3	47.8	0.5	45.5	45.5	0	47.5	47.5	0
200002642272	13 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	52.1	52.5	0.4	52.1	52.6	0.5	47.7	48.1	0.4	47.7	48.2	0.5	47.5	48.5	1	47.5	48.5	1
200002642273	15 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	52.3	52.6	0.3	52.2	52.7	0.5	47.9	48.2	0.3	47.8	48.2	0.5	48.5	48.5	0	47.5	48.5	1
200002642274	17 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	45.8	46.2	0.4	52.1	52.6	0.5	41.6	41.9	0.4	47.7	48.2	0.5	41.5	42.5	1	47.5	48.5	1

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			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
200002642275	19 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	51.8	52.2	0.4	52.2	52.7	0.5	47.4	47.8	0.4	47.8	48.2	0.5	47.5	47.5	0	47.5	48.5	1
200002642276	21 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	52.4	52.8	0.4	46.2	46.7	0.5	48	48.3	0.4	41.9	42.4	0.5	48.5	48.5	0	42.5	42.5	0
200002642277	23 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	45.8	46.2	0.4	52.3	52.8	0.5	41.6	41.9	0.4	47.9	48.3	0.5	41.5	42.5	1	48.5	48.5	0
200002642278	25 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	52.4	52.8	0.4	52.4	52.9	0.5	48	48.3	0.4	48	48.4	0.5	48.5	48.5	0	48.5	48.5	0
200002642279	27 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	45.8	46.2	0.4	52	52.5	0.5	41.6	41.9	0.4	47.6	48.1	0.5	41.5	42.5	1	47.5	48.5	1
200002642280	29 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	51.8	52.2	0.4	51.9	52.4	0.5	47.4	47.8	0.4	47.5	48	0.5	47.5	47.5	0	47.5	48.5	1
200002642281	31 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	51.3	51.7	0.4	51.3	51.8	0.5	46.9	47.3	0.4	46.9	47.4	0.5	47.5	47.5	0	47.5	47.5	0
200002642283	32 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	46.2	46.6	0.4	51	51.5	0.5	41.9	42.3	0.4	46.6	47.1	0.5	42.5	42.5	0	46.5	47.5	1
200002642284	33 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	49.8	50.2	0.4	50.8	51.3	0.5	45.4	45.8	0.4	46.4	46.9	0.5	45.5	46.5	1	46.5	47.5	1
200002642285	34 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	46.3	46.6	0.3	51	51.5	0.5	42	42.3	0.3	46.6	47.1	0.5	42.5	42.5	0	46.5	47.5	1
200002642286	35 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	50.7	51.1	0.4	50.7	51.2	0.5	46.3	46.7	0.4	46.3	46.8	0.5	46.5	46.5	0	46.5	46.5	0
200002642287	36 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	46.4	46.7	0.3	50.9	51.4	0.5	42.1	42.4	0.3	46.5	47	0.5	42.5	42.5	0	46.5	47.5	1
200002642288	37 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	51.3	51.7	0.4	50.9	51.4	0.5	46.9	47.3	0.4	46.5	47	0.5	47.5	47.5	0	46.5	47.5	1
200002642289	38 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	51.3	51.7	0.4	51.3	51.8	0.5	46.9	47.3	0.4	46.9	47.4	0.5	47.5	47.5	0	47.5	47.5	0
200002642290	39 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	50.9	51.3	0.4	51.3	51.8	0.5	46.5	46.9	0.4	46.9	47.4	0.5	46.5	47.5	1	47.5	47.5	0
200002642291	40 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	47.8	48.2	0.4	51.6	52.1	0.5	43.5	43.9	0.4	47.2	47.7	0.5	43.5	44.5	1	47.5	47.5	0
200002642292	41 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	48.8	49.2	0.4	51.9	52.4	0.5	44.5	44.9	0.4	47.5	48	0.5	44.5	45.5	1	47.5	48.5	1
200002642293	42 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	51.8	52.2	0.4	51.8	52.3	0.5	47.4	47.8	0.4	47.4	47.9	0.5	47.5	47.5	0	47.5	48.5	1
200002642294	43 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	48.8	49.2	0.4	52	52.5	0.5	44.5	44.9	0.4	47.6	48.1	0.5	44.5	45.5	1	47.5	48.5	1
200002642295	44 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	46.3	46.7	0.4	51.7	52.2	0.5	42	42.4	0.4	47.3	47.8	0.5	42.5	42.5	0	47.5	47.5	0
200002642296	45 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	52.1	52.5	0.4	52.1	52.6	0.5	47.7	48.1	0.4	47.7	48.2	0.5	47.5	48.5	1	47.5	48.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
200002642297	46 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	46.3	46.7	0.4	51.8	52.3	0.5	42	42.4	0.4	47.4	47.9	0.5	42.5	42.5	0	47.5	48.5	1
200002642298	47 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	52.2	52.6	0.4	52.2	52.7	0.5	47.8	48.2	0.4	47.8	48.2	0.5	47.5	48.5	1	47.5	48.5	1
200002642299	48 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	46.4	46.8	0.4	51.8	52.3	0.5	42.1	42.5	0.4	47.4	47.9	0.5	42.5	42.5	0	47.5	48.5	1
200002642300	50 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	52.3	52.6	0.3	52.2	52.7	0.5	47.9	48.2	0.3	47.8	48.2	0.5	48.5	48.5	0	47.5	48.5	1
200002642302	52 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	52.4	52.8	0.4	52.4	52.9	0.5	48	48.3	0.4	48	48.4	0.5	48.5	48.5	0	48.5	48.5	0
200002642303	54 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	52.5	52.9	0.4	52.5	53	0.5	48.1	48.4	0.4	48.1	48.5	0.5	48.5	48.5	0	48.5	48.5	0
200002642304	56 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	48.7	49.1	0.4	51.9	52.4	0.5	44.4	44.8	0.4	47.5	48	0.5	44.5	44.5	0	47.5	48.5	1
200002642305	58 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	51.8	52.2	0.4	52	52.5	0.5	47.4	47.8	0.4	47.6	48.1	0.5	47.5	47.5	0	47.5	48.5	1
200002642306	60 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	51.8	52.2	0.4	51.8	52.3	0.5	47.4	47.8	0.4	47.4	47.9	0.5	47.5	47.5	0	47.5	48.5	1
200002642307	62 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	51.4	51.8	0.4	50.1	50.6	0.5	47	47.4	0.4	45.7	46.2	0.5	47.5	47.5	0	45.5	46.5	1
200002642308	7 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	51.9	52.3	0.4	51.9	52.4	0.5	47.5	47.9	0.4	47.5	48	0.5	47.5	48.5	1	47.5	48.5	1
200002642309	9 DOL EITHIN CAERGEILIOG HOLYHEAD LL65	Residential	45.8	46.2	0.4	51.9	52.4	0.5	41.6	41.9	0.4	47.5	48	0.5	41.5	42.5	1	47.5	48.5	1
200002642310	GLYNCYMYRAN ROAD CAERGEILIOG HOLYHEAD L	Residential	53.4	53.7	0.3	54	54.4	0.4	48.9	49.2	0.3	49.5	49.9	0.4	49.5	49.5	0	49.5	50.5	1
200002642351	HAFAN GLYDCYMYRAN ROAD CAERGEILIOG HOLY	Residential	57.9	58.2	0.3	56.9	57.3	0.4	53.3	53.6	0.3	52.3	52.7	0.4	53.5	53.5	0	52.5	52.5	0
200002642352	BRYN FARMLON BACH CAERGEILIOG HOLYHEAD	Residential	53.3	53.7	0.4	56	56.5	0.5	48.8	49.2	0.4	51.5	51.9	0.5	48.5	49.5	1	51.5	52.5	1
200002642355	ARFRYNLON BACH CAERGEILIOG HOLYHEAD LL6	Residential	50.5	50.9	0.4	52.8	53.3	0.5	46.1	46.5	0.4	48.3	48.8	0.5	46.5	46.5	0	48.5	48.5	0
200002642357	BERWCYMYRAN ROAD CAERGEILIOG HOLYHEAD L	Residential	52.8	53.2	0.4	52.8	53.3	0.5	48.3	48.7	0.4	48.3	48.8	0.5	48.5	48.5	0	48.5	48.5	0
200002642365	FIELD STREET VALLEY HOLYHEAD LL65 3EF	Residential	54.3	54.8	0.5	52.2	52.7	0.5	49.8	50.3	0.5	47.8	48.2	0.5	49.5	50.5	1	47.5	48.5	1
200002642378	FIELD STREET VALLEY HOLYHEAD LL65 3EF	Residential	55.4	55.9	0.5	51.9	52.2	0.3	50.9	51.4	0.5	47.5	47.8	0.3	50.5	51.5	1	47.5	47.5	0
200002642379	FIELD STREET VALLEY HOLYHEAD LL65 3EF	Residential	56.8	57.4	0.6	53.5	53.8	0.3	52.2	52.8	0.6	49	49.3	0.3	52.5	52.5	0	49.5	49.5	0
200002642380	ANNALEELONDON ROAD VALLEY HOLYHEAD LL65	Residential	56.9	57.2	0.3	58.9	59	0.1	52.3	52.6	0.3	54.3	54.4	0.1	52.5	52.5	0	54.5	54.5	0
200002642384	LONDON ROAD VALLEY HOLYHEAD LL65 3DP	Residential	53.8	54.5	0.7	57	57.1	0.1	49.3	50	0.7	52.4	52.5	0.1	49.5	50.5	1	52.5	52.5	0
200002642385	BRYN EGLWYSLONDON ROAD VALLEY HOLYHEAD	Commercial	48.5	48.8	0.3	48	48.3	0.3	44.2	44.5	0.3	43.7	44	0.3	44.5	44.5	0	43.5	44.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
200002642387	GADLYSLONDON ROAD HOLYHEAD LL65 3DP	Residential	56.5	57.1	0.6	61	61.1	0.1	51.9	52.5	0.6	56.3	56.4	0.1	52.5	52.5	0	56.5	56.5	0
200002642389	1 LLYS COEDLYS VALLEY HOLYHEAD LL65 3FD	Residential	53.1	53.4	0.3	52.9	53.2	0.3	48.6	48.9	0.3	48.4	48.7	0.3	48.5	49.5	1	48.5	48.5	0
200002642390	OLD BULL BUILDINGSLONDON ROAD VALLEY HO	Residential	53.9	54.3	0.4	54.5	54.7	0.2	49.4	49.8	0.4	50	50.2	0.2	49.5	49.5	0	50.5	50.5	0
200002642391	HOME AND FARM SUPPLIESLONDON ROAD VALLE	Commercial	58.8	58.9	0.1	58.8	59	0.2	54.2	54.3	0.1	54.2	54.4	0.2	54.5	54.5	0	54.5	54.5	0
200002642392	VALLEY PHARMACYLONDON ROAD VALLEY HOLYH	Commercial	56.3	56.5	0.2	56.5	56.6	0.1	51.7	51.9	0.2	51.9	52	0.1	51.5	52.5	1	52.5	52.5	0
200002642393	FISH AND CHIP SHOPLONDON ROAD VALLEY HO	Commercial	54.1	54.3	0.2	68.8	68.9	0.1	49.6	49.8	0.2	63.9	64	0.1	49.5	49.5	0	63.5	63.5	0
200002642394	BULL HOTELLONDON ROAD VALLEY HOLYHEAD L	Commercial	52.9	53.2	0.3	53.2	53.5	0.3	48.4	48.7	0.3	48.7	49	0.3	48.5	48.5	0	48.5	49.5	1
200002642395	DYFFRYN SERVICE STATIONLONDON ROAD HOL	Commercial	50.4	50.6	0.2	62.3	62.5	0.2	46	46.2	0.2	57.6	57.8	0.2	46.5	46.5	0	57.5	57.5	0
200002642396	MELITALONDON ROAD VALLEY HOLYHEAD LL65	Commercial	48.2	48.5	0.3	48.2	48.4	0.2	43.9	44.2	0.3	43.9	44.1	0.2	44.5	44.5	0	44.5	44.5	0
200002642397	T R JONES AND SONSFIELD STREET VALLEY H	Commercial	50	50.4	0.4	49.4	49.7	0.3	45.6	46	0.4	45	45.3	0.3	45.5	46.5	1	45.5	45.5	0
200002642399	1 SIBRWD Y COED VALLEY HOLYHEAD LL65 3S	Residential	51.7	52	0.3	50.2	50.5	0.3	47.3	47.6	0.3	45.8	46.1	0.3	47.5	47.5	0	46.5	46.5	0
200002642444	2 PILI PALASSIBRWD Y COED VALLEY HOLYHE	Residential	51.9	52.2	0.3	52.4	52.7	0.3	47.5	47.8	0.3	48	48.2	0.3	47.5	47.5	0	48.5	48.5	0
200002642445	3 SIBRWD Y COED VALLEY HOLYHEAD LL65 3S	Residential	50.9	51.2	0.3	51	51.2	0.2	46.5	46.8	0.3	46.6	46.8	0.2	46.5	46.5	0	46.5	46.5	0
200002642446	2 COUNCIL HOUSESCOUNCIL HOUSES LLANFACH	Residential	69.1	70.4	1.3	69.1	70.9	1.8	64.2	65.4	1.3	64.2	65.9	1.7	64.5	65.5	1	64.5	65.5	1
200002642447	3 COUNCIL HOUSESCOUNCIL HOUSES LLANFACH	Residential	69	70.3	1.3	65.7	67.5	1.8	64.1	65.3	1.3	60.9	62.6	1.7	63.5	65.5	2	60.5	62.5	2
200002642448	4 COUNCIL HOUSESCOUNCIL HOUSES LLANFACH	Residential	68.9	70.2	1.3	69	70.7	1.7	64	65.2	1.3	64.1	65.7	1.6	63.5	65.5	2	63.5	65.5	2
200002642449	5 COUNCIL HOUSESCOUNCIL HOUSES LLANFACH	Residential	68.9	70.3	1.4	69.1	70.8	1.7	64	65.3	1.4	64.2	65.8	1.6	63.5	65.5	2	64.5	65.5	1
200002642450	1 GLASFRYNCOUNCIL HOUSESCOUNCIL HOUSES	Residential	69.2	70.5	1.3	63.9	65.8	1.9	64.3	65.5	1.3	59.1	61	1.8	64.5	65.5	1	59.5	60.5	1
200002642451	6 COUNCIL HOUSESCOUNCIL HOUSES LLANFACH	Residential	68.9	70.3	1.4	57.5	59.3	1.8	64	65.3	1.4	52.9	54.7	1.7	63.5	65.5	2	52.5	54.5	2
200002642452	7 HAFANCOUNCIL HOUSESCOUNCIL HOUSES LLA	Residential	65.6	67	1.4	57.9	59.7	1.8	60.8	62.1	1.4	53.3	55	1.7	60.5	62.5	2	53.5	55.5	2
200002642453	Y DREFLANLONDON ROAD HOLYHEAD LL65 3DP	Residential	52.7	53	0.3	52.6	52.9	0.3	48.2	48.5	0.3	48.2	48.4	0.3	48.5	48.5	0	48.5	48.5	0
200002642454	ROCK HOUSELONDON ROAD VALLEY HOLYHEAD L	Commercial	51.8	52.3	0.5	62.9	63	0.1	47.4	47.9	0.5	58.1	58.2	0.1	47.5	48.5	1	58.5	58.5	0
200002642478	2 GERLAN ESTATE CAERGEILIOG HOLYHEAD LL	Residential	51.8	52.1	0.3	51.8	52.2	0.4	47.4	47.7	0.3	47.4	47.8	0.4	47.5	47.5	0	47.5	47.5	0

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			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
200002642486	LLYS DYFFRYNLONDON ROAD HOLYHEAD LL65	Residential	55.6	55.9	0.3	65.1	65.2	0.1	51.1	51.4	0.3	60.3	60.4	0.1	51.5	51.5	0	60.5	60.5	0
200002642488	ERWR WENNOLLON BACH CAERGEILIOG HOLYHEA	Residential	53.8	54.2	0.4	58.1	58.6	0.5	49.3	49.7	0.4	53.5	54	0.5	49.5	49.5	0	53.5	54.5	1
200002642490	1 GERLAN ESTATE CAERGEILIOG HOLYHEAD LL	Residential	50.8	51	0.2	52.8	53.1	0.3	46.4	46.6	0.2	48.3	48.6	0.3	46.5	46.5	0	48.5	48.5	0
200002642493	3 GERLAN ESTATE CAERGEILIOG HOLYHEAD LL	Residential	51.9	52.2	0.3	51.9	52.3	0.4	47.5	47.8	0.3	47.5	47.9	0.4	47.5	47.5	0	47.5	48.5	1
200002642494	VALLEY PRECINCTSTATION ROAD VALLEY HOLY	Commercial	54.4	55.1	0.7	54.6	54.5	-0.1	49.9	50.6	0.7	50.1	50	-0.1	50.5	50.5	0	50.5	50.5	0
200002642495	GWALIA SERVICE STATIONLONDON ROAD HOLY	Commercial	65.8	67.2	1.4	69	68.6	-0.4	61	62.3	1.4	64.1	63.7	-0.4	60.5	62.5	2	63.5	63.5	0
200002642501	25 ROE BUCK ESTATE LLANFACHRAETH HOLYHE	Residential	49.3	50.7	1.4	44.8	50.7	5.9	45	46.3	1.4	40.6	46.3	5.7	45.5	46.5	1	40.5	46.5	6
200002642502	27 ROE BUCK ESTATE LLANFACHRAETH HOLYHE	Residential	49.6	51	1.4	44.9	50.5	5.6	45.2	46.6	1.4	40.7	46.1	5.4	45.5	46.5	1	40.5	46.5	6
200002642503	HEDDFABRYN LLWYD ESTATE LLANFAETHLU HOL	Residential	60.3	61.8	1.5	49.7	50.2	0.5	55.6	57.1	1.5	45.3	45.8	0.5	55.5	57.5	2	45.5	46.5	1
200002642506	CLYDFANBRYN LLWYD ESTATE LLANFAETHLU HO	Residential	53.6	55	1.4	60.9	62	1.1	49.1	50.5	1.4	56.2	57.3	1.1	49.5	50.5	1	56.5	57.5	1
200002642507	NEWLYNBRYN LLWYD ESTATE LLANFAETHLU HOL	Residential	51.9	53.3	1.4	48.4	48.6	0.2	47.5	48.8	1.4	44.1	44.3	0.2	47.5	48.5	1	44.5	44.5	0
200002642508	PEN Y BRYNBRYN LLWYD ESTATE LLANFAETHLU	Residential	53.4	54.9	1.5	46.8	46.9	0.1	48.9	50.4	1.5	42.5	42.6	0.1	49.5	50.5	1	42.5	42.5	0
200002642509	AWELFRYNBRYN LLWYD ESTATE LLANFAETHLU H	Residential	51	52.2	1.2	50.7	51	0.3	46.6	47.8	1.2	46.3	46.6	0.3	46.5	47.5	1	46.5	46.5	0
200002642510	LLECHWEDDBRYN LLWYD ESTATE LLANFAETHLU	Residential	51.5	52.8	1.3	56	56.1	0.1	47.1	48.3	1.3	51.5	51.5	0.1	47.5	48.5	1	51.5	51.5	0
200002642511	GARREG WENBRYN LLWYD ESTATE LLANFAETHLU	Residential	53.4	54.9	1.5	50.1	49.8	-0.3	48.9	50.4	1.5	45.7	45.4	-0.3	49.5	50.5	1	45.5	45.5	0
200002642512	GARN VIEWBRYN LLWYD ESTATE LLANFAETHLU	Residential	55.1	56.6	1.5	47.7	48.1	0.4	50.6	52	1.5	43.4	43.8	0.4	50.5	52.5	2	43.5	44.5	1
200002642513	AFALLONBRYN LLWYD ESTATE LLANFAETHLU HO	Residential	58.5	60	1.5	51	51.2	0.2	53.9	55.3	1.5	46.6	46.8	0.2	53.5	55.5	2	46.5	46.5	0
200002642514	AROSFABRYN LLWYD ESTATE LLANFAETHLU HOL	Residential	51	52.3	1.3	55.5	55.6	0.1	46.6	47.9	1.3	51	51.1	0.1	46.5	48.5	2	51.5	51.5	0
200002642515	AELWENBRYN LLWYD ESTATE LLANFAETHLU HOL	Residential	52.2	53.5	1.3	61.6	61.9	0.3	47.8	49	1.3	56.9	57.2	0.3	47.5	49.5	2	56.5	57.5	1
200002642516	1 SCHOOL TERRACESCHOOL TERRACE LLANRHYD	Residential	57.9	59.5	1.6	57.8	60.3	2.5	53.3	54.8	1.6	53.2	55.6	2.4	53.5	54.5	1	53.5	55.5	2
200002642518	2 SCHOOL TERRACESCHOOL TERRACE LLANRHYD	Residential	58.4	60	1.6	58.3	60.8	2.5	53.8	55.3	1.6	53.7	56.1	2.4	53.5	55.5	2	53.5	56.5	3
200002642519	3 SCHOOL TERRACESCHOOL TERRACE LLANRHYD	Residential	59.1	60.7	1.6	59	61.4	2.4	54.5	56	1.6	54.4	56.7	2.3	54.5	56.5	2	54.5	56.5	2
200002642520	4 SCHOOL TERRACESCHOOL TERRACE LLANRHYD	Residential	59.4	61	1.6	59.1	61.6	2.5	54.7	56.3	1.6	54.5	56.9	2.4	54.5	56.5	2	54.5	56.5	2

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			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
200002642521	1 BRYN ESTATE LLANFAETHLU HOLYHEAD LL65	Residential	50.2	51.4	1.2	55.9	58	2.1	45.8	47	1.2	51.4	53.4	2	46.5	47.5	1	51.5	53.5	2
200002642522	10 AWEL Y MORBRYN ESTATE LLANFAETHLU HO	Residential	50.2	51.5	1.3	43.9	44	0.1	45.8	47.1	1.3	39.7	39.8	0.1	46.5	47.5	1	40.5	40.5	0
200002642523	11 BRYN ESTATE LLANFAETHLU HOLYHEAD LL6	Residential	53.9	55.3	1.4	49.9	50.5	0.6	49.4	50.8	1.4	45.5	46.1	0.6	49.5	50.5	1	45.5	46.5	1
200002642524	12 BLAEN Y WAWRBRYN ESTATE LLANFAETHLU	Residential	53.2	54.5	1.3	47	47	0	48.7	50	1.3	42.7	42.7	0	48.5	50.5	2	42.5	42.5	0
200002642525	13 GOLYGFABRYN ESTATE LLANFAETHLU HOLYH	Residential	48.6	49.9	1.3	41.9	41.9	0	44.3	45.5	1.3	37.8	37.8	0	44.5	45.5	1	38.5	38.5	0
200002642526	14 MON CAPRICEBRYN ESTATE LLANFAETHLU H	Residential	48.8	50.1	1.3	43.9	43.7	-0.2	44.5	45.7	1.3	39.7	39.5	-0.2	44.5	45.5	1	40.5	39.5	-1
200002642527	15 PENYDDOLBRYN ESTATE LLANFAETHLU HOLY	Residential	49.3	50.6	1.3	43.7	43.4	-0.3	45	46.2	1.3	39.5	39.2	-0.3	45.5	46.5	1	39.5	39.5	0
200002642528	16 BRYN DIFYRBRYN ESTATE LLANFAETHLU HO	Residential	50.1	51.4	1.3	44.5	44.2	-0.3	45.7	47	1.3	40.3	40	-0.3	45.5	47.5	2	40.5	40.5	0
200002642529	17 WESTERLINGBRYN ESTATE LLANFAETHLU HO	Residential	50.6	52	1.4	42.8	42.1	-0.7	46.2	47.6	1.4	38.6	38	-0.7	46.5	47.5	1	38.5	38.5	0
200002642530	18 BRYN ESTATE LLANFAETHLU HOLYHEAD LL6	Residential	51.1	52.5	1.4	43.3	42.3	-1	46.7	48.1	1.4	39.1	38.2	-1	46.5	48.5	2	39.5	38.5	-1
200002642531	19 BRYN ESTATE LLANFAETHLU HOLYHEAD LL6	Residential	51.9	53.3	1.4	46.7	45.4	-1.3	47.5	48.8	1.4	42.4	41.2	-1.3	47.5	48.5	1	42.5	41.5	-1
200002642532	2 BRYN ESTATE LLANFAETHLU HOLYHEAD LL65	Residential	50.6	51.9	1.3	50.8	52.7	1.9	46.2	47.5	1.3	46.4	48.2	1.8	46.5	47.5	1	46.5	48.5	2
200002642533	20 BRYN ESTATE LLANFAETHLU HOLYHEAD LL6	Residential	53.8	55.2	1.4	46.1	45	-1.1	49.3	50.7	1.4	41.8	40.8	-1.1	49.5	50.5	1	42.5	41.5	-1
200002642534	21 BRYN ESTATE LLANFAETHLU HOLYHEAD LL6	Residential	56	57.4	1.4	45.6	44	-1.6	51.5	52.8	1.4	41.4	39.8	-1.6	51.5	52.5	1	41.5	40.5	-1
200002642535	22 BRYN ESTATE LLANFAETHLU HOLYHEAD LL6	Residential	59.2	60.7	1.5	47.8	46.6	-1.2	54.6	56	1.5	43.5	42.3	-1.2	54.5	56.5	2	43.5	42.5	-1
200002642536	23 BRYN ESTATE LLANFAETHLU HOLYHEAD LL6	Residential	60.7	62	1.3	47.4	46.8	-0.6	56	57.3	1.3	43.1	42.5	-0.6	56.5	57.5	1	43.5	42.5	-1
200002642537	24 GLAS YNYSBRYN ESTATE LLANFAETHLU HOL	Residential	60.2	61.4	1.2	53.8	56	2.2	55.5	56.7	1.2	49.3	51.5	2.1	55.5	56.5	1	49.5	51.5	2
200002642538	3 ALNRICBRYN ESTATE LLANFAETHLU HOLYHEA	Residential	53.6	54.9	1.3	53.1	54	0.9	49.1	50.4	1.3	48.6	49.5	0.9	49.5	50.5	1	48.5	49.5	1
200002642539	4 BRYN ESTATE LLANFAETHLU HOLYHEAD LL65	Residential	52.2	53.5	1.3	44.5	44.5	0	47.8	49	1.3	40.3	40.3	0	47.5	49.5	2	40.5	40.5	0
200002642540	5 BRYN ESTATE LLANFAETHLU HOLYHEAD LL65	Residential	52	53.3	1.3	44.7	44.5	-0.2	47.6	48.8	1.3	40.5	40.3	-0.2	47.5	48.5	1	40.5	40.5	0
200002642541	6 BRYN ESTATE LLANFAETHLU HOLYHEAD LL65	Residential	53	54.4	1.4	49.5	49.9	0.4	48.5	49.9	1.4	45.1	45.5	0.4	48.5	50.5	2	45.5	45.5	0
200002642542	7 PINE VILLABRYN ESTATE LLANFAETHLU HOL	Residential	47.7	49	1.3	44	43.8	-0.2	43.4	44.7	1.3	39.8	39.6	-0.2	43.5	44.5	1	40.5	39.5	-1
200002642543	8 TEGFRYNBRYN ESTATE LLANFAETHLU HOLYHE	Residential	52.2	53.6	1.4	43	42.4	-0.6	47.8	49.1	1.4	38.8	38.3	-0.6	47.5	49.5	2	39.5	38.5	-1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
200002642544	9 BRYN ESTATE LLANFAETHLU HOLYHEAD LL65	Residential	50.3	51.7	1.4	42.4	42.1	-0.3	45.9	47.3	1.4	38.3	38	-0.3	46.5	47.5	1	38.5	38.5	0
200002642545	1 SALANROE BUCK ESTATE LLANFACHRAETH HO	Residential	65.3	66.7	1.4	51.1	47.8	-3.3	60.5	61.8	1.4	46.7	43.5	-3.2	60.5	61.5	1	46.5	43.5	-3
200002642553	10 ROE BUCK ESTATE LLANFACHRAETH HOLYHE	Residential	44.8	46.2	1.4	45.1	47.8	2.7	40.6	41.9	1.4	40.9	43.5	2.6	40.5	42.5	2	41.5	43.5	2
200002642554	11 CLOONAROE BUCK ESTATE LLANFACHRAETH	Residential	50.7	52.1	1.4	48.1	49.2	1.1	46.3	47.7	1.4	43.8	44.9	1.1	46.5	47.5	1	44.5	45.5	1
200002642555	13 DALAR WENROE BUCK ESTATE LLANFACHRAE	Residential	49.8	51.2	1.4	46.2	49	2.8	45.4	46.8	1.4	41.9	44.7	2.7	45.5	46.5	1	42.5	44.5	2
200002642556	15 ROE BUCK ESTATE LLANFACHRAETH HOLYHE	Residential	49.7	51.1	1.4	46.9	49.8	2.9	45.3	46.7	1.4	42.6	45.4	2.8	45.5	46.5	1	42.5	45.5	3
200002642557	17 ROE BUCK ESTATE LLANFACHRAETH HOLYHE	Residential	48.8	50.2	1.4	45.3	50.8	5.5	44.5	45.8	1.4	41.1	46.4	5.3	44.5	46.5	2	41.5	46.5	5
200002642558	19 ROE BUCK ESTATE LLANFACHRAETH HOLYHE	Residential	48.5	49.9	1.4	44.1	51.1	7	44.2	45.5	1.4	39.9	46.7	6.8	44.5	45.5	1	40.5	46.5	6
200002642559	2 GWYLMARROE BUCK ESTATE LLANFACHRAETH	Residential	53.8	55.2	1.4	48.3	47.7	-0.6	49.3	50.7	1.4	44	43.4	-0.6	49.5	50.5	1	44.5	43.5	-1
200002642560	21 ROE BUCK ESTATE LLANFACHRAETH HOLYHE	Residential	49.6	51	1.4	45.3	51.5	6.2	45.2	46.6	1.4	41.1	47.1	6	45.5	46.5	1	41.5	47.5	6
200002642561	23 ROE BUCK ESTATE LLANFACHRAETH HOLYHE	Residential	49.6	51	1.4	44.8	50.9	6.1	45.2	46.6	1.4	40.6	46.5	5.9	45.5	46.5	1	40.5	46.5	6
200002642562	3 HAFOD Y GRUGROE BUCK ESTATE LLANFACHR	Residential	54.1	55.5	1.4	49.6	47.6	-2	49.6	51	1.4	45.2	43.3	-1.9	49.5	51.5	2	45.5	43.5	-2
200002642563	4 ROE BUCK ESTATE LLANFACHRAETH HOLYHEA	Residential	54	55.4	1.4	46.6	47.1	0.5	49.5	50.9	1.4	42.3	42.8	0.5	49.5	50.5	1	42.5	43.5	1
200002642564	5 ROE BUCK ESTATE LLANFACHRAETH HOLYHEA	Residential	53.8	55.2	1.4	48.2	47.5	-0.7	49.3	50.7	1.4	43.9	43.2	-0.7	49.5	50.5	1	44.5	43.5	-1
200002642565	6 ROE BUCK ESTATE LLANFACHRAETH HOLYHEA	Residential	49.2	50.6	1.4	46.1	47.8	1.7	44.9	46.2	1.4	41.8	43.5	1.6	45.5	46.5	1	42.5	43.5	1
200002642566	7 ROE BUCK ESTATE LLANFACHRAETH HOLYHEA	Residential	49.3	50.7	1.4	47.6	47.7	0.1	45	46.3	1.4	43.3	43.4	0.1	45.5	46.5	1	43.5	43.5	0
200002642567	8 ROE BUCK ESTATE LLANFACHRAETH HOLYHEA	Residential	50	51.4	1.4	45.3	47.7	2.4	45.6	47	1.4	41.1	43.4	2.3	45.5	47.5	2	41.5	43.5	2
200002642568	9 ROE BUCK ESTATE LLANFACHRAETH HOLYHEA	Residential	50.8	52.2	1.4	47.7	49	1.3	46.4	47.8	1.4	43.4	44.7	1.3	46.5	47.5	1	43.5	44.5	1
200002642569	1 MAES ALAWMAES ALAW LLANFACHRAETH HOLY	Residential	67.1	68.5	1.4	54.9	50.5	-4.4	62.2	63.6	1.4	50.4	46.1	-4.3	62.5	63.5	1	50.5	46.5	-4
200002642571	3 MAES ALAWMAES ALAW LLANFACHRAETH HOLY	Residential	68.1	69.5	1.4	50.2	50.8	0.6	63.2	64.5	1.4	45.8	46.4	0.6	63.5	64.5	1	46.5	46.5	0
200002642572	5 MAES ALAWMAES ALAW LLANFACHRAETH HOLY	Residential	68.1	69.5	1.4	50.2	51.2	1	63.2	64.5	1.4	45.8	46.8	1	63.5	64.5	1	46.5	46.5	0
200002642573	7 MAES ALAWMAES ALAW LLANFACHRAETH HOLY	Residential	69.6	70.9	1.3	50.7	51.3	0.6	64.6	65.9	1.3	46.3	46.9	0.6	64.5	65.5	1	46.5	47.5	1
200002642574	9 MAES ALAWMAES ALAW LLANFACHRAETH HOLY	Residential	69.5	70.9	1.4	50.5	51.4	0.9	64.5	65.9	1.4	46.1	47	0.9	64.5	65.5	1	46.5	47.5	1
200002642575	MINFFORDD LLANFACHRAETH HOLYHEAD LL65 4	Residential	51.9	53.2	1.3	48.1	46.1	-2	47.5	48.7	1.3	43.8	41.8	-1.9	47.5	48.5	1	44.5	42.5	-2

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
200002642576	MINFFORDD LLANFACHRAETH HOLYHEAD LL65 4	Residential	53.2	54.6	1.4	51.9	47.8	-4.1	48.7	50.1	1.4	47.5	43.5	-4	48.5	50.5	2	47.5	43.5	-4
200002642577	MINFFORDD LLANFACHRAETH HOLYHEAD LL65 4	Residential	53.3	54.7	1.4	52.5	47.9	-4.6	48.8	50.2	1.4	48.1	43.6	-4.5	48.5	50.5	2	48.5	43.5	-5
200002642578	MINFFORDD LLANFACHRAETH HOLYHEAD LL65 4	Residential	47.3	48.7	1.4	47.3	44.9	-2.4	43	44.4	1.4	43	40.7	-2.3	43.5	44.5	1	43.5	40.5	-3
200002642579	MINFFORDD LLANFACHRAETH HOLYHEAD LL65 4	Residential	53.3	54.7	1.4	47.2	45.3	-1.9	48.8	50.2	1.4	42.9	41.1	-1.8	48.5	50.5	2	43.5	41.5	-2
200002642580	MINFFORDD LLANFACHRAETH HOLYHEAD LL65 4	Residential	54.2	55.6	1.4	47.8	45.8	-2	49.7	51.1	1.4	43.5	41.6	-1.9	49.5	51.5	2	43.5	41.5	-2
200002642581	MINFFORDD LLANFACHRAETH HOLYHEAD LL65 4	Residential	52.8	54.2	1.4	52	47.6	-4.4	48.3	49.7	1.4	47.6	43.3	-4.3	48.5	49.5	1	47.5	43.5	-4
200002642582	MINFFORDD LLANFACHRAETH HOLYHEAD LL65 4	Residential	56.6	58	1.4	53.7	48.9	-4.8	52	53.4	1.4	49.2	44.6	-4.7	52.5	53.5	1	49.5	44.5	-5
200002642583	MINFFORDD LLANFACHRAETH HOLYHEAD LL65 4	Residential	57.8	59.2	1.4	50.2	46.7	-3.5	53.2	54.6	1.4	45.8	42.4	-3.4	53.5	54.5	1	46.5	42.5	-4
200002642584	GLANLLYN LLANFACHRAETH HOLYHEAD LL65 4U	Residential	66.8	68.2	1.4	51.1	48.7	-2.4	61.9	63.3	1.4	46.7	44.4	-2.3	61.5	63.5	2	46.5	44.5	-2
200002642585	GLANLLYN LLANFACHRAETH HOLYHEAD LL65 4U	Residential	71.1	72.5	1.4	50.9	48.7	-2.2	66.1	67.5	1.4	46.5	44.4	-2.1	65.5	67.5	2	46.5	44.5	-2
200002642586	GLANLLYN LLANFACHRAETH HOLYHEAD LL65 4U	Residential	70	71.4	1.4	51.4	49.1	-2.3	65	66.4	1.4	47	44.8	-2.2	64.5	66.5	2	47.5	44.5	-3
200002642587	GLANLLYN LLANFACHRAETH HOLYHEAD LL65 4U	Residential	70.1	71.5	1.4	51.6	49.2	-2.4	65.1	66.5	1.4	47.2	44.9	-2.3	64.5	66.5	2	47.5	45.5	-2
200002642588	ABERGLANLLYN LLANFACHRAETH HOLYHEAD LL6	Residential	68.3	69.7	1.4	51.5	48.9	-2.6	63.4	64.7	1.4	47.1	44.6	-2.5	63.5	64.5	1	47.5	44.5	-3
200002642589	GLANLLYN LLANFACHRAETH HOLYHEAD LL65 4U	Residential	63	64.4	1.4	51.5	48.8	-2.7	58.2	59.6	1.4	47.1	44.5	-2.6	58.5	59.5	1	47.5	44.5	-3
200002642590	MADRYNGLANLLYN LLANFACHRAETH HOLYHEAD L	Residential	71	72.4	1.4	55.2	50.7	-4.5	66	67.4	1.4	50.7	46.3	-4.4	65.5	67.5	2	50.5	46.5	-4
200002642591	LLANFACHRAETH HOLYHEAD LL65 4YB	Residential	40.1	41.5	1.4	40.8	42.8	2	36	37.4	1.4	36.7	38.6	1.9	36.5	37.5	1	37.5	38.5	1
200002642592	LLANFACHRAETH HOLYHEAD LL65 4YB	Residential	43.6	45	1.4	40.6	42.5	1.9	39.4	40.8	1.4	36.5	38.4	1.8	39.5	41.5	2	36.5	38.5	2
200002642593	LLANFACHRAETH HOLYHEAD LL65 4YB	Residential	44.5	45.9	1.4	42.5	44.6	2.1	40.3	41.7	1.4	38.4	40.4	2	40.5	41.5	1	38.5	40.5	2
200002642594	LLANFACHRAETH HOLYHEAD LL65 4YB	Residential	43.8	45.2	1.4	41.5	43.4	1.9	39.6	41	1.4	37.4	39.2	1.8	39.5	41.5	2	37.5	39.5	2
200002642595	LLANFACHRAETH HOLYHEAD LL65 4UU	Residential	47.4	48.7	1.3	44.8	42.8	-2	43.1	44.4	1.3	40.6	38.6	-1.9	43.5	44.5	1	40.5	38.5	-2
200002642614	LLANFACHRAETH HOLYHEAD LL65 4UU	Residential	47	48.4	1.4	45	42.9	-2.1	42.7	44.1	1.4	40.8	38.7	-2	42.5	44.5	2	41.5	39.5	-2
200002642615	LLANFACHRAETH HOLYHEAD LL65 4UU	Residential	48.1	49.4	1.3	44.5	42.3	-2.2	43.8	45	1.3	40.3	38.2	-2.1	44.5	45.5	1	40.5	38.5	-2
200002642616	LLANFACHRAETH HOLYHEAD LL65 4UU	Residential	47.9	49.3	1.4	44.4	41.9	-2.5	43.6	45	1.4	40.2	37.8	-2.4	43.5	45.5	2	40.5	38.5	-2

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
200002642617	LLANFACHRAETH HOLYHEAD LL65 4UU	Residential	50.3	51.6	1.3	45.2	42.6	-2.6	45.9	47.2	1.3	41	38.5	-2.5	46.5	47.5	1	41.5	38.5	-3
200002642618	LLANFACHRAETH HOLYHEAD LL65 4UE	Residential	53.8	55.2	1.4	52.1	52.4	0.3	49.3	50.7	1.4	47.7	48	0.3	49.5	50.5	1	47.5	48.5	1
200002642624	LLANFACHRAETH HOLYHEAD LL65 4UE	Residential	59.2	60.5	1.3	49.6	52.4	2.8	54.6	55.8	1.3	45.2	48	2.7	54.5	55.5	1	45.5	48.5	3
200002642625	1 LLYNNON PARK LLANFACHRAETH HOLYHEAD L	Residential	44.3	45.7	1.4	44.6	50	5.4	40.1	41.5	1.4	40.4	45.6	5.2	40.5	41.5	1	40.5	45.5	5
200002642626	2 LLYNNON PARK LLANFACHRAETH HOLYHEAD L	Residential	48.3	49.7	1.4	44.7	49.6	4.9	44	45.3	1.4	40.5	45.2	4.8	44.5	45.5	1	40.5	45.5	5
200002642627	3 LLAMEDOSLLYNNON PARK LLANFACHRAETH HO	Residential	48	49.4	1.4	44.4	49.1	4.7	43.7	45	1.4	40.2	44.8	4.6	43.5	45.5	2	40.5	44.5	4
200002642628	4 SANDOWLLYNNON PARK LLANFACHRAETH HOLY	Residential	46.1	47.5	1.4	43.5	51.3	7.8	41.8	43.2	1.4	39.3	46.9	7.6	42.5	43.5	1	39.5	47.5	8
200002642629	5 HAFOTYLLYNNON PARK LLANFACHRAETH HOLY	Residential	46.8	48.2	1.4	43.8	51.5	7.7	42.5	43.9	1.4	39.6	47.1	7.5	42.5	44.5	2	39.5	47.5	8
200002642630	6 WITS ENDLLYNNON PARK LLANFACHRAETH HO	Residential	46.6	47.9	1.3	44	52.6	8.6	42.3	43.6	1.3	39.8	48.2	8.3	42.5	43.5	1	40.5	48.5	8
200002642631	7 LLYNNON PARK LLANFACHRAETH HOLYHEAD L	Residential	45.8	47.2	1.4	43.7	51.2	7.5	41.6	42.9	1.4	39.5	46.8	7.3	41.5	43.5	2	39.5	46.5	7
200002642632	8 LLYNNON PARK LLANFACHRAETH HOLYHEAD L	Residential	47.9	49.2	1.3	44	49.9	5.9	43.6	44.9	1.3	39.8	45.5	5.7	43.5	45.5	2	40.5	45.5	5
200002642633	9 GORS BACHLLYNNON PARK LLANFACHRAETH H	Residential	46.6	48	1.4	43.4	48.5	5.1	42.3	43.7	1.4	39.2	44.2	4.9	42.5	43.5	1	39.5	44.5	5
200002642634	10 LLYNNON PARK LLANFACHRAETH HOLYHEAD	Residential	45.6	46.9	1.3	43.6	49.9	6.3	41.4	42.6	1.3	39.4	45.5	6.1	41.5	42.5	1	39.5	45.5	6
200002642635	11 LLYNNON PARK LLANFACHRAETH HOLYHEAD	Residential	45.9	47.2	1.3	43.5	52.7	9.2	41.7	42.9	1.3	39.3	48.2	8.9	41.5	43.5	2	39.5	48.5	9
200002642636	12 LLYNNON PARK LLANFACHRAETH HOLYHEAD	Residential	44.2	45.6	1.4	43.8	53.9	10.1	40	41.4	1.4	39.6	49.4	9.8	40.5	41.5	1	39.5	49.5	10
200002642637	13 LLYNNON PARK LLANFACHRAETH HOLYHEAD	Residential	46	47.3	1.3	43.6	54.3	10.7	41.8	43	1.3	39.4	49.8	10.4	42.5	43.5	1	39.5	49.5	10
200002642638	14 LLYNNON PARK LLANFACHRAETH HOLYHEAD	Residential	45.1	46.4	1.3	43	54.6	11.6	40.9	42.1	1.3	38.8	50.1	11.3	41.5	42.5	1	39.5	50.5	11
200002642639	15 LLYNNON PARK LLANFACHRAETH HOLYHEAD	Residential	45.6	47	1.4	44	52.1	8.1	41.4	42.7	1.4	39.8	47.7	7.9	41.5	42.5	1	40.5	47.5	7
200002642640	16 LLYNNON PARK LLANFACHRAETH HOLYHEAD	Residential	46.4	47.8	1.4	44	51.6	7.6	42.1	43.5	1.4	39.8	47.2	7.4	42.5	43.5	1	40.5	47.5	7
200002642641	17 ERW FACHLLYNNON PARK LLANFACHRAETH H	Residential	44.2	45.6	1.4	43.7	50.9	7.2	40	41.4	1.4	39.5	46.5	7	40.5	41.5	1	39.5	46.5	7
200002642642	LLANFACHRAETH HOLYHEAD LL65 4YB	Residential	39.3	40.7	1.4	39.3	41	1.7	35.3	36.6	1.4	35.3	36.9	1.6	35.5	36.5	1	35.5	37.5	2
200002642643	ROMA LLANFACHRAETH HOLYHEAD LL65 4YB	Residential	39.9	41.3	1.4	39.9	41.7	1.8	35.8	37.2	1.4	35.8	37.6	1.7	36.5	37.5	1	36.5	37.5	1
200002642644	HOLLAND PARK INDUSTRIAL ESTATE HOLYHEA	Commercial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
200002645872	HOLLAND PARK INDUSTRIAL ESTATE HOLYHEA	Commercial	49.8	50	0.2	52.4	52.7	0.3	45.4	45.6	0.2	48	48.2	0.3	45.5	45.5	0	48.5	48.5	0
200002645873	PETROL STATIONTESCO STORES LTD HOLYHEA	Commercial	58.5	58.6	0.1	46.3	46.6	0.3	53.9	54	0.1	42	42.3	0.3	53.5	54.5	1	42.5	42.5	0
200002646037	OFFICEBRYNTIRION HOLYHEAD LL65 2TF	Commercial	42.3	42.6	0.3	42.7	43.2	0.5	38.2	38.5	0.3	38.5	39	0.5	38.5	38.5	0	38.5	39.5	1
200002646497	9 GARTH Y FELIN VALLEY HOLYHEAD LL65 3F	Residential	55.5	55.7	0.2	58.7	58.9	0.2	51	51.2	0.2	54.1	54.3	0.2	51.5	51.5	0	54.5	54.5	0
200002646504	HEIDI COTTAGELONDON ROAD HOLYHEAD LL65	Residential	48.3	48.5	0.2	48.4	48.7	0.3	44	44.2	0.2	44.1	44.4	0.3	44.5	44.5	0	44.5	44.5	0
200002647222	TAREEPENRHOS BEACH ROAD HOLYHEAD LL65	Residential	51.1	51.3	0.2	46	46.3	0.3	46.7	46.9	0.2	41.8	42	0.3	46.5	47.5	1	42.5	42.5	0
200002647237	PENTIRPENRHOS BEACH ROAD HOLYHEAD LL65	Residential	52.8	52.9	0.1	46.2	46.5	0.3	48.3	48.4	0.1	41.9	42.2	0.3	48.5	48.5	0	42.5	42.5	0
200002647238	CEFWYNPENRHOS BEACH ROAD HOLYHEAD LL65	Residential	50.4	50.6	0.2	48.9	49.2	0.3	46	46.2	0.2	44.6	44.9	0.3	46.5	46.5	0	44.5	45.5	1
200002647239	MAUDCYTTIR ROAD HOLYHEAD LL65 2PU	Residential	51.8	52.1	0.3	51.8	52.2	0.4	47.4	47.7	0.3	47.4	47.8	0.4	47.5	47.5	0	47.5	47.5	0
200002647243	WESTWINDSPENRHOS BEACH ROAD HOLYHEAD L	Residential	50.8	50.9	0.1	50.3	50.5	0.2	46.4	46.5	0.1	45.9	46.1	0.2	46.5	46.5	0	46.5	46.5	0
200002647244	FLAT 2BOSTON VILLA HOLYHEAD LL65 2SP	Residential	45.4	45.6	0.2	50.8	51.1	0.3	41.2	41.4	0.2	46.4	46.7	0.3	41.5	41.5	0	46.5	46.5	0
200002647347	PANDY CEFN COCH ANGLESEY LL68 0SW	Residential	67.8	69.4	1.6	68.3	70.9	2.6	62.9	64.4	1.6	63.4	65.9	2.5	62.5	64.5	2	63.5	65.5	2
200002647922	TYN YR ODYN ANGLESEY LL68 0SW	Residential	69.4	70.9	1.5	69.3	72	2.7	64.4	65.9	1.5	64.4	67	2.6	64.5	65.5	1	64.5	66.5	2
200002647923	Y NYTH ANGLESEY LL68 0SW	Residential	62.8	64.3	1.5	59.1	61.8	2.7	58	59.5	1.5	54.5	57.1	2.6	58.5	59.5	1	54.5	57.5	3
200002647924	PEN Y GRAIG LLANFAETHLU HOLYHEAD LL65 4	Residential	69.1	70.7	1.6	69.1	71.3	2.2	64.2	65.7	1.6	64.2	66.3	2.1	64.5	65.5	1	64.5	66.5	2
200002647928	8 MAES ALAWMAES ALAW LLANFACHRAETH HOLY	Residential	69.5	70.8	1.3	50.5	51.3	0.8	64.5	65.8	1.3	46.1	46.9	0.8	64.5	65.5	1	46.5	47.5	1
200002647939	BOSTON TERRACE VALLEY HOLYHEAD LL65 3DU	Residential	53.9	54.2	0.3	53.9	54.1	0.2	49.4	49.7	0.3	49.4	49.6	0.2	49.5	49.5	0	49.5	49.5	0
200002648028	LLYS ALEDBOSTON TERRACELONDON ROAD VALL	Residential	54.7	55	0.3	54.8	55	0.2	50.2	50.5	0.3	50.3	50.5	0.2	50.5	50.5	0	50.5	50.5	0
200002648029	THE RECTORYLONDON ROAD VALLEY HOLYHEAD	Residential	53.9	54.4	0.5	64.1	64.2	0.1	49.4	49.9	0.5	59.3	59.4	0.1	49.5	50.5	1	59.5	59.5	0
200002648033	CAMDEN HOUSEBOSTON TERRACELONDON ROAD V	Residential	69.8	69.9	0.1	69.8	69.8	0	64.8	64.9	0.1	64.8	64.8	0	64.5	64.5	0	64.5	64.5	0
200002648045	4 GARTH Y FELIN VALLEY HOLYHEAD LL65 3F	Residential	56.4	56.6	0.2	56.4	56.7	0.3	51.8	52	0.2	51.8	52.1	0.3	51.5	52.5	1	51.5	52.5	1
200002648046	33 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	63.4	63.5	0.1	58.9	59.1	0.2	58.6	58.7	0.1	54.3	54.5	0.2	58.5	58.5	0	54.5	54.5	0
200002648047	34 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	53.7	53.9	0.2	53.8	54	0.2	49.2	49.4	0.2	49.3	49.5	0.2	49.5	49.5	0	49.5	49.5	0
200002648048	DINAM HOUSESTATION ROAD VALLEY HOLYHEAD	Residential	67.6	68.1	0.5	52.8	53.2	0.4	62.7	63.2	0.5	48.3	48.7	0.4	62.5	63.5	1	48.5	48.5	0
200002648051	MEIRION HOUSESTATION ROAD VALLEY HOLYHE	Residential	70	70.5	0.5	63.4	63.7	0.3	65	65.5	0.5	58.6	58.9	0.3	64.5	65.5	1	58.5	58.5	0

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			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
200002648052	ARGRAIG CAERGEILIOG HOLYHEAD LL65 3HW	Residential	51.5	51.9	0.4	53	53.5	0.5	47.1	47.5	0.4	48.5	49	0.5	47.5	47.5	0	48.5	49.5	1
200002648280	TREGELE CEMAES BAY LL67 0DP	Residential	44.2	44.8	0.6	44.2	45	0.8	40	40.6	0.6	40	40.8	0.8	40.5	40.5	0	40.5	41.5	1
200002648557	SEREN LAS TREGELE CEMAES BAY LL67 0DP	Residential	49.8	50.2	0.4	50.5	51.1	0.6	45.4	45.8	0.4	46.1	46.7	0.6	45.5	46.5	1	46.5	46.5	0
200002648562	ARDRO TREGELE CEMAES BAY LL67 0DP	Residential	46.8	47.2	0.4	58.5	59.1	0.6	42.5	42.9	0.4	53.9	54.5	0.6	42.5	43.5	1	53.5	54.5	1
200002648569	PANDY BAR ANGLESEY LL68 0SW	Residential	69.2	70.8	1.6	54.8	57.6	2.8	64.3	65.8	1.6	50.3	53	2.7	64.5	65.5	1	50.5	53.5	3
200002648625	OVERDALE HOLYHEAD LL65 2YD	Residential	42.3	42.6	0.3	42.3	42.8	0.5	38.2	38.5	0.3	38.2	38.6	0.5	38.5	38.5	0	38.5	38.5	0
200002650257	CLOVELLY CEMAES BAY LL67 0DA	Residential	62.2	62.9	0.7	65.9	66.7	0.8	57.5	58.1	0.7	61.1	61.8	0.8	57.5	58.5	1	60.5	61.5	1
200002650752	PENTREGOF BACH CEMAES BAY LL67 0DA	Residential	65.8	66.5	0.7	65.8	66.6	0.8	61	61.6	0.7	61	61.7	0.8	60.5	61.5	1	60.5	61.5	1
200002650753	BODLONDEB TREGELE CEMAES BAY LL67 0DP	Residential	45.4	45.9	0.5	45.4	46.1	0.7	41.2	41.7	0.5	41.2	41.8	0.7	41.5	41.5	0	41.5	42.5	1
200002650890	TURNPIKE LLANYNGHENEDL HOLYHEAD LL65 3D	Residential	51.7	52.5	0.8	51.8	52.9	1.1	47.3	48.1	0.8	47.4	48.4	1.1	47.5	48.5	1	47.5	48.5	1
200002650945	TURNPIKE LLANYNGHENEDL HOLYHEAD LL65 3D	Residential	54.4	55.5	1.1	54.4	55.9	1.5	49.9	51	1.1	49.9	51.4	1.5	50.5	51.5	1	50.5	51.5	1
200002650946	7 MELBOURNE HOUSEFIELD STREET VALLEY HO	Residential	54.1	54.5	0.4	53.3	53.6	0.3	49.6	50	0.4	48.8	49.1	0.3	49.5	50.5	1	48.5	49.5	1
200002651008	BRITANNIA TERRACE VALLEY HOLYHEAD LL65	Residential	53.8	54.3	0.5	54.3	54.7	0.4	49.3	49.8	0.5	49.8	50.2	0.4	49.5	49.5	0	49.5	50.5	1
200002651016	HOLMFIELDSTATION ROAD VALLEY HOLYHEAD L	Residential	66	66.5	0.5	68.1	68.4	0.3	61.2	61.6	0.5	63.2	63.5	0.3	61.5	61.5	0	63.5	63.5	0
200002651051	36 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	54.8	54.9	0.1	54.8	55	0.2	50.3	50.4	0.1	50.3	50.5	0.2	50.5	50.5	0	50.5	50.5	0
200002651291	35 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	54.3	54.5	0.2	54.4	54.6	0.2	49.8	50	0.2	49.9	50.1	0.2	49.5	50.5	1	50.5	50.5	0
200002651292	3 GARTH Y FELIN VALLEY HOLYHEAD LL65 3F	Residential	54.8	55	0.2	54.9	55.1	0.2	50.3	50.5	0.2	50.4	50.6	0.2	50.5	50.5	0	50.5	50.5	0
200002651297	2 GARTH Y FELIN VALLEY HOLYHEAD LL65 3F	Residential	55.7	55.9	0.2	55.2	55.5	0.3	51.2	51.4	0.2	50.7	51	0.3	51.5	51.5	0	50.5	51.5	1
200002651299	1 GARTH Y FELIN VALLEY HOLYHEAD LL65 3F	Residential	59.1	59.2	0.1	59.1	59.3	0.2	54.5	54.6	0.1	54.5	54.7	0.2	54.5	54.5	0	54.5	54.5	0
200002651301	6 GARTH Y FELIN VALLEY HOLYHEAD LL65 3F	Residential	55.6	55.8	0.2	57.4	57.6	0.2	51.1	51.3	0.2	52.8	53	0.2	51.5	51.5	0	52.5	53.5	1
200002651312	5 GARTH Y FELIN VALLEY HOLYHEAD LL65 3F	Residential	57.7	57.9	0.2	57.8	58	0.2	53.1	53.3	0.2	53.2	53.4	0.2	53.5	53.5	0	53.5	53.5	0
200002651314	8 GARTH Y FELIN VALLEY HOLYHEAD LL65 3F	Residential	55	55.2	0.2	55.1	55.4	0.3	50.5	50.7	0.2	50.6	50.9	0.3	50.5	50.5	0	50.5	50.5	0
200002651316	7 GARTH Y FELIN VALLEY HOLYHEAD LL65 3F	Residential	55.4	55.6	0.2	55.4	55.7	0.3	50.9	51.1	0.2	50.9	51.2	0.3	50.5	51.5	1	50.5	51.5	1
200002651319	18 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	55	55.2	0.2	53.4	53.7	0.3	50.5	50.7	0.2	48.9	49.2	0.3	50.5	50.5	0	49.5	49.5	0
200002651323	19 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	53.1	53.4	0.3	53.1	53.4	0.3	48.6	48.9	0.3	48.6	48.9	0.3	48.5	49.5	1	48.5	49.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
200002651324	21 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	53.4	53.7	0.3	53.4	53.7	0.3	48.9	49.2	0.3	48.9	49.2	0.3	49.5	49.5	0	49.5	49.5	0
200002651325	31 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	53.5	53.6	0.1	53.5	53.7	0.2	49	49.1	0.1	49	49.2	0.2	49.5	49.5	0	49.5	49.5	0
200002651326	20 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	53.3	53.6	0.3	54.3	54.5	0.2	48.8	49.1	0.3	49.8	50	0.2	48.5	49.5	1	49.5	50.5	1
200002651327	28 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	53.8	54.1	0.3	53.9	54.2	0.3	49.3	49.6	0.3	49.4	49.7	0.3	49.5	49.5	0	49.5	49.5	0
200002651331	29 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	54.3	54.6	0.3	56.3	56.5	0.2	49.8	50.1	0.3	51.7	51.9	0.2	49.5	50.5	1	51.5	52.5	1
200002651332	26 CRUD YR AWELGARTH Y FELIN VALLEY HOL	Residential	54.7	55	0.3	53.5	53.7	0.2	50.2	50.5	0.3	49	49.2	0.2	50.5	50.5	0	49.5	49.5	0
200002651334	27 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	53.8	54	0.2	56.3	56.5	0.2	49.3	49.5	0.2	51.7	51.9	0.2	49.5	49.5	0	51.5	52.5	1
200002651335	30 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	54.4	54.7	0.3	54.4	54.7	0.3	49.9	50.2	0.3	49.9	50.2	0.3	50.5	50.5	0	50.5	50.5	0
200002651337	PENRHOS PORTHYFELIN HOLYHEAD LL65 2PR	Residential	51.4	51.5	0.1	46.8	47	0.2	47	47.1	0.1	42.5	42.7	0.2	47.5	47.5	0	42.5	42.5	0
200002651606	PEN Y GRAIG LLANFAETHLU HOLYHEAD LL65 4	Residential	59.8	61.4	1.6	71	73.3	2.3	55.1	56.7	1.6	66	68.2	2.2	55.5	56.5	1	65.5	68.5	3
200002651718	CERRIGDRUDION HOLYHEAD LL65 4PB	Residential	46.2	47.5	1.3	46.9	47.6	0.7	41.9	43.2	1.3	42.6	43.3	0.7	42.5	43.5	1	42.5	43.5	1
200002651737	2 YR ERWLONDON ROAD HOLYHEAD LL65 2PT	Residential	53	53.1	0.1	46.8	47	0.2	48.5	48.6	0.1	42.5	42.7	0.2	48.5	48.5	0	42.5	42.5	0
200002651918	FLATANGLESEY PET CLINIC HOLYHEAD LL65	Residential	49.4	49.7	0.3	49.4	49.9	0.5	45	45.3	0.3	45	45.5	0.5	45.5	45.5	0	45.5	45.5	0
200002651925	CEFN COCH ANGLESEY LL68 0SW	Residential	61.6	63.1	1.5	52.2	53.5	1.3	56.9	58.3	1.5	47.8	49	1.3	56.5	58.5	2	47.5	49.5	2
200002652030	RHOSYDD GANOL BODEDERN HOLYHEAD LL65 3S	Residential	57	57.2	0.2	58	58.3	0.3	52.4	52.6	0.2	53.4	53.7	0.3	52.5	52.5	0	53.5	53.5	0
200002652143	BRONWYLFA HOLYHEAD LL65 4PB	Residential	46.1	47.4	1.3	40.5	41.1	0.6	41.8	43.1	1.3	36.4	37	0.6	42.5	43.5	1	36.5	37.5	1
200002652194	1 YR ERWLONDON ROAD HOLYHEAD LL65 2PT	Residential	52.6	52.7	0.1	47	47.3	0.3	48.2	48.2	0.1	42.7	43	0.3	48.5	48.5	0	42.5	43.5	1
200002652460	JEWSON LTDCYTTIR ROAD HOLYHEAD LL65 2P	Residential	51.8	52	0.2	50.1	50.5	0.4	47.4	47.6	0.2	45.7	46.1	0.4	47.5	47.5	0	45.5	46.5	1
200002652464	CAER ELEN HOLYHEAD LL65 3DX	Residential	54.2	54.7	0.5	54.3	54.8	0.5	49.7	50.2	0.5	49.8	50.3	0.5	49.5	50.5	1	49.5	50.5	1
200002652517	10 GARTH Y FELIN VALLEY HOLYHEAD LL65 3	Residential	56	56.2	0.2	55	55.2	0.2	51.5	51.6	0.2	50.5	50.7	0.2	51.5	51.5	0	50.5	50.5	0
200002652614	TY CAPEL SOAR - Place of Worship	Place of Worship	67.2	68.6	1.4	50.4	49.3	-1.1	62.3	63.7	1.4	46	45	-1.1	62.5	63.5	1	46.5	45.5	-1
10013458455_B	STABLE FLATGWAELOD MAWR CAERGEILIOG HOL	Residential	50.8	51.1	0.3	57.1	57.6	0.5	46.4	46.7	0.3	52.5	53	0.5	46.5	46.5	0	52.5	53.5	1
10013853000_1	PENRHYN GEIRIOL	Residential	44.8	45.1	0.3	47.1	47.5	0.4	40.6	40.9	0.3	42.8	43.2	0.4	40.5	41.5	1	43.5	43.5	0
12_PENRHYN GEIRIOL	PENRHYN GEIRIOL	Residential	49.3	49.6	0.3	44.5	45	0.5	45	45.2	0.3	40.3	40.8	0.5	45.5	45.5	0	40.5	41.5	1
13_PENRHYN GEIRIOL	PENRHYN GEIRIOL	Residential	44.9	45.3	0.4	47.1	47.6	0.5	40.7	41.1	0.4	42.8	43.3	0.5	40.5	41.5	1	43.5	43.5	0

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
14_PENRHYN GEIRIOL	PENRHYN GEIRIOL	Residential	44.3	44.6	0.3	44.3	44.8	0.5	40.1	40.4	0.3	40.1	40.6	0.5	40.5	40.5	0	40.5	40.5	0
15_PENRHYN GEIRIOL	18/017/1	PROW	50.4	51.9	1.5	50.4	52.4	2	46	47.5	1.5	46	48	1.9	46.5	47.5	1	46.5	48.5	2
18/017/1	18/018/1 DIVERTED	PROW	63.4	64.9	1.5	63.4	61.9	-1.5	58.6	60.1	1.5	58.6	57.2	-1.5	58.5	60.5	2	58.5	57.5	-1
18/018/1	18/050/1	PROW	52	53.6	1.6	51.9	54.3	2.4	47.6	49.1	1.6	47.5	49.8	2.3	47.5	49.5	2	47.5	49.5	2
18/050/1	18/055/2	PROW	50.6	52.2	1.6	50.5	52.9	2.4	46.2	47.8	1.6	46.1	48.4	2.3	46.5	47.5	1	46.5	48.5	2
18/055/2	18/056/1	PROW	45.3	46.9	1.6	45.2	47.6	2.4	41.1	42.6	1.6	41	43.3	2.3	41.5	42.5	1	41.5	43.5	2
18/056/1	18/057/2	PROW	52.3	53.9	1.6	52.2	54.6	2.4	47.9	49.4	1.6	47.8	50.1	2.3	48.5	49.5	1	47.5	50.5	3
18/057/2	18/061/1	PROW	46.8	48.3	1.5	46.8	49.1	2.3	42.5	44	1.5	42.5	44.8	2.2	42.5	44.5	2	42.5	44.5	2
18/061/1	18/062/1	PROW	46.5	47.9	1.4	46.4	48.5	2.1	42.2	43.6	1.4	42.1	44.2	2	42.5	43.5	1	42.5	44.5	2
18/062/1	18/067/01	PROW	48.6	50.1	1.5	48.6	50.4	1.8	44.3	45.7	1.5	44.3	46	1.7	44.5	45.5	1	44.5	46.5	2
18/067/01	Industrial	Industrial	57.9	58.2	0.3	50.3	50.6	0.3	53.3	53.6	0.3	45.9	46.2	0.3	53.5	53.5	0	46.5	46.5	0
2_A55 London Rd	PENRHYN GEIRIOL LL65 2YW	Residential	43.8	44.2	0.4	49.7	50.1	0.4	39.6	40	0.4	45.3	45.7	0.4	39.5	40.5	1	45.5	45.5	0
200002648182A	PENRHYN GEIRIOL LL65 2YW	Residential	44.3	44.7	0.4	44.3	44.9	0.6	40.1	40.5	0.4	40.1	40.7	0.6	40.5	40.5	0	40.5	40.5	0
200002648182B	PENRHYN GEIRIOL LL65 2YW	Residential	50.8	51.1	0.3	44.4	44.9	0.5	46.4	46.7	0.3	40.2	40.7	0.5	46.5	46.5	0	40.5	40.5	0
200002648182C	PENRHYN GEIRIOL LL65 2YW	Residential	49.9	50.2	0.3	43.6	44.1	0.5	45.5	45.8	0.3	39.4	39.9	0.5	45.5	46.5	1	39.5	40.5	1
200002648182D	PENRHYN GEIRIOL LL65 2YW	Residential	45.2	45.6	0.4	45.2	45.8	0.6	41	41.4	0.4	41	41.6	0.6	41.5	41.5	0	41.5	41.5	0
200002648182E	PENRHYN GEIRIOL LL65 2YW	Residential	48.3	48.6	0.3	49.3	49.7	0.4	44	44.3	0.3	45	45.3	0.4	44.5	44.5	0	45.5	45.5	0
200002648182F	PENRHYN GEIRIOL LL65 2YW	Residential	46.8	47.1	0.3	47	47.5	0.5	42.5	42.8	0.3	42.7	43.2	0.5	42.5	43.5	1	42.5	43.5	1
200002648182G	PENRHYN GEIRIOL LL65 2YW	Residential	43.2	43.6	0.4	47.4	47.9	0.5	39	39.4	0.4	43.1	43.6	0.5	39.5	39.5	0	43.5	43.5	0
200002648182H	PENRHYN GEIRIOL LL65 2YW	Residential	49.4	49.7	0.3	48	48.5	0.5	45	45.3	0.3	43.7	44.2	0.5	45.5	45.5	0	43.5	44.5	1
200002648182I	PENRHYN GEIRIOL LL65 2YW	Residential	42.8	43.2	0.4	43.3	43.8	0.5	38.6	39	0.4	39.1	39.6	0.5	38.5	39.5	1	39.5	39.5	0
200002648182J	PENRHYN GEIRIOL LL65 2YW	Residential	41.9	42.2	0.3	47.8	48.2	0.4	37.8	38.1	0.3	43.5	43.9	0.4	38.5	38.5	0	43.5	44.5	1
200002648182K	27/007/1	PROW	49.7	51	1.3	49.7	51.8	2.1	45.3	46.6	1.3	45.3	47.4	2	45.5	46.5	1	45.5	47.5	2
27/007/1	27/008/1	PROW	49.2	50.5	1.3	49.2	51.1	1.9	44.9	46.1	1.3	44.9	46.7	1.8	45.5	46.5	1	45.5	46.5	1
27/008/1	27/012/1 DIVERTED	PROW	52.2	53.6	1.4	52.2	53.8	1.6	47.8	49.1	1.4	47.8	49.3	1.6	47.5	49.5	2	47.5	49.5	2
27/012/1 DIVERTED	27/018/1	PROW	51.6	52.9	1.3	47.3	50.5	3.2	47.2	48.4	1.3	43	46.1	3.1	47.5	48.5	1	43.5	46.5	3

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
27/018/1	27/020/1	PROW	45.9	47.2	1.3	44.4	51.5	7.1	41.7	42.9	1.3	40.2	47.1	6.9	41.5	43.5	2	40.5	47.5	7
27/020/1	29/007/2	PROW	52.8	54.4	1.6	52.8	54.9	2.1	48.3	49.9	1.6	48.3	50.4	2	48.5	50.5	2	48.5	50.5	2
29/007/2	29/008/1	PROW	53.1	54.6	1.5	53.1	53.6	0.5	48.6	50.1	1.5	48.6	49.1	0.5	48.5	50.5	2	48.5	49.5	1
29/008/1	29/011/4	PROW	43	44.3	1.3	43	44.1	1.1	38.8	40.1	1.3	38.8	39.9	1.1	39.5	40.5	1	39.5	40.5	1
29/011/4	29/013/01	PROW	48.2	49.7	1.5	48.2	49.7	1.5	43.9	45.3	1.5	43.9	45.3	1.5	44.5	45.5	1	44.5	45.5	1
29/013/01	29/029/1	PROW	47	48.5	1.5	46.9	48.5	1.6	42.7	44.2	1.5	42.6	44.2	1.6	42.5	44.5	2	42.5	44.5	2
29/029/1	Industrial	PROW	49.3	49.6	0.3	49.7	50.1	0.4	45	45.2	0.3	45.3	45.7	0.4	45.5	45.5	0	45.5	45.5	0
3_A55 London Rd	33/033A/1	PROW	51	52.5	1.5	50.9	53.2	2.3	46.6	48.1	1.5	46.5	48.7	2.2	46.5	48.5	2	46.5	48.5	2
33/033A/1	38/013/2	PROW	55.9	57.6	1.7	56	55.1	-0.9	51.4	53	1.6	51.5	50.6	-0.9	51.5	53.5	2	51.5	50.5	-1
38/013/2	38/013/3	PROW	56.5	58.2	1.7	56.6	56	-0.6	51.9	53.6	1.6	52	51.5	-0.6	52.5	53.5	1	52.5	51.5	-1
38/013/3	38/029/1	PROW	52.2	53.7	1.5	52.1	54.5	2.4	47.8	49.2	1.5	47.7	50	2.3	47.5	49.5	2	47.5	50.5	3
38/029/1	38/0300B/1	PROW	56.5	58	1.5	56.5	50.3	-6.2	51.9	53.4	1.5	51.9	45.9	-6	52.5	53.5	1	52.5	46.5	-6
38/0300B/1	38/033/1	PROW	52.5	54	1.5	52.5	54.9	2.4	48.1	49.5	1.5	48.1	50.4	2.3	48.5	49.5	1	48.5	50.5	2
38/033/1	38/036/5	PROW	49.9	51.4	1.5	49.9	52.3	2.4	45.5	47	1.5	45.5	47.9	2.3	45.5	47.5	2	45.5	48.5	3
38/036/5	38/039/1	PROW	55	56.5	1.5	54.9	57.1	2.2	50.5	51.9	1.5	50.4	52.5	2.1	50.5	52.5	2	50.5	52.5	2
38/039/1	49/009/1	PROW	53.8	54.9	1.1	53.8	55.4	1.6	49.3	50.4	1.1	49.3	50.9	1.6	49.5	50.5	1	49.5	50.5	1
49/009/1	49/010/1	PROW	53.2	54.3	1.1	53.2	54.7	1.5	48.7	49.8	1.1	48.7	50.2	1.5	48.5	49.5	1	48.5	50.5	2
49/010/1	49/011/1	PROW	57.5	58.9	1.4	57.7	59.3	1.6	52.9	54.3	1.4	53.1	54.7	1.6	52.5	54.5	2	53.5	54.5	1
49/011/1	49/014/2	PROW	54.4	55.6	1.2	54.4	56	1.6	49.9	51.1	1.2	49.9	51.5	1.6	50.5	51.5	1	50.5	51.5	1
49/014/2	49016/2	PROW	56.5	57.6	1.1	56.5	58.1	1.6	51.9	53	1.1	51.9	53.5	1.6	52.5	53.5	1	52.5	53.5	1
49016/2	Dinam Rd_1	Residential	52.4	52.8	0.4	52.4	52.9	0.5	48	48.3	0.4	48	48.4	0.5	48.5	48.5	0	48.5	48.5	0
Dinam Rd_1	Dinam Rd_2	Residential	52.4	52.8	0.4	52.4	52.9	0.5	48	48.3	0.4	48	48.4	0.5	48.5	48.5	0	48.5	48.5	0
Dinam Rd_2	Dinam Rd_3	Residential	52.2	52.6	0.4	52.2	52.7	0.5	47.8	48.2	0.4	47.8	48.2	0.5	47.5	48.5	1	47.5	48.5	1
Dinam Rd_3	Dinam Rd_4	Residential	52.4	52.8	0.4	52.4	52.9	0.5	48	48.3	0.4	48	48.4	0.5	48.5	48.5	0	48.5	48.5	0
Dinam Rd_4	Dol Eithin_1	Residential	51.9	52.3	0.4	51.9	52.4	0.5	47.5	47.9	0.4	47.5	48	0.5	47.5	48.5	1	47.5	48.5	1
Dol Eithin_1	Dol Eithin_2	Residential	51.9	52.3	0.4	51.9	52.4	0.5	47.5	47.9	0.4	47.5	48	0.5	47.5	48.5	1	47.5	48.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
Dol Eithin_2	Footpath to North	PROW	50.8	51.1	0.3	50.8	51.2	0.4	46.4	46.7	0.3	46.4	46.8	0.4	46.5	46.5	0	46.5	46.5	0
Footpath_1	Footpath to North	PROW	52	52.2	0.2	52	52.3	0.3	47.6	47.8	0.2	47.6	47.9	0.3	47.5	47.5	0	47.5	48.5	1
Footpath_2	Minffordd Rd_1	Residential	52.3	52.7	0.4	52.3	52.8	0.5	47.9	48.2	0.4	47.9	48.3	0.5	48.5	48.5	0	48.5	48.5	0
Minffordd Rd_1	Minffordd Rd_2	Residential	52.1	52.5	0.4	52	52.5	0.5	47.7	48.1	0.4	47.6	48.1	0.5	47.5	48.5	1	47.5	48.5	1
Minffordd Rd_2	Minffordd Rd_3	Residential	51.8	52.2	0.4	51.8	52.3	0.5	47.4	47.8	0.4	47.4	47.9	0.5	47.5	47.5	0	47.5	48.5	1
Minffordd Rd_3	Minffordd Rd_4	Residential	50.8	51.2	0.4	50.9	51.4	0.5	46.4	46.8	0.4	46.5	47	0.5	46.5	46.5	0	46.5	47.5	1
Minffordd Rd_4	Minffordd Rd_5	Residential	50.8	51.2	0.4	50.9	51.4	0.5	46.4	46.8	0.4	46.5	47	0.5	46.5	46.5	0	46.5	47.5	1
Minffordd Rd_5	Minffordd Rd_6	Residential	51.5	51.9	0.4	51.5	52	0.5	47.1	47.5	0.4	47.1	47.6	0.5	47.5	47.5	0	47.5	47.5	0
Minffordd Rd_6	Llanfachraeth Play Area	Outdoor Amenity	48.9	50.2	1.3	48.9	44.4	-4.5	44.6	45.8	1.3	44.6	40.2	-4.4	44.5	46.5	2	44.5	40.5	-4
OAXX10	Llanfaethlu Play Area	Outdoor Amenity	43.9	45.1	1.2	43.9	43.2	-0.7	39.7	40.9	1.2	39.7	39	-0.7	40.5	41.5	1	40.5	39.5	-1
OAXX15	Holyhead Leisure Centre Playing Fields	Outdoor Amenity	42.2	42.6	0.4	42.2	42.9	0.7	38.1	38.5	0.4	38.1	38.7	0.7	38.5	38.5	0	38.5	39.5	1
OAXXX4	Holyhead Leisure Centre Playing Fields	Outdoor Amenity	43	43.4	0.4	42.9	43.6	0.7	38.8	39.2	0.4	38.7	39.4	0.7	39.5	39.5	0	39.5	39.5	0
OAXXX5	KINGSLAND PRIMARY SCHOOL Playing Fields	Outdoor Amenity	56.2	56.3	0.1	56.2	56.5	0.3	51.6	51.7	0.1	51.6	51.9	0.3	51.5	51.5	0	51.5	52.5	1
OAXXX6	Ynys Wen Valley Cemetry	Outdoor Amenity	61.3	62	0.7	61.3	59.3	-2	56.6	57.3	0.7	56.6	54.7	-1.9	56.5	57.5	1	56.5	54.5	-2
OAXXX7	Dronwy Caravan Park	Outdoor Amenity	43.7	45	1.3	43.6	45.8	2.2	39.5	40.8	1.3	39.4	41.6	2.1	39.5	41.5	2	39.5	41.5	2
OAXXX9	Tyddyn Pioden Barn, Kingsland Road	Residential	56.5	57.2	0.7	53.4	54.6	1.2	51.9	52.6	0.7	48.9	50.1	1.2	52.5	52.5	0	49.5	50.5	1
Tyddyn Pioden_Barn	Cottages Near Logistics	Residential	47.8	48.1	0.3	48	48.4	0.4	43.5	43.8	0.3	43.7	44.1	0.4	43.5	44.5	1	43.5	44.5	1
XXXX001	Holyhead Industrial Park 1	Industrial	58.8	59.1	0.3	56.9	57.3	0.4	54.2	54.5	0.3	52.3	52.7	0.4	54.5	54.5	0	52.5	52.5	0
XXXX002	Holyhead Industrial Park 2	Industrial	51.3	51.5	0.2	51.4	51.7	0.3	46.9	47.1	0.2	47	47.3	0.3	47.5	47.5	0	47.5	47.5	0
XXXX003	Extra Property	Residential	36.1	37.5	1.4	36.1	38.2	2.1	32.1	33.5	1.4	32.1	34.2	2	32.5	33.5	1	32.5	34.5	2
XXXX008	Extra Property at Llanfaethlu	Residential	37.6	39.1	1.5	37.5	39	1.5	33.6	35.1	1.5	33.5	35	1.5	34.5	35.5	1	33.5	35.5	2
XXXX012	Extra Property at Llanfaethlu	Residential	41.8	43.1	1.3	39.9	40.1	0.2	37.7	38.9	1.3	35.8	36	0.2	38.5	39.5	1	36.5	36.5	0
XXXX013	Extra Property at Llanfaethlu	Residential	41.2	42.5	1.3	40	40.1	0.1	37.1	38.4	1.3	35.9	36	0.1	37.5	38.5	1	36.5	36.5	0
XXXX014	Extra Property at Llanfaethlu	Residential	38.5	39.7	1.2	37.8	38.1	0.3	34.5	35.6	1.2	33.8	34.1	0.3	34.5	36.5	2	34.5	34.5	0
XXXX015	Extra Property at Llanfaethlu	Residential	40.8	42	1.2	38.6	38.9	0.3	36.7	37.9	1.2	34.6	34.9	0.3	37.5	38.5	1	34.5	35.5	1
XXXX016	Extra Property at Cefn Coch	Residential	46.6	48.1	1.5	39.7	40.9	1.2	42.3	43.8	1.5	35.6	36.8	1.2	42.5	44.5	2	36.5	37.5	1

Rep. ID	Receptor Name	Type	Predicted Daytime Noise Level, dB $L_{A10, 18hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 4hrs}$						Predicted Daytime Noise Level, dB $L_{Aeq, 16hrs}$					
			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 Without Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses			DM 2020 vs. DS 2020 Without Bypasses			DM 2023 vs. DS 2023 With Bypasses		
			DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference	DM2020	DS2020	Difference	DM2023	DS2033	Difference
XXXX017	Extra Property at Cefn Coch	Residential	43.3	44.8	1.5	38.7	39.7	1	39.1	40.6	1.5	34.7	35.6	1	39.5	40.5	1	35.5	36.5	1
XXXX021	Extra Property at Cefn Coch	Residential	42.4	43.9	1.5	38.2	38.9	0.7	38.3	39.7	1.5	34.2	34.9	0.7	38.5	40.5	2	34.5	35.5	1
XXXX022	Eglwys Sant Maethlu Church	Place of Worship	49.2	50.6	1.4	47.4	48.3	0.9	44.9	46.2	1.4	43.1	44	0.9	45.5	46.5	1	43.5	44.5	1
XXXX301	Condessa Welsh Liqueurs	Residential	50.1	51.8	1.7	50.4	52.8	2.4	45.7	47.4	1.6	46	48.3	2.3	45.5	47.5	2	46.5	48.5	2
XXXX302	CHURCH	Place of Worship	62.7	63.9	1.2	43.9	41.2	-2.7	57.9	59.1	1.2	39.7	37.1	-2.6	57.5	59.5	2	40.5	37.5	-3
XXXX303	Extra Property	Residential	61.8	63.4	1.6	61.1	63.6	2.5	57.1	58.6	1.6	56.4	58.8	2.4	57.5	58.5	1	56.5	58.5	2
XXXX305	Extra Property	Residential	66.2	67.4	1.2	53.7	49.2	-4.5	61.3	62.5	1.2	49.2	44.9	-4.4	61.5	62.5	1	49.5	45.5	-4
XXXX306	CHURCH	Place of Worship	62.3	63.7	1.4	44.9	40.5	-4.4	57.6	58.9	1.4	40.7	36.4	-4.3	57.5	58.5	1	40.5	36.5	-4
XXXX307	Extra Property	Residential	40.4	41.9	1.5	39.6	40.7	1.1	36.3	37.8	1.5	35.5	36.6	1.1	36.5	38.5	2	35.5	36.5	1

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HORIZON NUCLEAR POWER

WYLFA NEWYDD

ENERGY WORKING FOR BRITAIN

Wylfa Newydd Project
Environmental Statement Addendum Appendix D-A
WNDA Development Figure Booklet – Volume D

PINS Reference Number: EN010007

25 March 2019

Revision 1.0
Examination Deadline 8

Regulation Number: 5(2)(a)

Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Horizon Internal DCRM Number: WN0902-HZDCO-PAC-REP-00311

Contents

Figure D5-5 - AIR QUALITY MODELLING CONSTRUCTION PLANT WORKING ZONES AND HAUL ROUTES

Figure D5-7 - PREDICTED CHANGE IN ANNUAL MEAN NITROGEN DIOXIDE CONCENTRATIONS AT HUMAN RECEPTORS - YEAR 2 PEAK EARTHWORKS AND MARINE WORKS (RESIDUAL EFFECTS)

Figure D5-8 - PREDICTED CHANGE IN ANNUAL MEAN NITROGEN DIOXIDE CONCENTRATIONS AT HUMAN RECEPTORS - YEAR 5 PEAK CONSTRUCTION (RESIDUAL EFFECTS)

Figure D5-9 - PREDICTED TOTAL ONE-HOUR MEAN (99.8th PERCENTILE) NITROGEN DIOXIDE CONCENTRATIONS AT HUMAN RECPTORS - YEAR 2 PEAK EARTHWORKS AND MARINE WORKS (RESIDUAL EFFECTS)

Figure D5-10 - PREDICTED TOTAL ONE-HOUR MEAN (99.8th PERCENTILE) NITROGEN DIOXIDE CONCENTRATIONSM AT HUMAN RECEPTORS - YEAR 5 PEAK CONSTRUCTION (RESIDUAL EFFECTS)

Figure D6-2 - CONSTRUCTION ZONES AND HAUL ROUTES USED FOR ASSESSMENT IN THE DCO APPLICATION

Overview of Figure Sheets - PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS OVERVIEW

Figure 1, Sheets 1-17 - PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (DAYTIME)

Figure 2, Sheets 1-17 - PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (EVENING)

Figure 3, Sheets 1-17 - PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (NIGHT-TIME)

Figure 4, Sheets 1-17 - PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (DAYTIME)

Figure 5, Sheets 1-17 - PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (EVENING)

Figure 6, Sheets 1-17 - PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (NIGHT-TIME)

Figure 7, Sheets 1-17 - PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (DAYTIME)

Figure 8, Sheets 1-17 - PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (EVENING)

Figure 9, Sheets 1-17 - PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (NIGHT-TIME)

Figure 10, Sheets 1-17 - PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (DAYTIME)

Figure 11, Sheets 1-17 - PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (EVENING)

Figure 12, Sheets 1-17 - PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (NIGHT-TIME)

Figure 13, Sheets 1-17 - PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (DAYTIME)

Figure 14, Sheets 1-17 - PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (EVENING)

Figure 15, Sheets 1-17 - PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (NIGHT-TIME)

Figure 16, Sheets 1-17 - PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (DAYTIME)

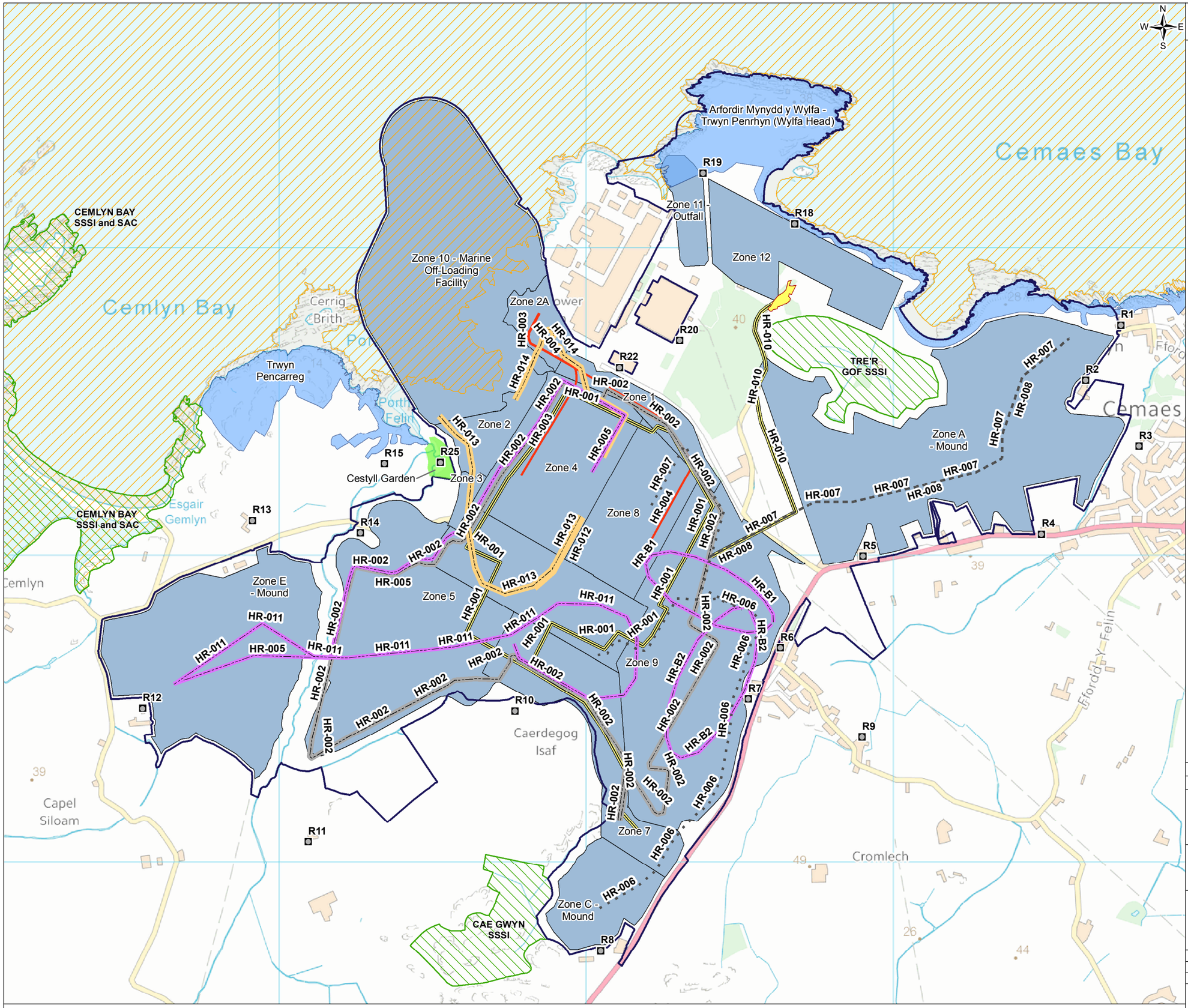
Figure 17, Sheets 1-17 - PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (EVENING)

Figure 18, Sheets 1-17 - PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (NIGHT-TIME)

Figure 2-2 - Vertical Grids showing Lux Levels

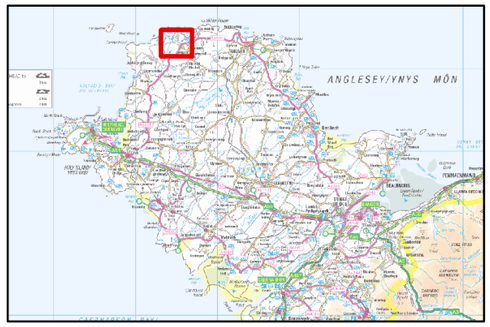
Figure 2-3 - Amended indicative earthwork haul routes as a result of the change with annotated key sensitive receptors

FIGURE D5-5



Legend

- Wylfa Newydd Development Area
- Haul route - All other vehicles
- Haul route - Earthworks: Soft and Hard Material
- Haul route - Earthworks: Hard Material
- Haul route - Earthworks: Soft Material
- Haul route - Bus route
- Haul route - Concrete
- Construction Zones
- Special Area of Conservation (SAC)
- Site of Special Scientific Interest (SSSI)
- Ancient Woodland
- Wildlife Site
- Registered Historic Park and Garden
- Key human receptors



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
1.0	OCT 18	CANDIDATE FOR CHANGE	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: AIR QUALITY MODELLING CONSTRUCTION PLANT WORKING ZONES AND HAUL ROUTES

Scale @ A3	1:12,000	DO NOT SCALE
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Client No.		

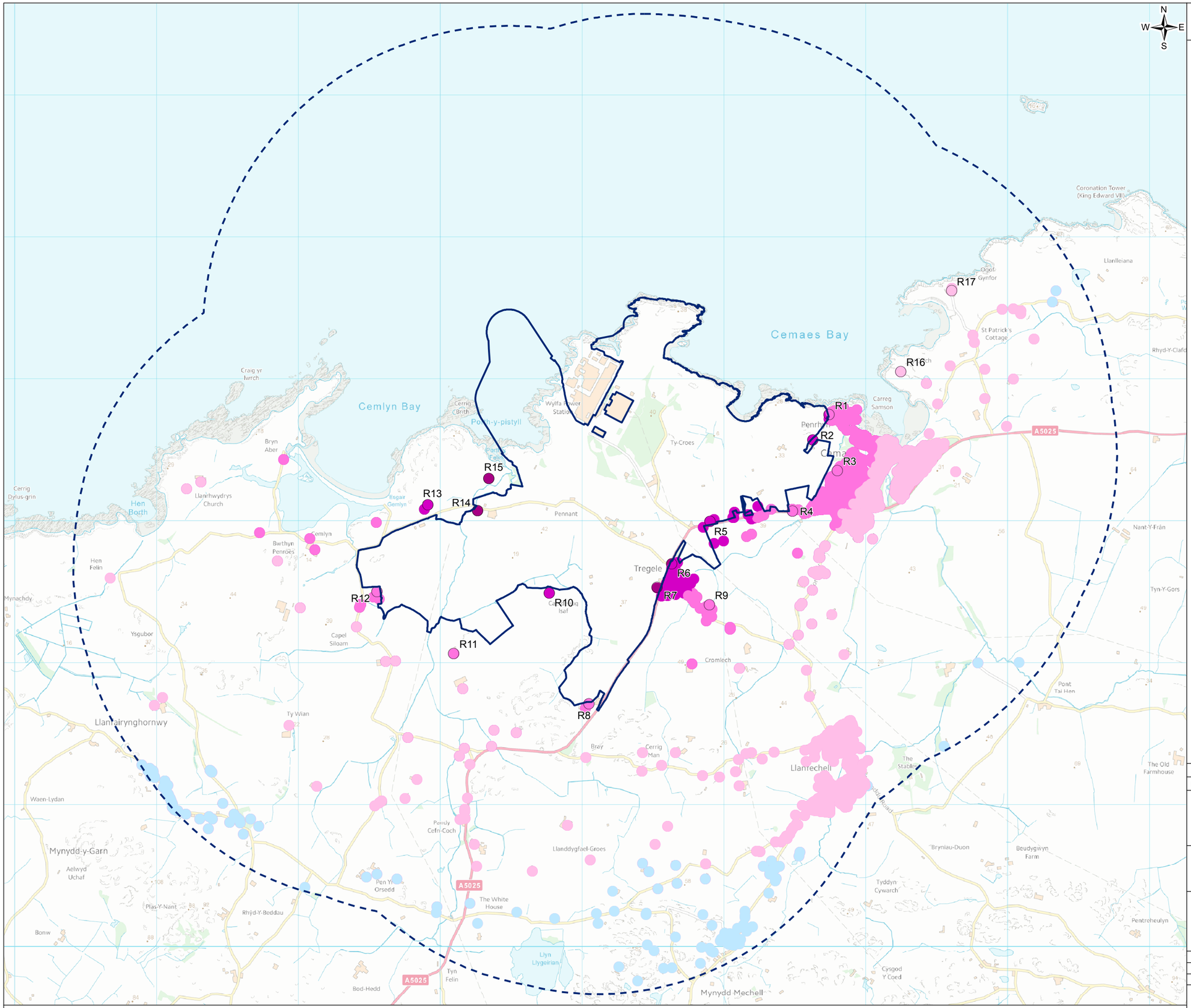
Drawing No.: 60PO80AG_VOL_D_05_05_C01

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0 75 150 300 450 600 750 metres

FIGURE D5-7



Legend

- Wylfa Newydd Development Area
- Construction plant, machinery and marine vessels study area (2km buffer from the Wylfa Newydd Development Area)
- R1 Key receptors (long-term exposure)

Change in annual mean nitrogen dioxide concentration (µg/m³)

- 0 to +0.4
- > +0.4 to +1
- > +1 to +2
- > +2 to +4
- > +4 to +10
- > +10



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
2.0	MAR 19	DCO submission	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED CHANGE IN ANNUAL MEAN NITROGEN DIOXIDE CONCENTRATIONS AT HUMAN RECEPTORS - YEAR 2 PEAK EARTHWORKS AND MARINE WORKS (RESIDUAL EFFECTS)

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0 125 250 500 750 1,000 metres

FIGURE D5-8

Legend

- Wylfa Newydd Development Area
- Construction plant, machinery and marine vessels study area (2km buffer from the Wylfa Newydd Development Area)
- Key receptors (long-term exposure) (R1)

Change in annual mean nitrogen dioxide concentration (µg/m³)

- 0 to +0.4
- > +0.4 to +1
- > +1 to +2
- > +2 to +4
- > +4 to +10
- > +10

Note: Site Campus receptors displayed at ground level (1.6m)



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
2.0	MAR 19	DCO submission	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED CHANGE IN ANNUAL MEAN NITROGEN DIOXIDE CONCENTRATIONS AT HUMAN RECEPTORS - YEAR 5 PEAK CONSTRUCTION (RESIDUAL EFFECTS)

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60PO8077_DCO_VOL_D_05_08

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0 125 250 500 750 1,000 metres

FIGURE D5-9

Legend

- Wylfa Newydd Development Area
- Construction plant, machinery and marine vessels study area (2km buffer from the Wylfa Newydd Development Area)
- R1 Key receptors (short-term exposure)

Predicted total one-hour mean (99.8th percentile) nitrogen dioxide concentrations (µg/m³)

- < 20
- > 20 - 50
- > 50 - 100
- > 100 - 150
- > 150 - 200
- >200



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
2.0	MAR 19	DCO submission	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED TOTAL ONE-HOUR MEAN (99.8th PERCENTILE) NITROGEN DIOXIDE CONCENTRATIONS AT HUMAN RECPTORS - YEAR 2 PEAK EARTHWORKS AND MARINE WORKS (RESIDUAL EFFECTS)

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0 125 250 500 750 1,000 metres

FIGURE D5-10

Legend

- Wylfa Newydd Development Area
- Construction plant, machinery and marine vessels study area (2km buffer from the Wylfa Newydd Development Area)
- Key receptors (short-term exposure) (R1)

Predicted total one-hour mean (99.8th percentile) nitrogen dioxide concentrations (µg/m³)

- < 20
- > 20 - 50
- > 50 - 100
- > 100 - 150
- > 150 - 200
- >200

Note: Site Campus receptors displayed at ground level (1.6m)



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
2.0	MAR 19	DCO submission	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED TOTAL ONE-HOUR MEAN (99.8th PERCENTILE) NITROGEN DIOXIDE CONCENTRATIONS AT HUMAN RECEPTORS - YEAR 5 PEAK CONSTRUCTION (RESIDUAL EFFECTS)

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0 125 250 500 750 1,000 metres

FIGURE D6-2

Legend

- Wylfa Newydd Development Area
- Construction zones
- Haul route for earthworks: soft and hard material
- Haul route for earthworks: hard material
- Haul route for earthworks: soft material
- Haul route for concrete distribution
- Haul route for other vehicles
- Bus circulation route



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
1.0	OCT 18	CANDIDATE FOR CHANGE	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: CONSTRUCTION ZONES AND HAUL ROUTES
USED FOR NOISE MODELLING AND ASSESSMENTS

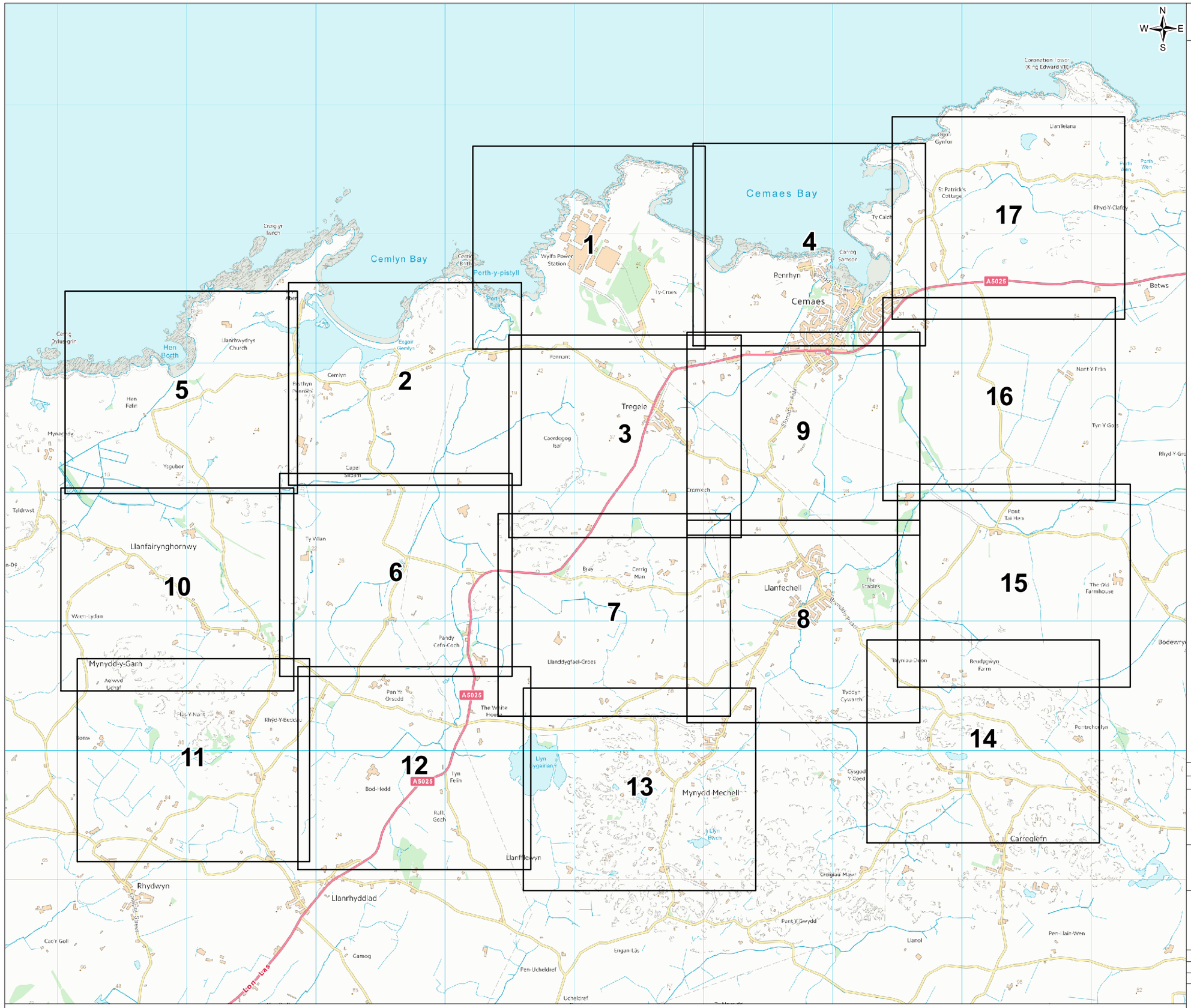
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0 125 250 500 750 1,000 1,250 metres



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0 125 250 500 metres

OVERVIEW

Legend

Figure Sheet



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS OVERVIEW

Scale @ A3	1:28,500	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_Overview

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FIGURE 1

Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (DAYTIME)
SHEET 1 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS7TO9_DAYTIME

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0 125 250 500 metres

FIGURE 1

Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (DAYTIME)
SHEET 2 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS7TO9_DAYTIME

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0 125 250 500 metres

FIGURE 1

Pennant
42
Tregele
Caerdegog
Isaf
37
49
Cromlech
26

N
W
E
S

Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (DAYTIME)
SHEET 3 OF 17

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Client No.		

Drawing No.

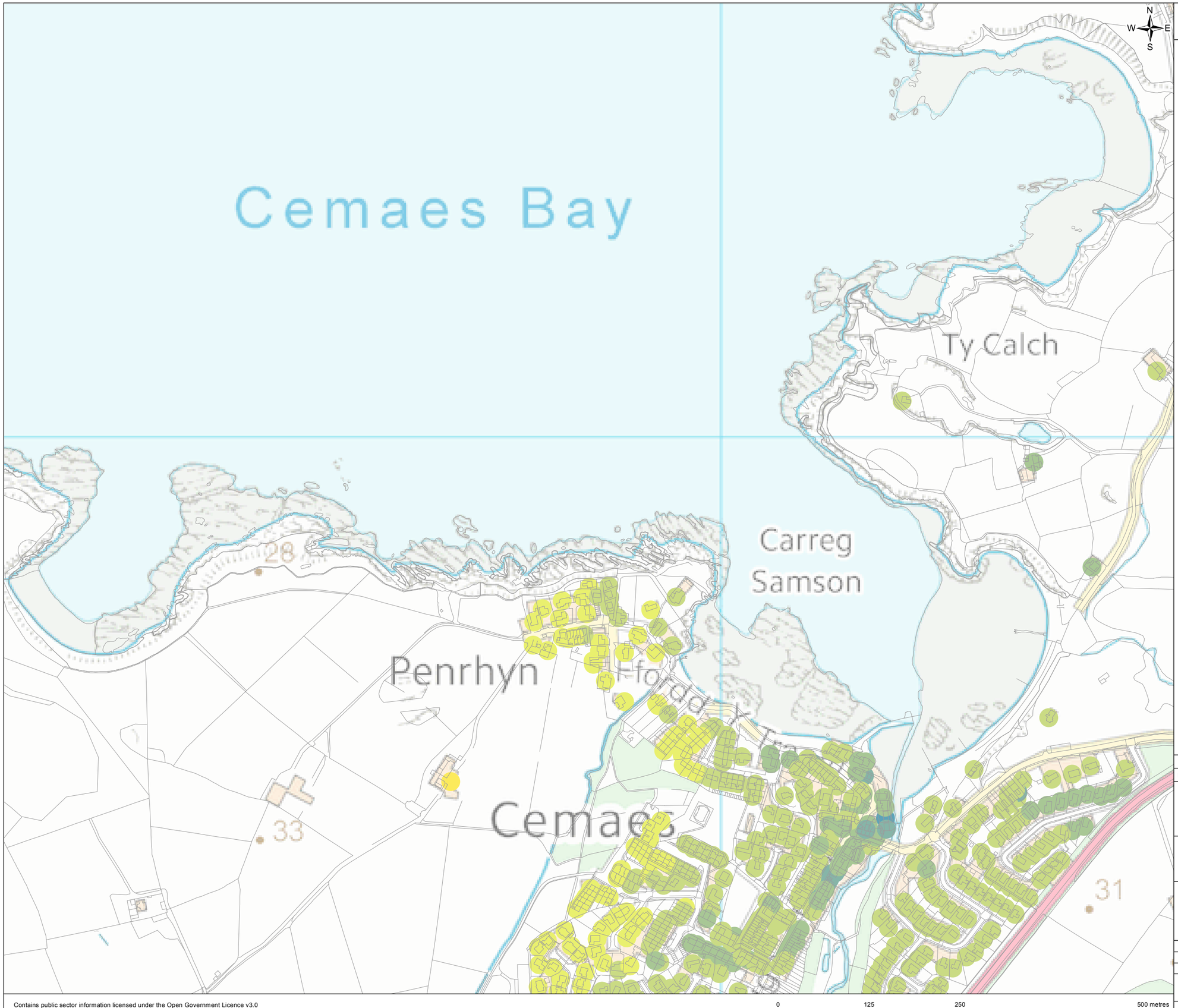
60PO80AS_NOISE_RfNMC_MONTHS7TO9_DAYTIME

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0 125 250 500 metres

FIGURE 1



Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (DAYTIME)
SHEET 4 OF 17

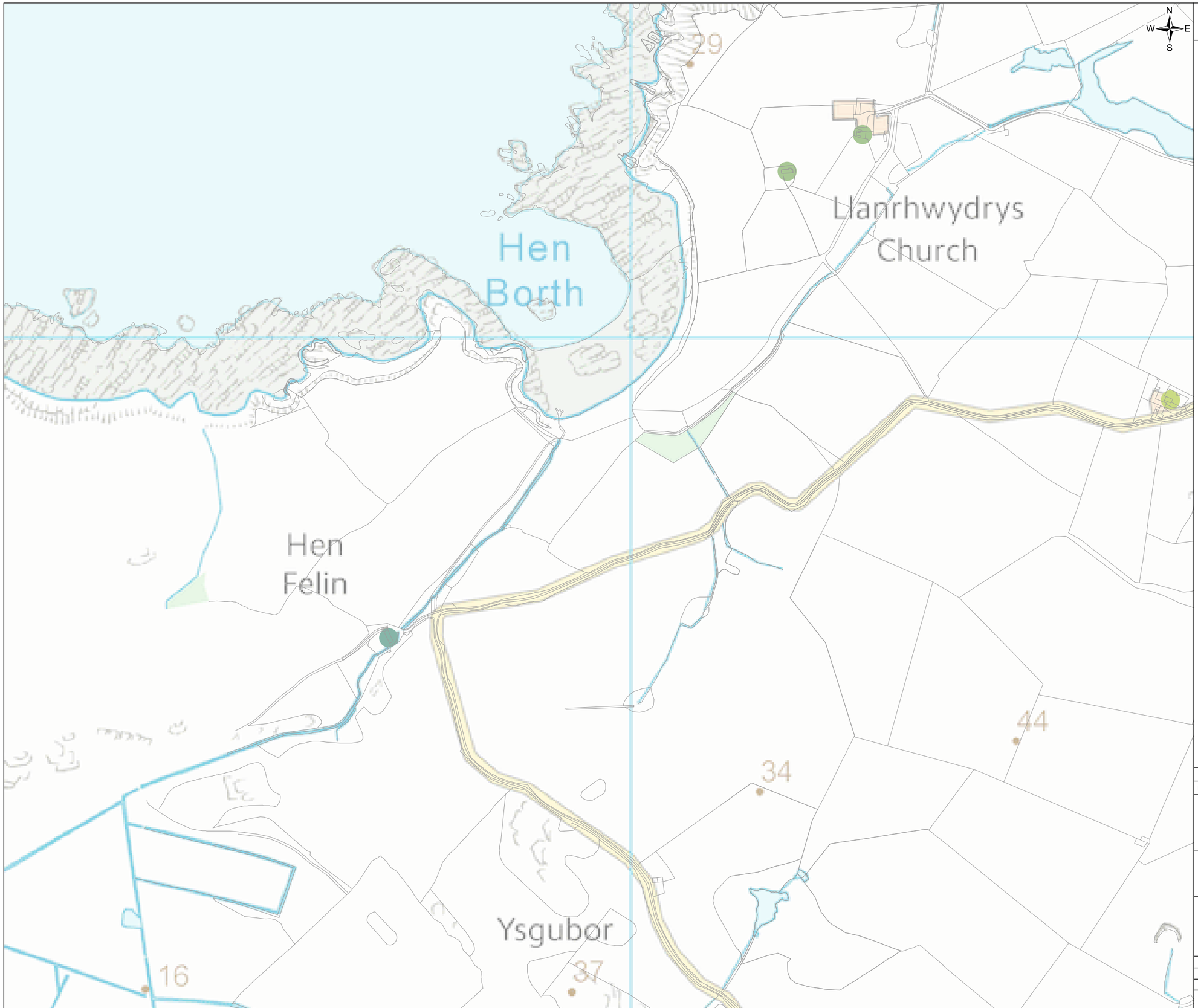
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Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS7TO9_DAYTIME

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FIGURE 1



Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (DAYTIME)
SHEET 5 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

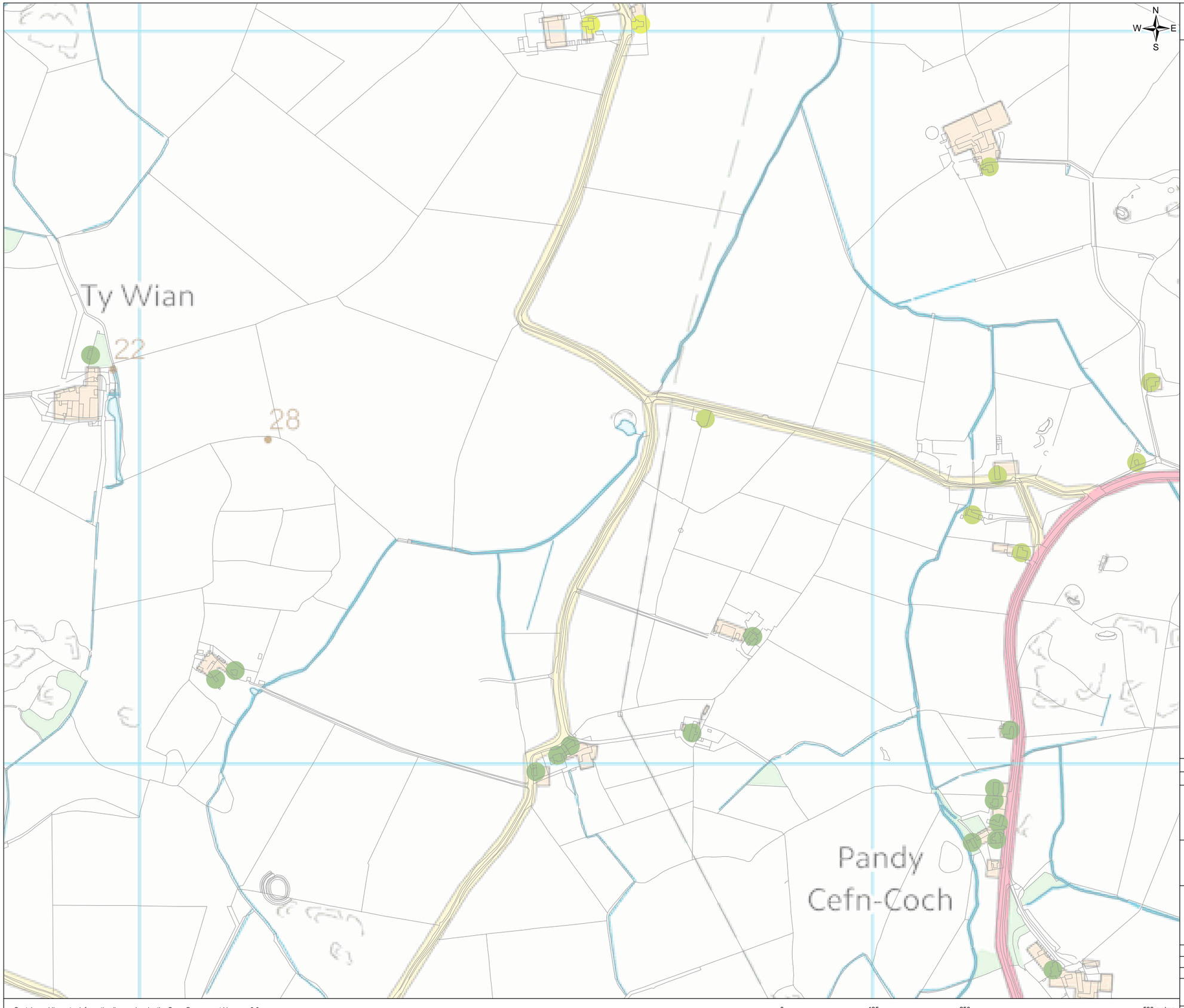
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS7TO9_DAYTIME

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0 125 250 500 metres

FIGURE 1



Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (DAYTIME)
SHEET 6 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

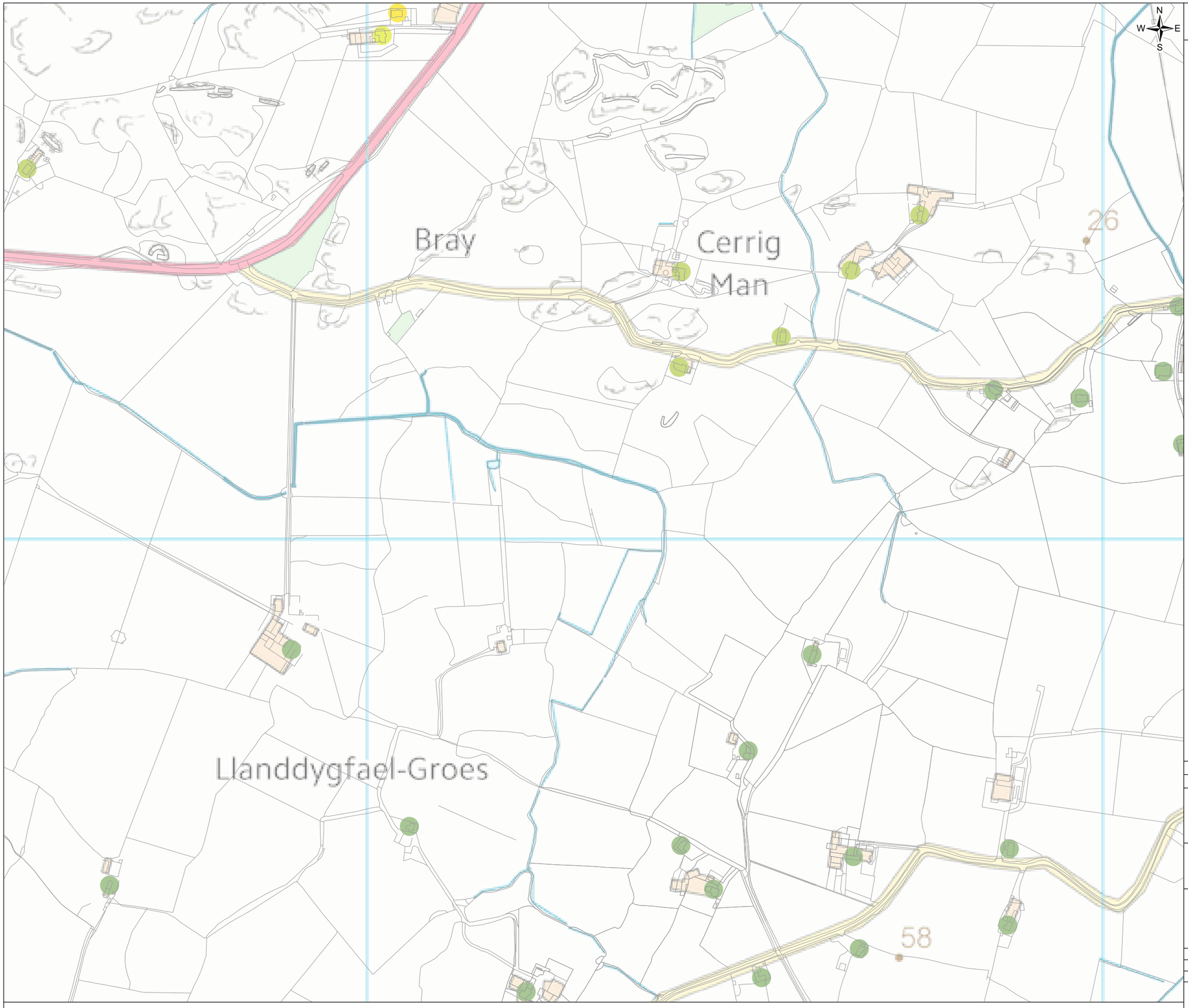
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS7TO9_DAYTIME

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0 125 250 500 metres

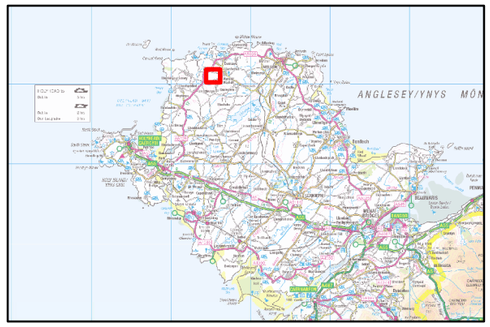
FIGURE 1



Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (DAYTIME)
SHEET 7 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS7TO9_DAYTIME

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FIGURE 1

Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (DAYTIME)
SHEET 8 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS7TO9_DAYTIME

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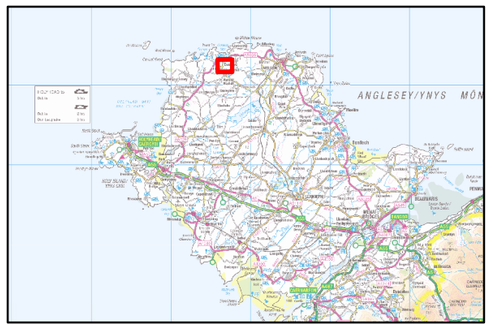
0 125 250 500 metres

FIGURE 1

Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (DAYTIME)
SHEET 9 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS7TO9_DAYTIME

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0 125 250 500 metres

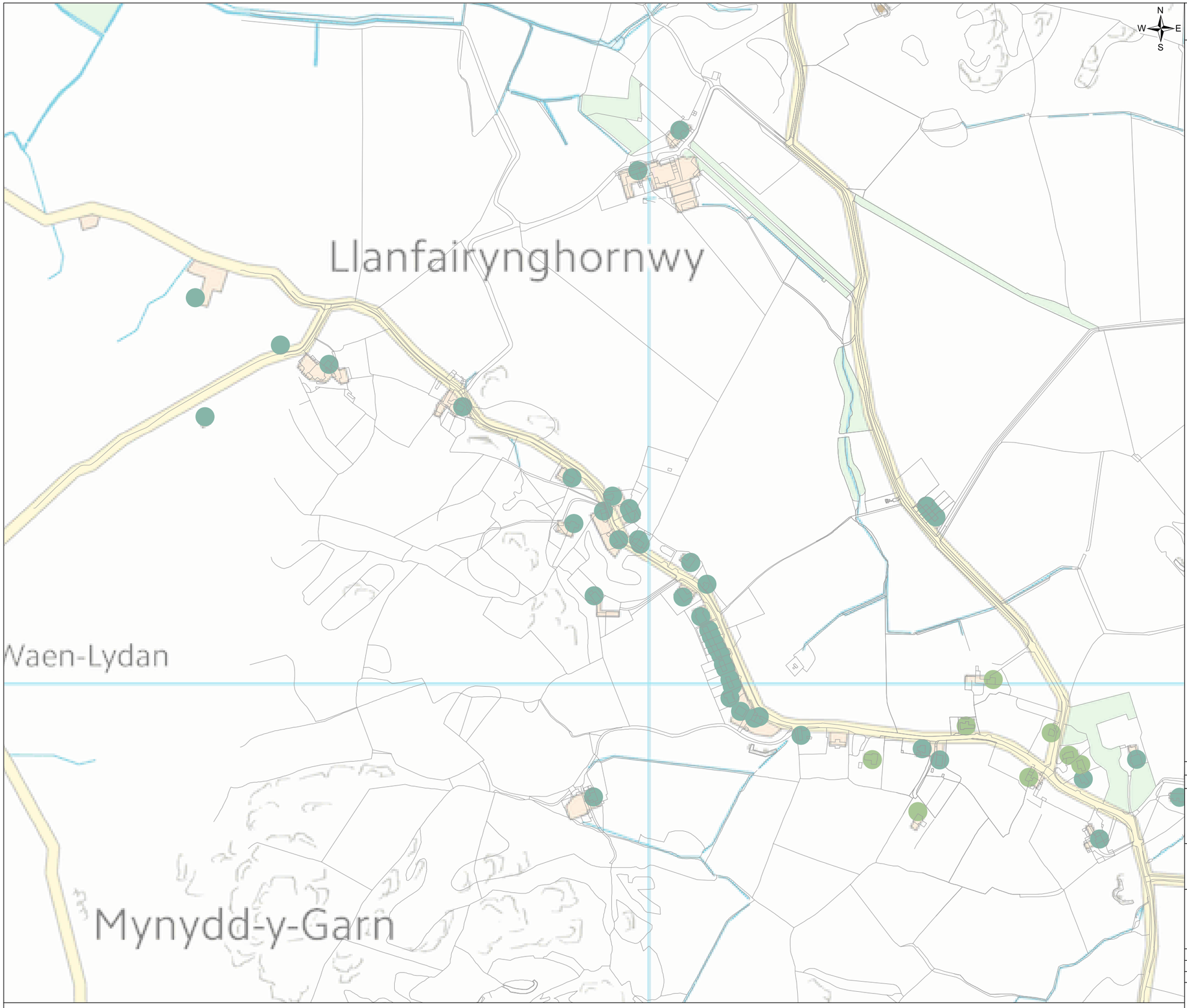


FIGURE 1

Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (DAYTIME) SHEET 10 OF 17

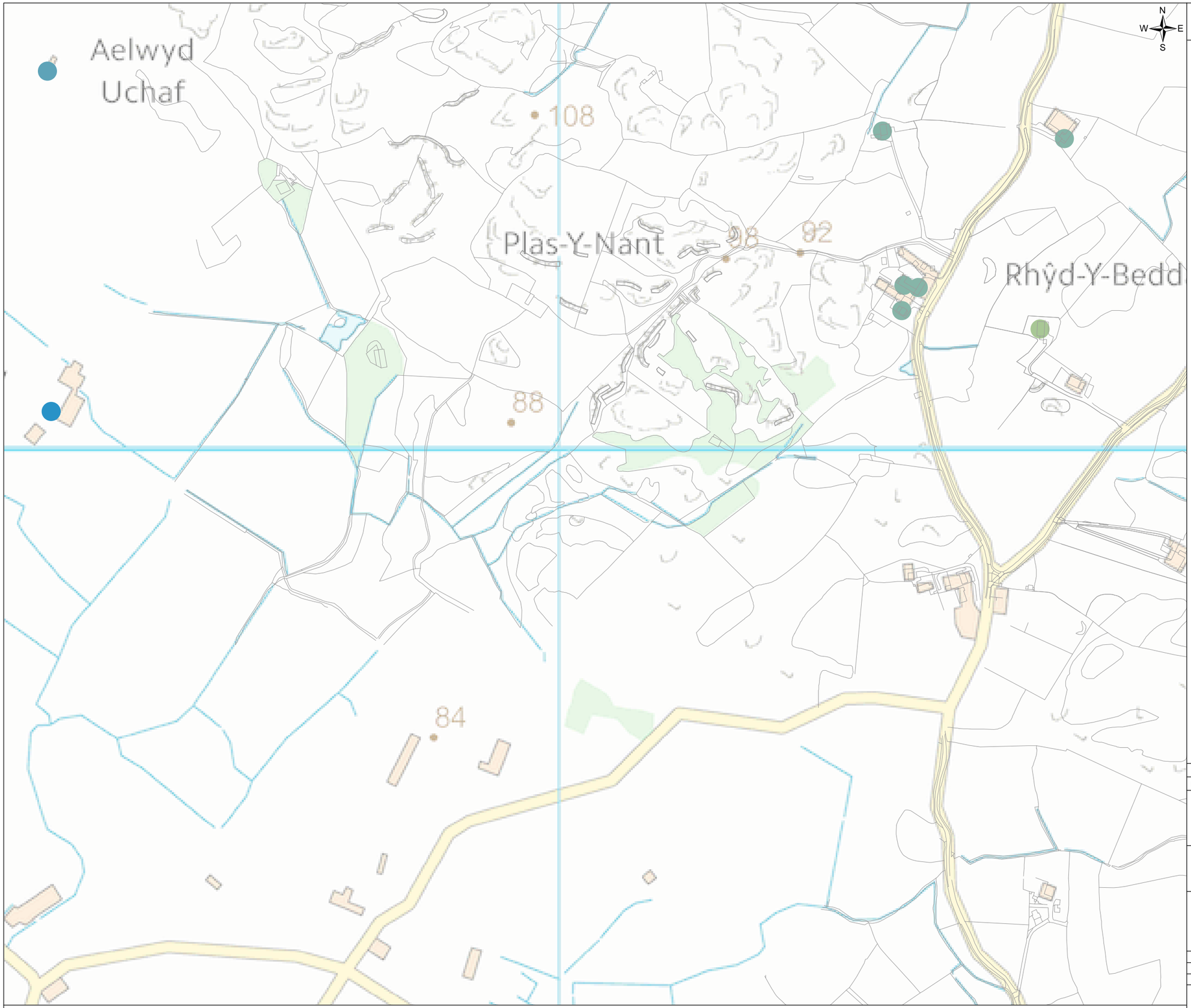
Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS7TO9_DAYTIME

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FIGURE 1



Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (DAYTIME) SHEET 11 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

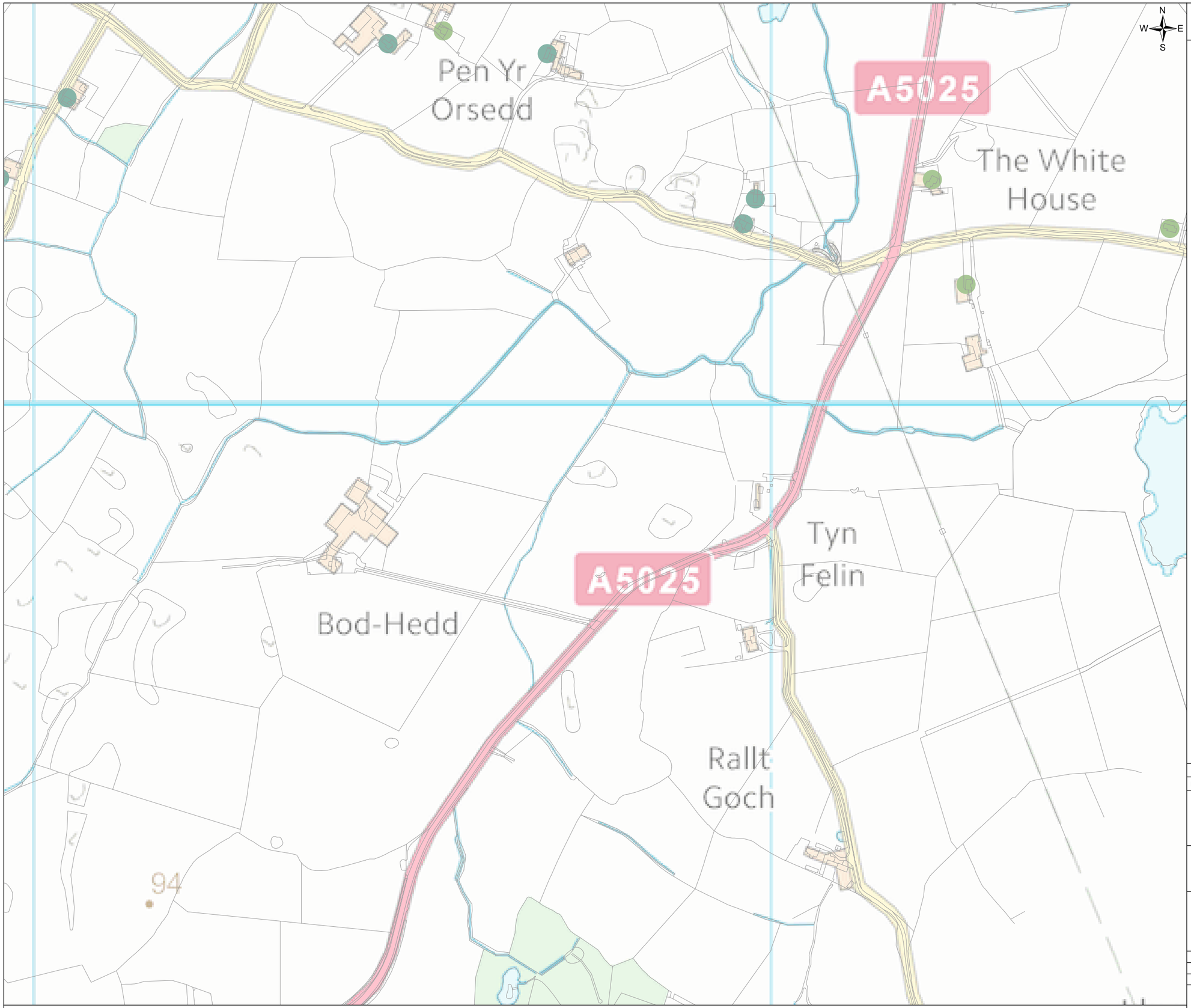
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS7TO9_DAYTIME

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0 125 250 500 metres

FIGURE 1



Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (DAYTIME)
SHEET 12 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS7TO9_DAYTIME

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0 125 250 500 metres

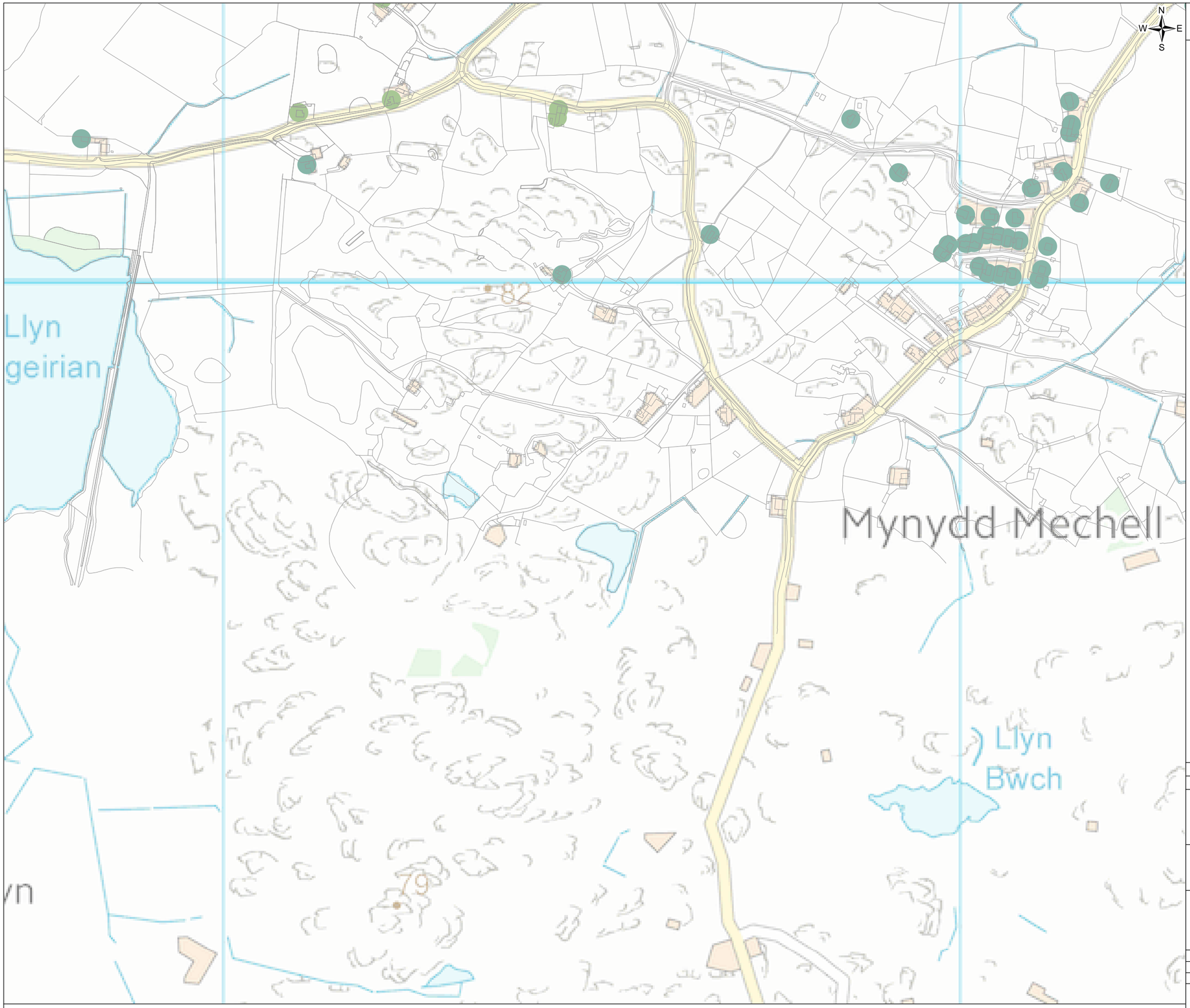
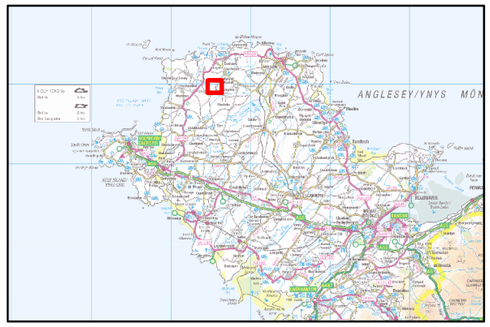


FIGURE 1

Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (DAYTIME)
SHEET 13 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS7TO9_DAYTIME

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0 125 250 500 metres

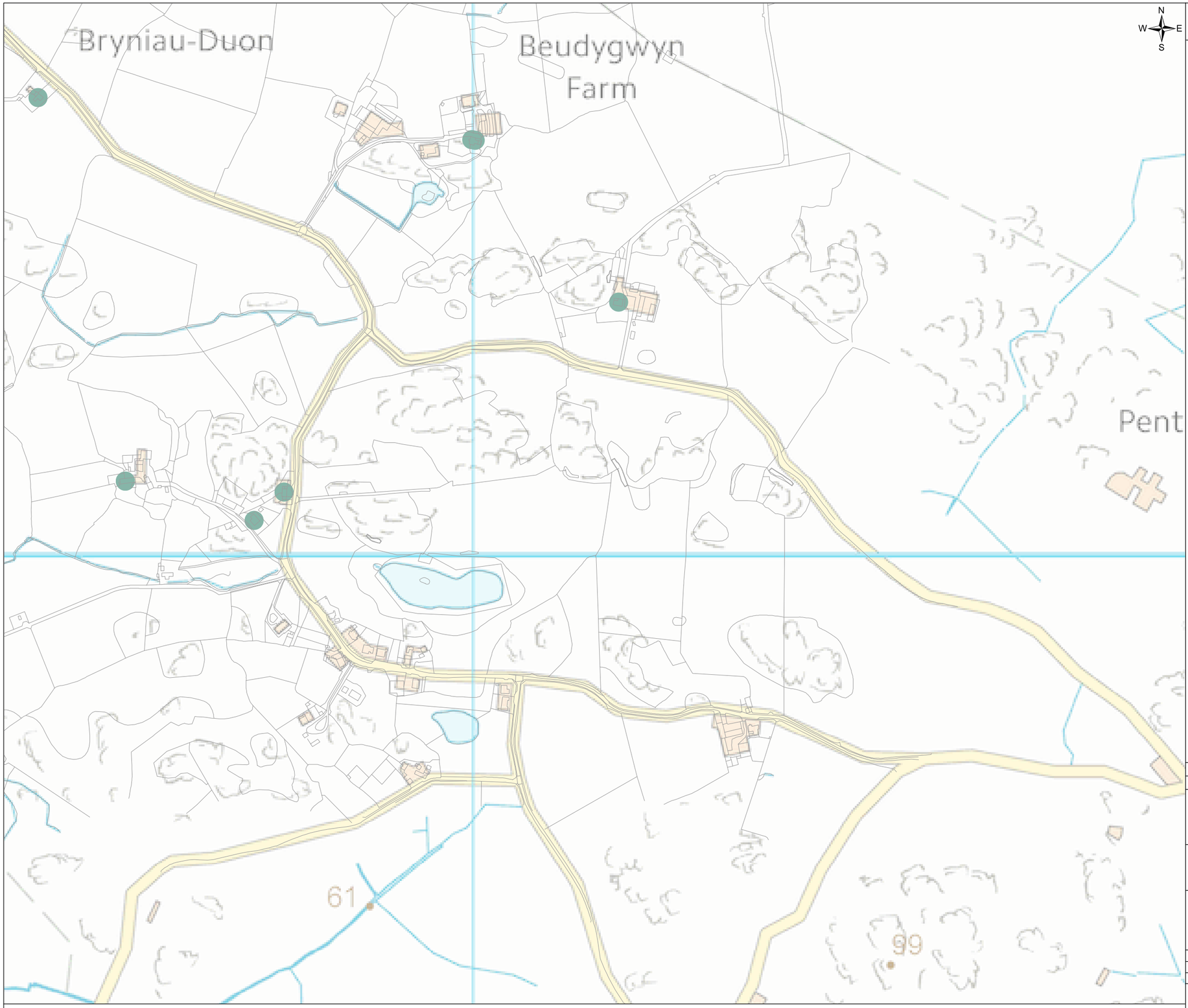


FIGURE 1

Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (DAYTIME)
SHEET 14 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

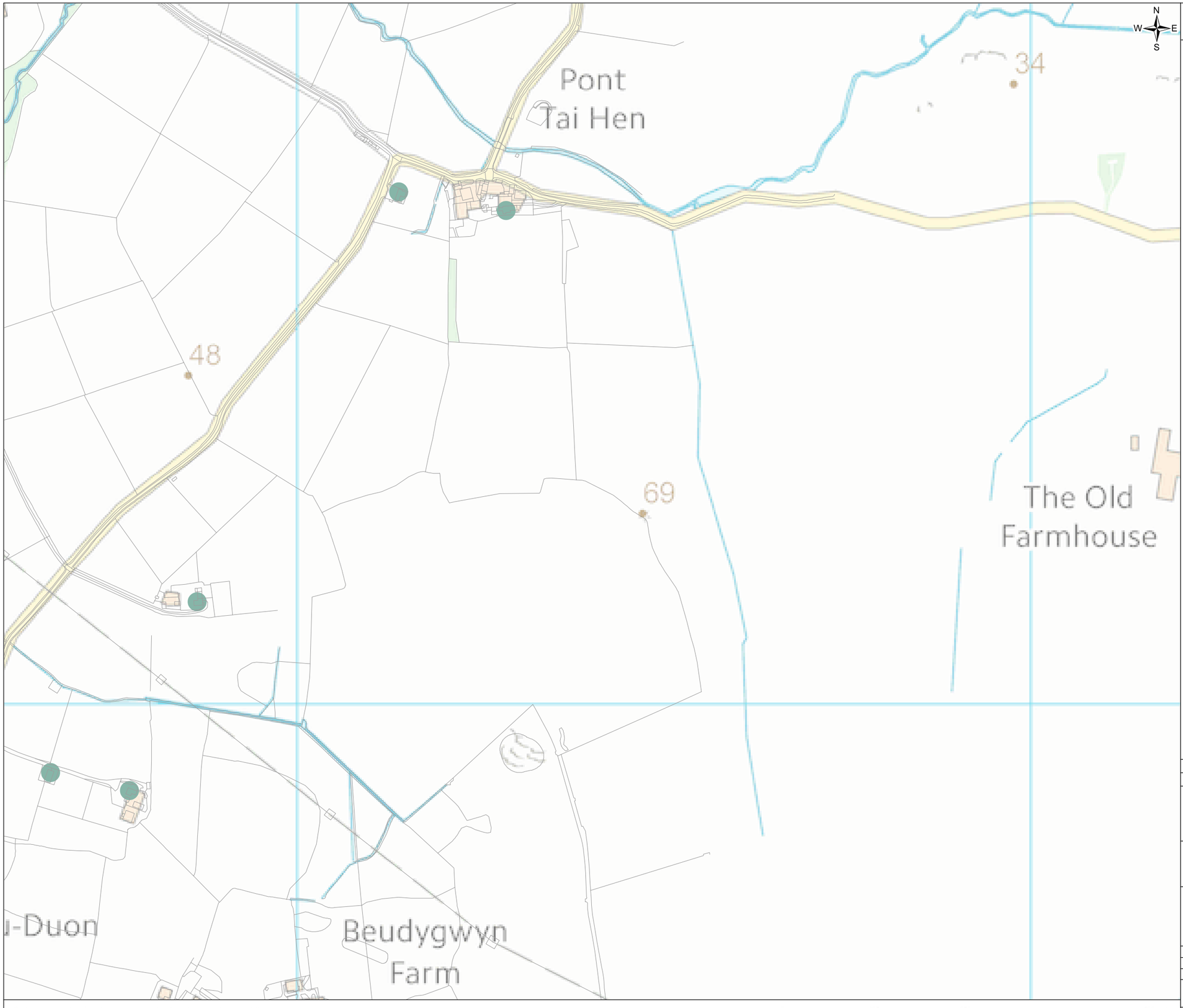
60PO80AS_NOISE_RfNMC_MONTHS7TO9_DAYTIME

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0 125 250 500 metres

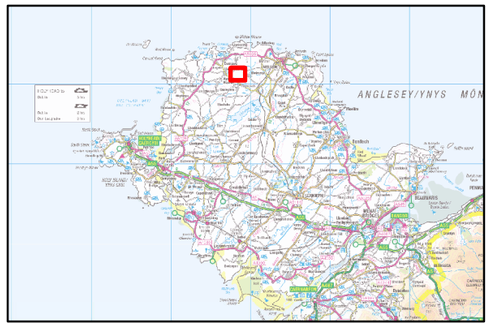
FIGURE 1



Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (DAYTIME)
SHEET 15 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS7TO9_DAYTIME

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0 125 250 500 metres

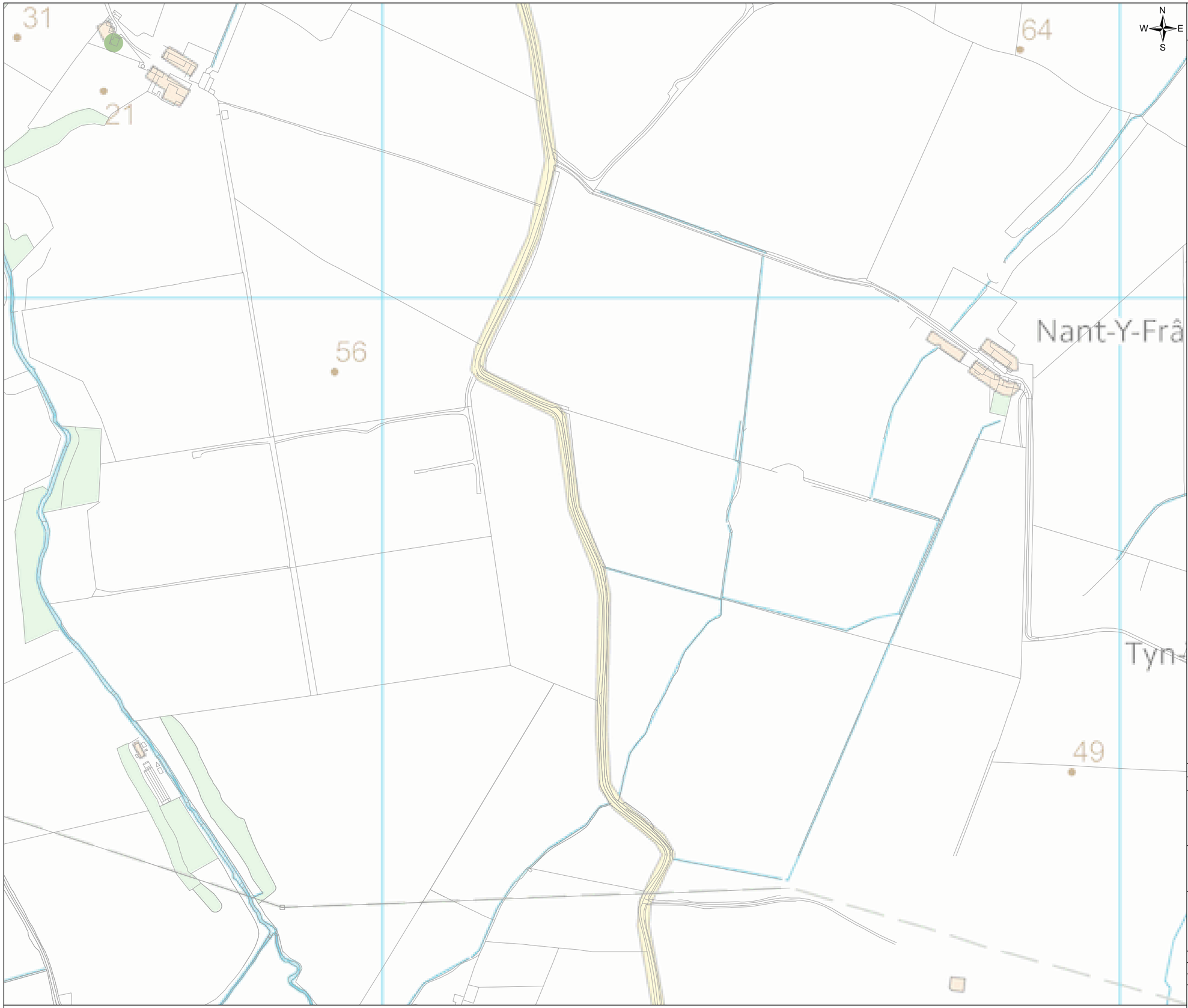


FIGURE 1

Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (DAYTIME)
SHEET 16 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS7TO9_DAYTIME

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0 125 250 500 metres

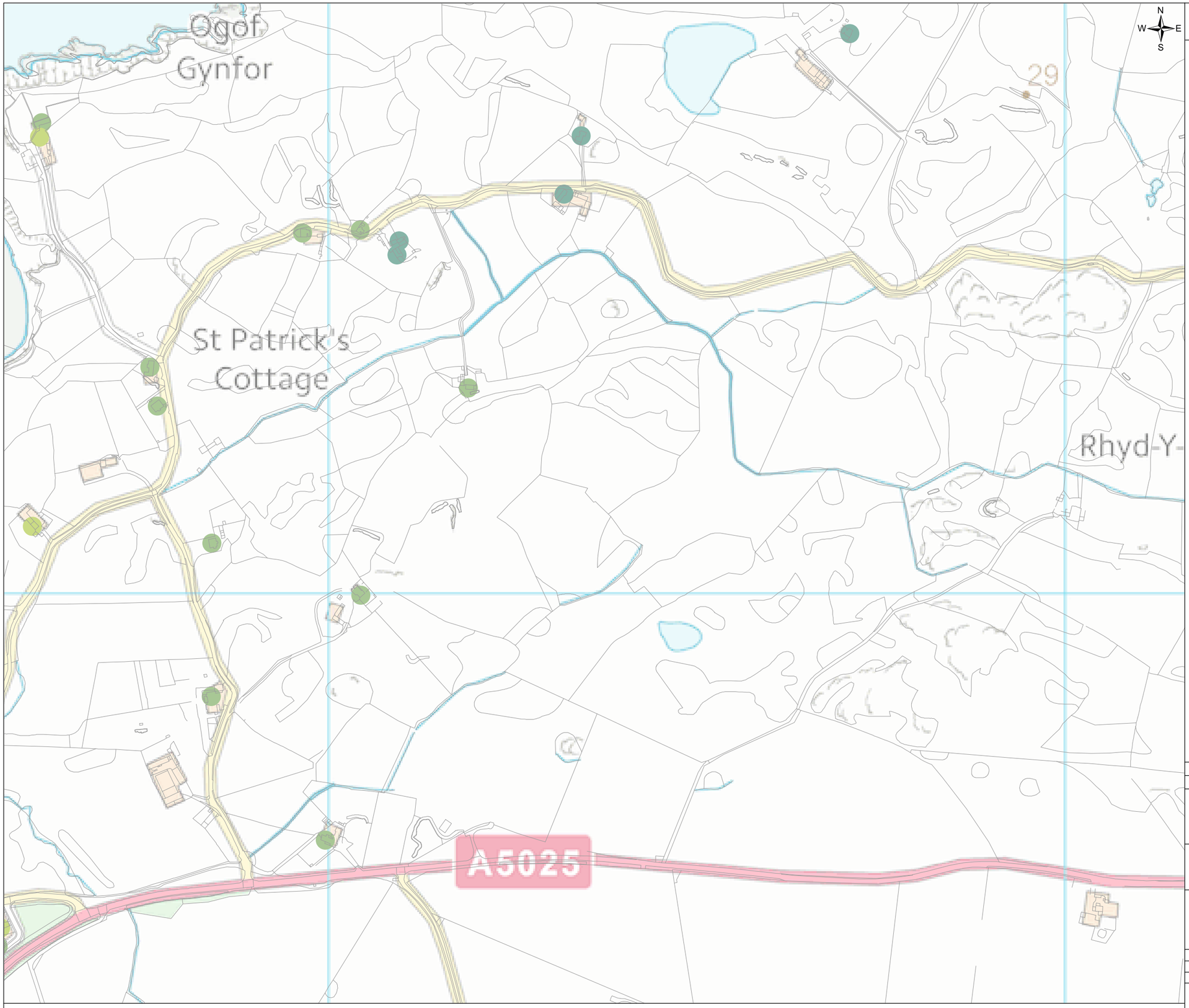


FIGURE 1

Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (DAYTIME)
SHEET 17 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

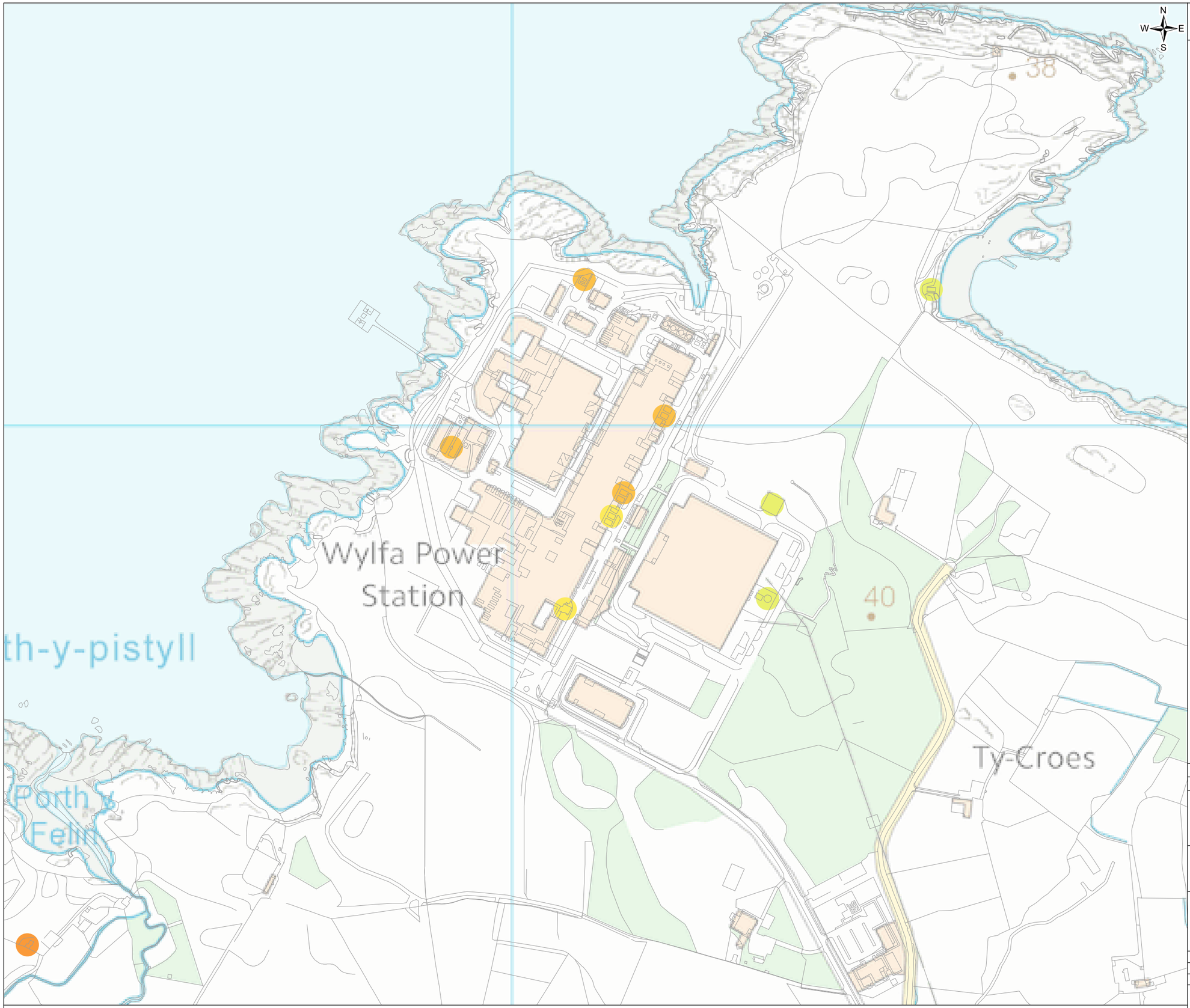
60PO80AS_NOISE_RfNMC_MONTHS7TO9_DAYTIME

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0 125 250 500 metres

FIGURE 2



Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (EVENING) SHEET 1 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS7TO9_EVENING

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0 125 250 500 metres

FIGURE 2

Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (EVENING)
SHEET 2 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS7TO9_EVENING

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0 125 250 500 metres

FIGURE 2

Pennant
42
Tregele
Caerdegog
Isaf
37
49
Cromlech
26

N
W
E
S

Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (EVENING)
SHEET 3 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

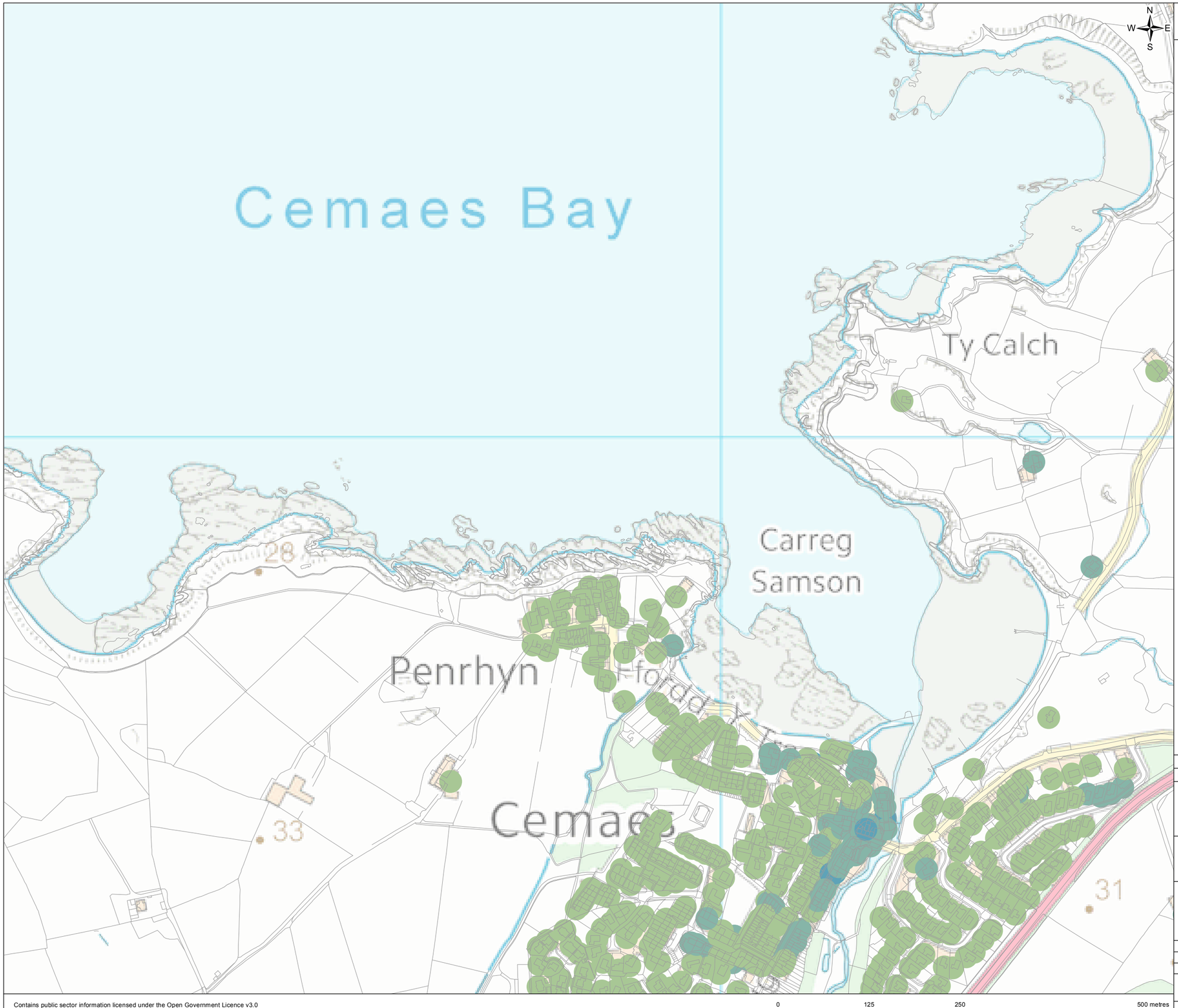
60PO80AS_NOISE_RfNMC_MONTHS7TO9_EVENING

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0 125 250 500 metres

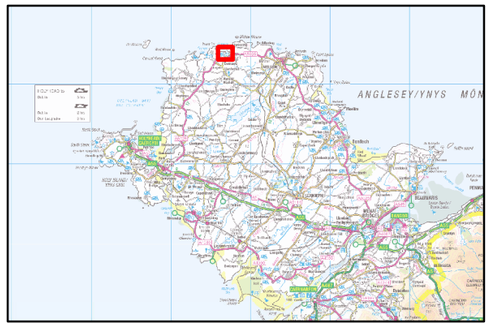
FIGURE 2



Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

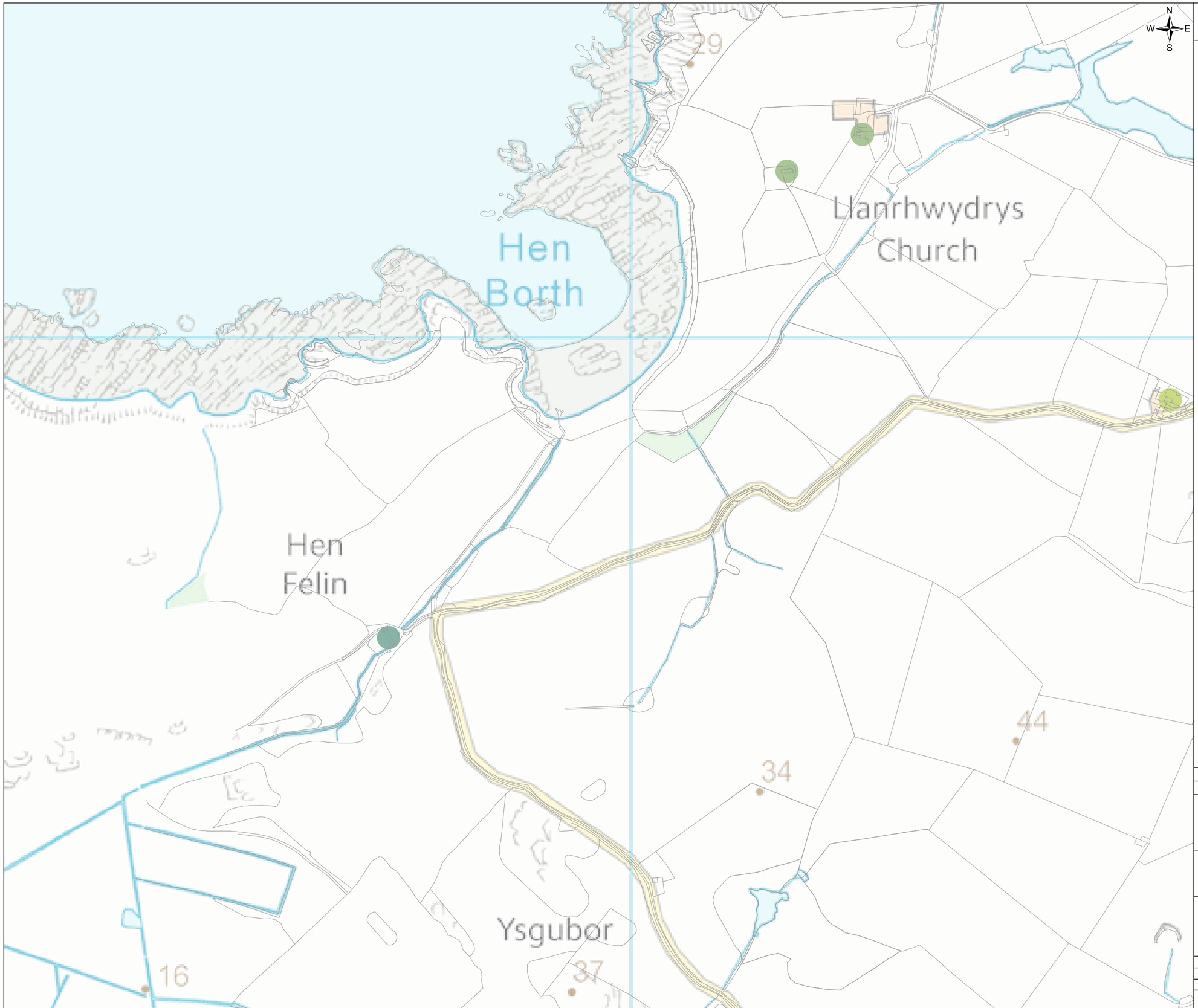
Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (EVENING)
SHEET 4 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS7TO9_EVENING

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0 125 250 500 metres

FIGURE 2

Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

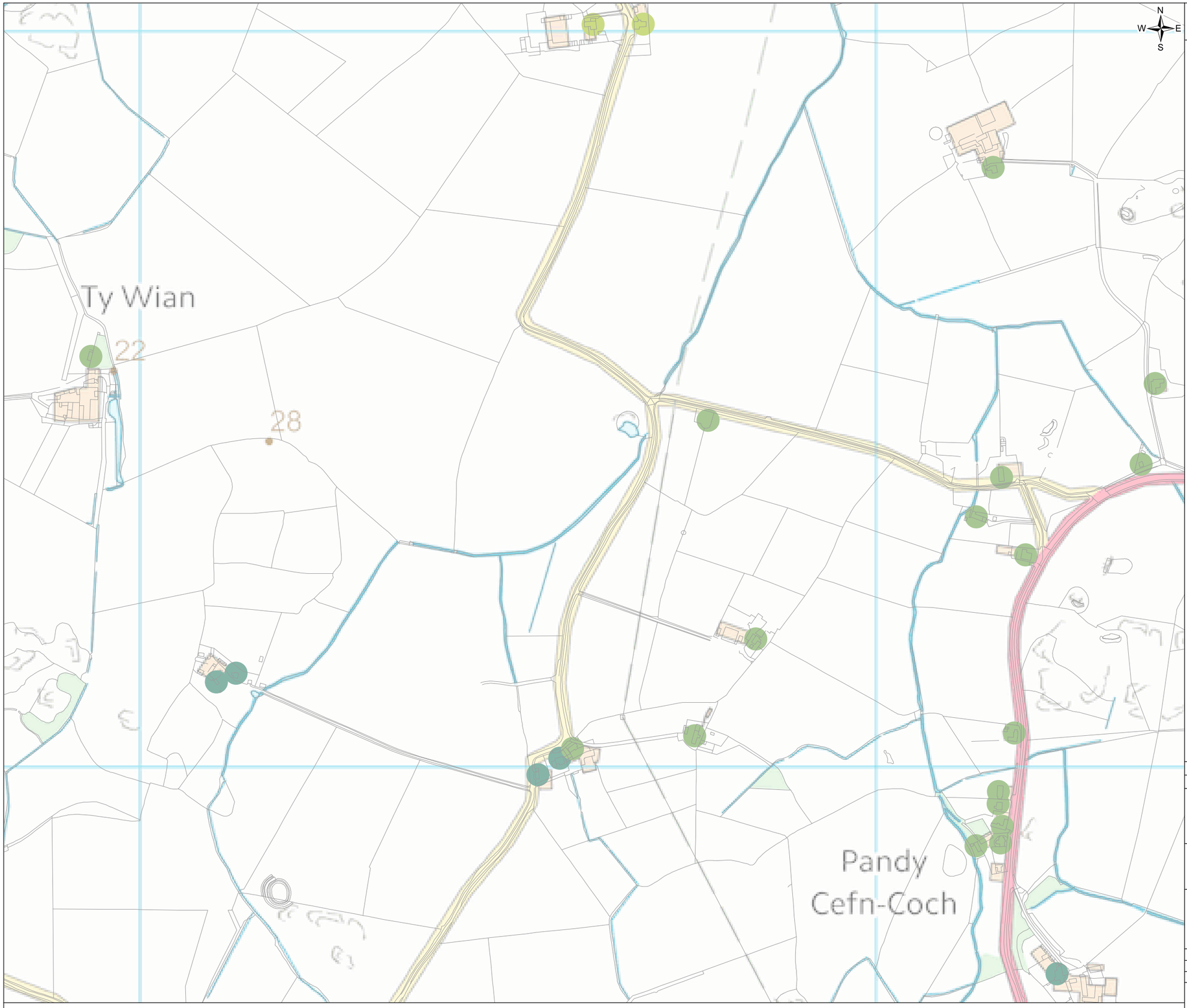
Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (EVENING)
SHEET 5 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS7TO9_EVENING

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FIGURE 2



Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (EVENING)
SHEET 6 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

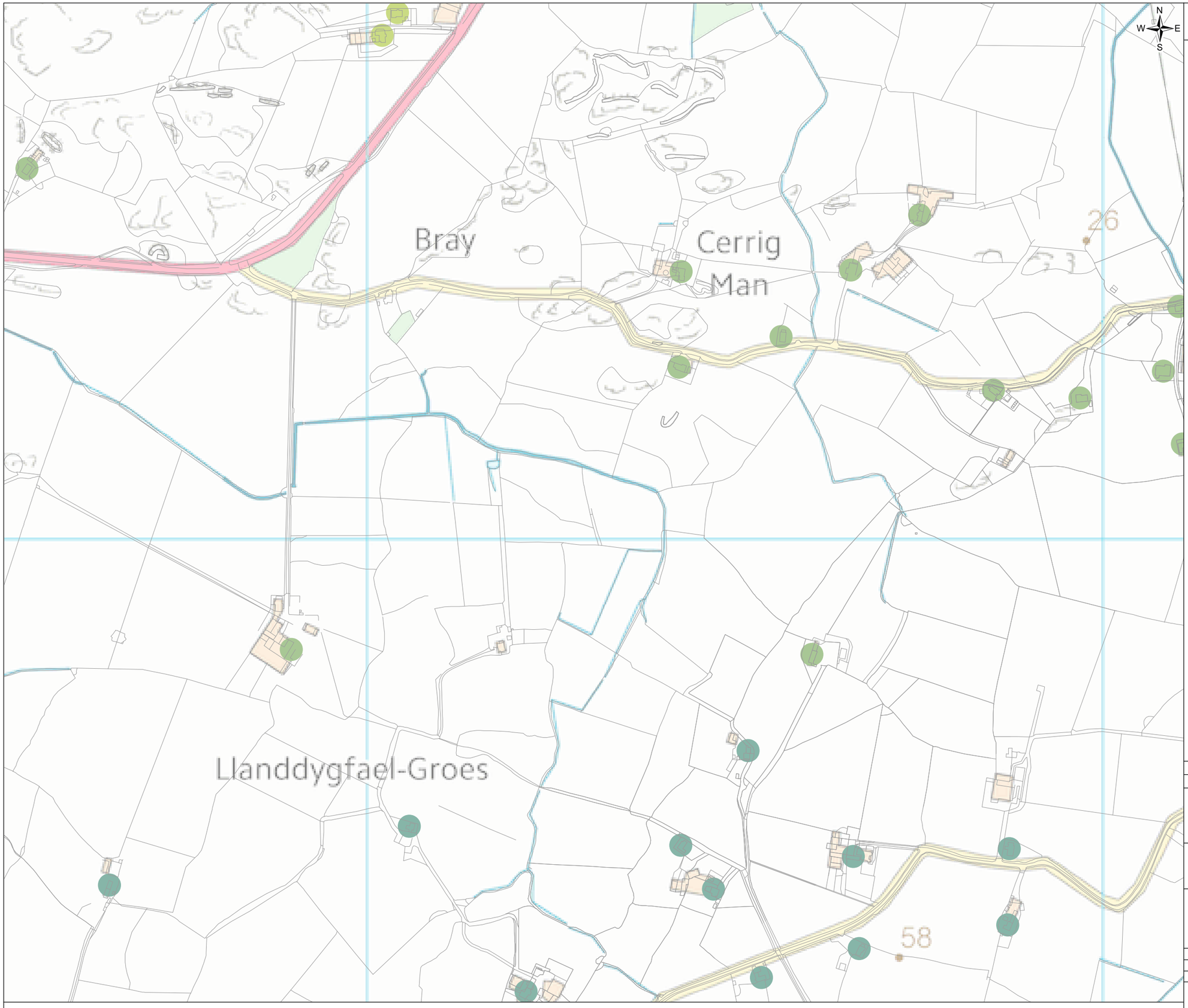
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS7TO9_EVENING

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0 125 250 500 metres

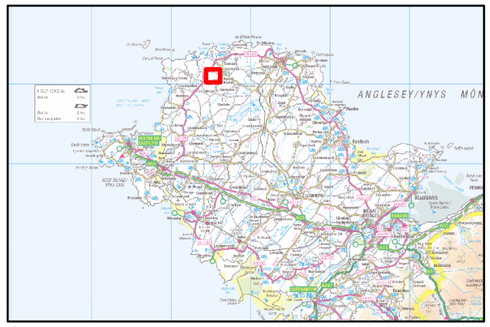
FIGURE 2



Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (EVENING)
SHEET 7 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS7TO9_EVENING

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0 125 250 500 metres

FIGURE 2

Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (EVENING)
SHEET 8 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS7TO9_EVENING

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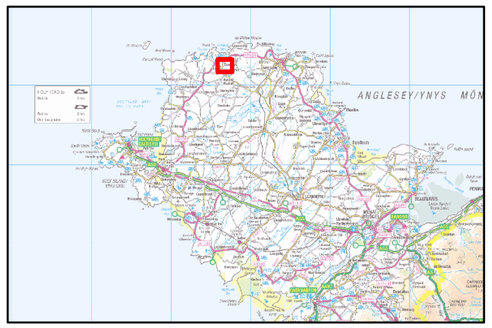
0 125 250 500 metres

FIGURE 2

Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (EVENING)
SHEET 9 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS7TO9_EVENING

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0 125 250 500 metres

FIGURE 2

Llanfairynghornwy

Waen-Lydan

Mynydd-y-Garn

N
W E
S

Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (EVENING)
SHEET 10 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS7TO9_EVENING

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0 125 250 500 metres

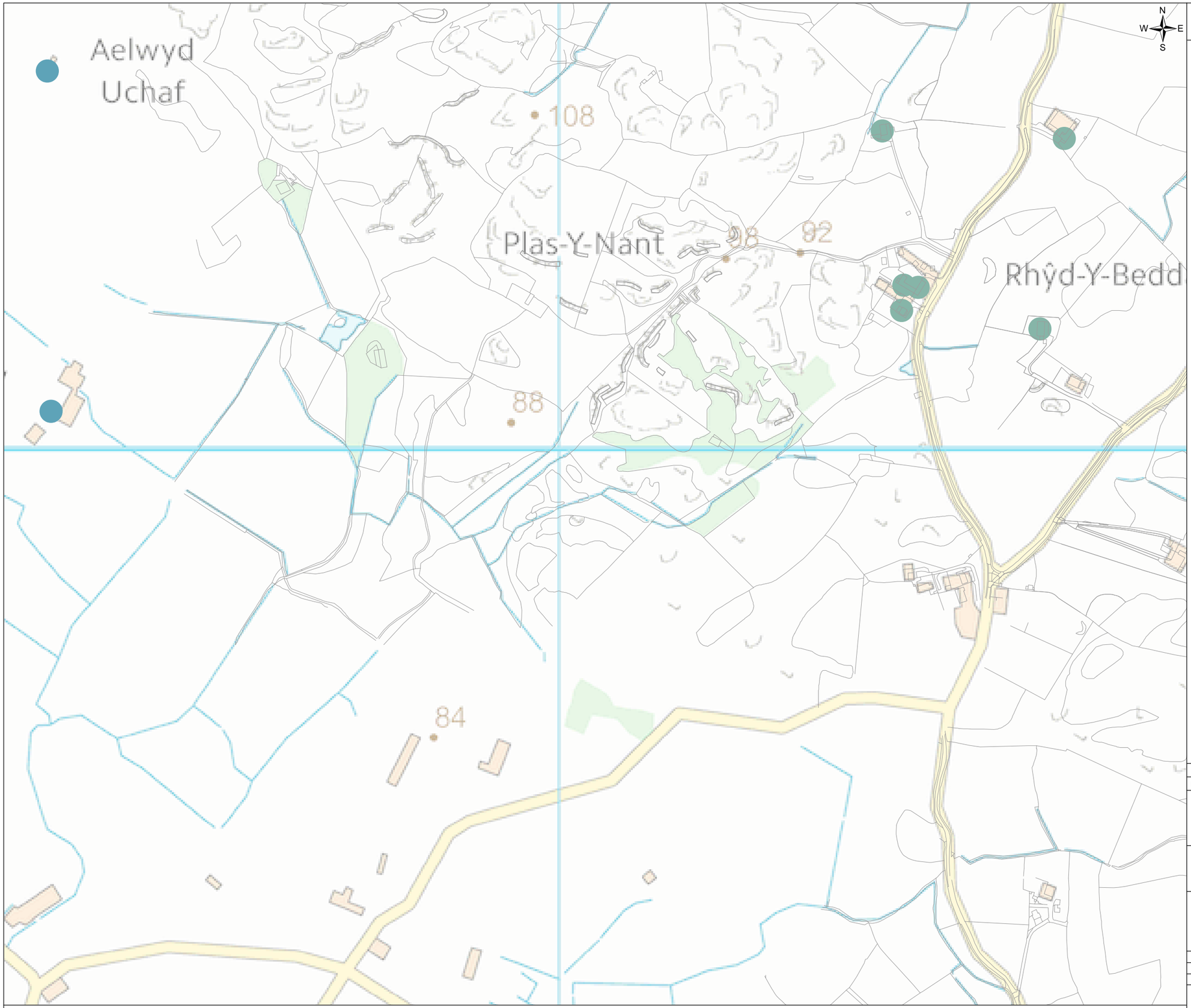


FIGURE 2

Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (EVENING)
SHEET 11 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

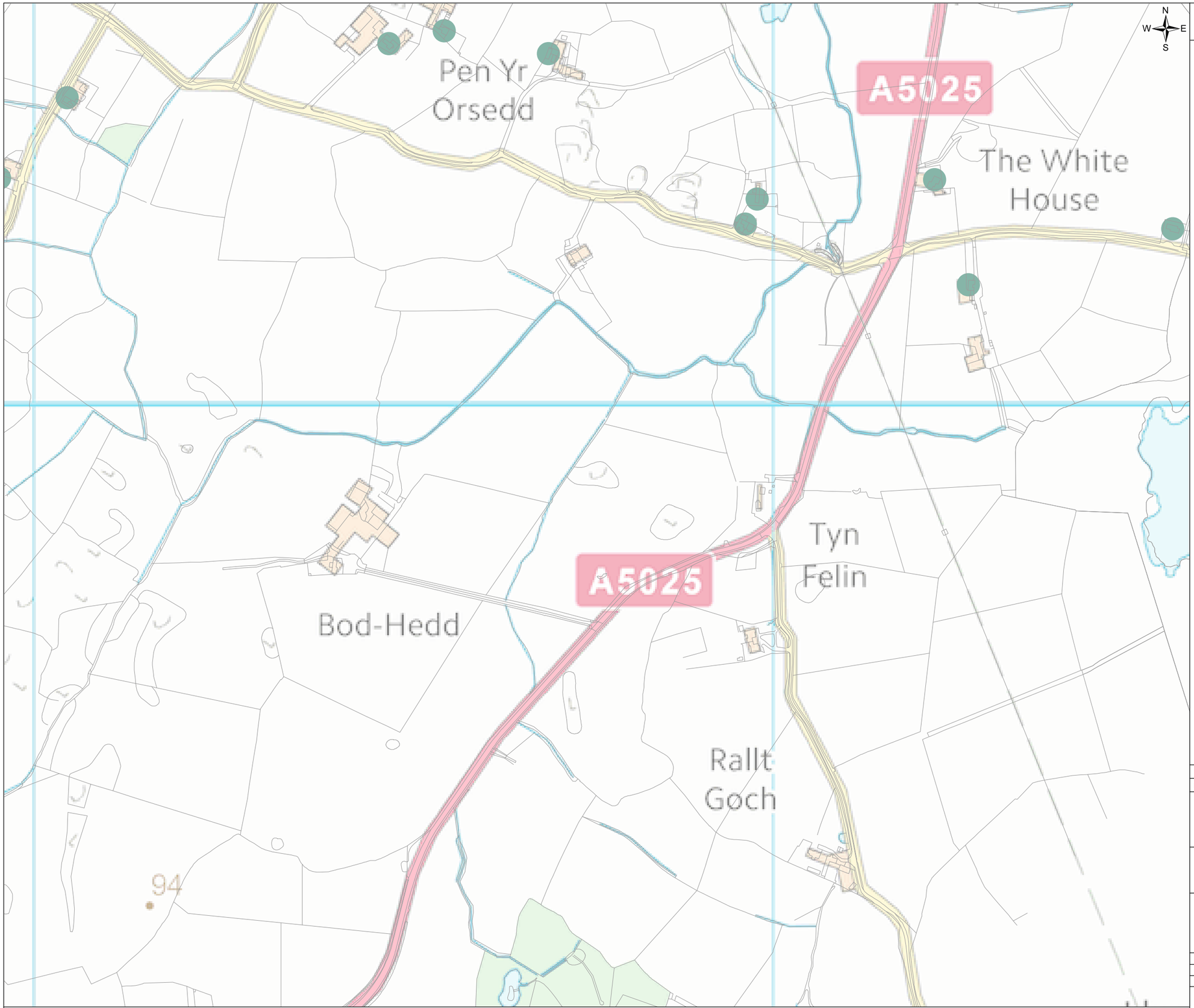
60PO80AS_NOISE_RfNMC_MONTHS7TO9_EVENING

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0 125 250 500 metres

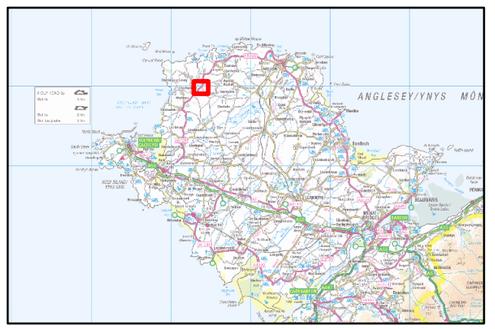
FIGURE 2



Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (EVENING)
SHEET 12 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS7TO9_EVENING

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0 125 250 500 metres

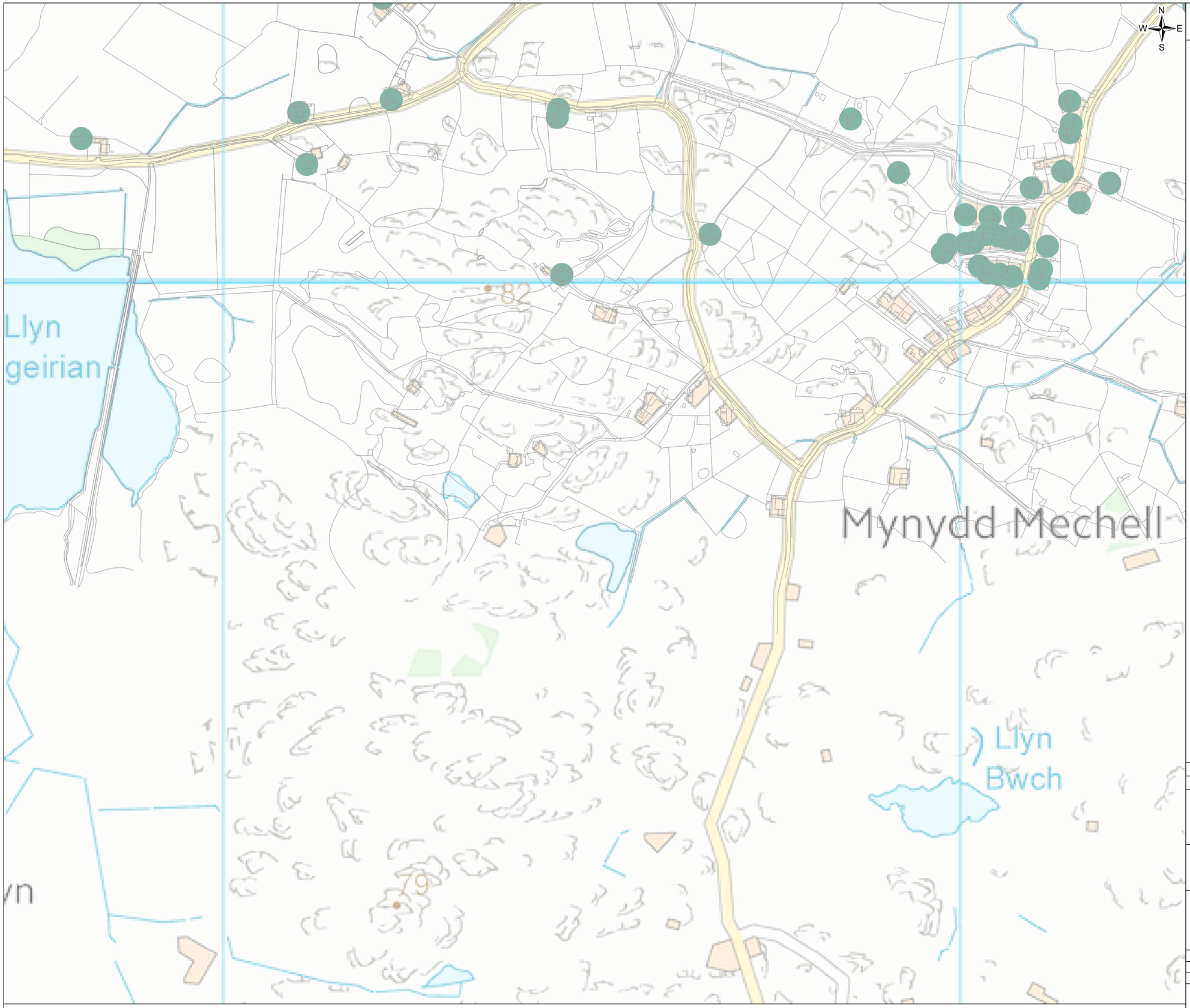
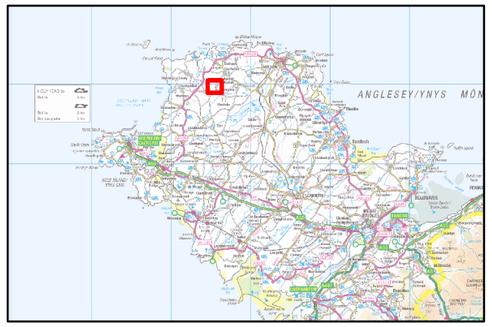


FIGURE 2

Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (EVENING)
SHEET 13 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS7TO9_EVENING

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0 125 250 500 metres

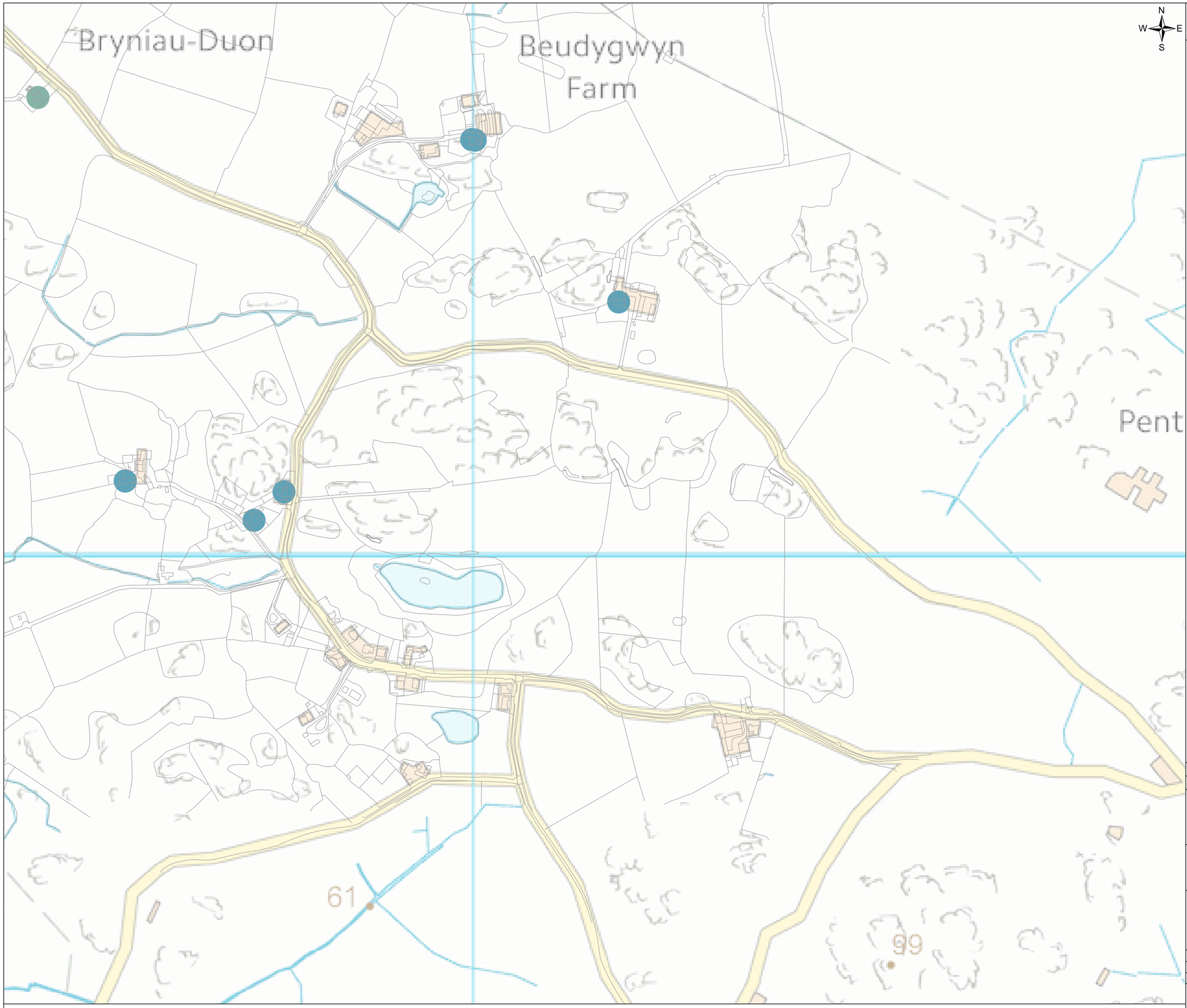


FIGURE 2

Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (EVENING)
SHEET 14 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

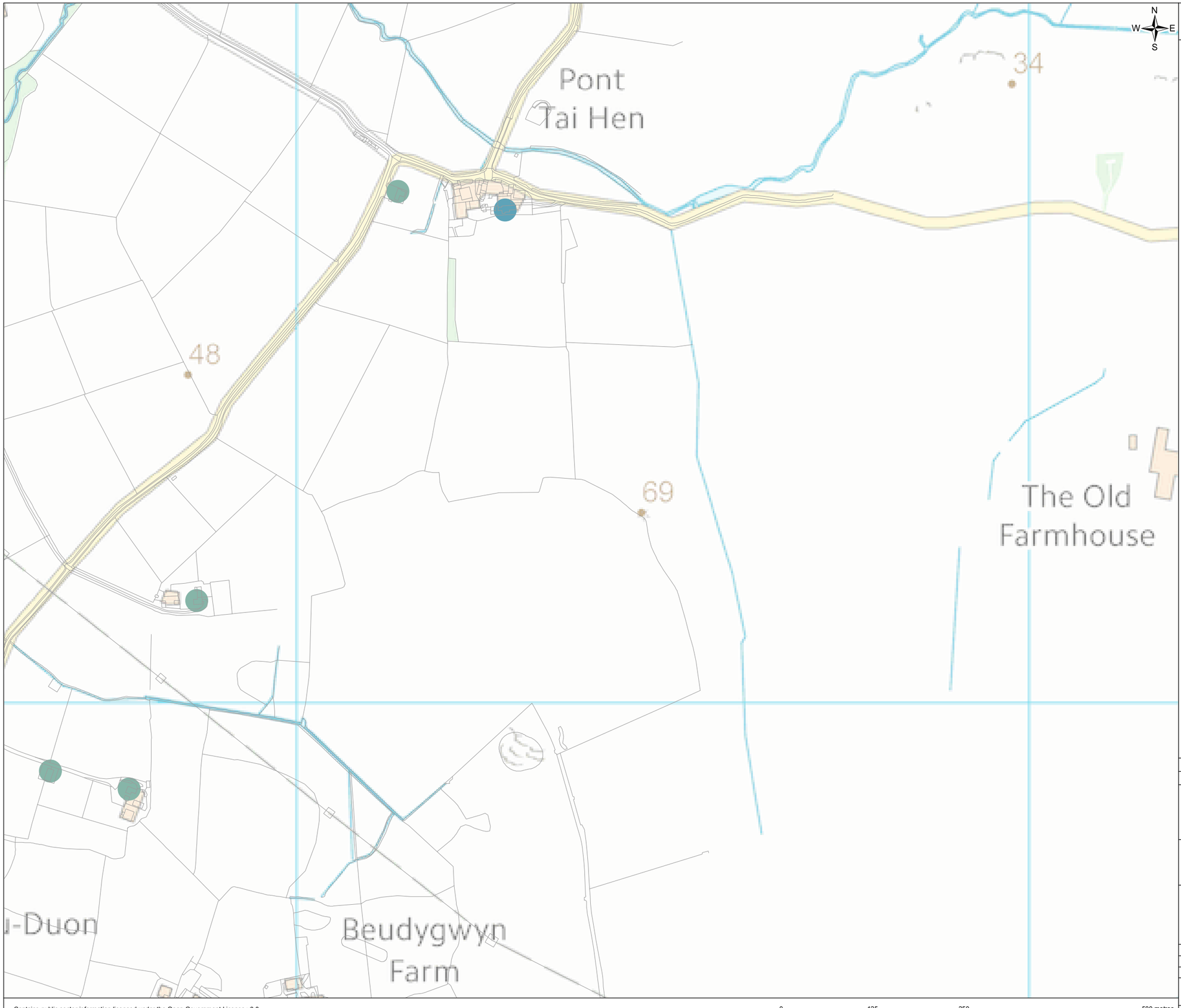
60PO80AS_NOISE_RfNMC_MONTHS7TO9_EVENING

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0 125 250 500 metres

FIGURE 2



Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (EVENING)
SHEET 15 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS7TO9_EVENING

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0 125 250 500 metres

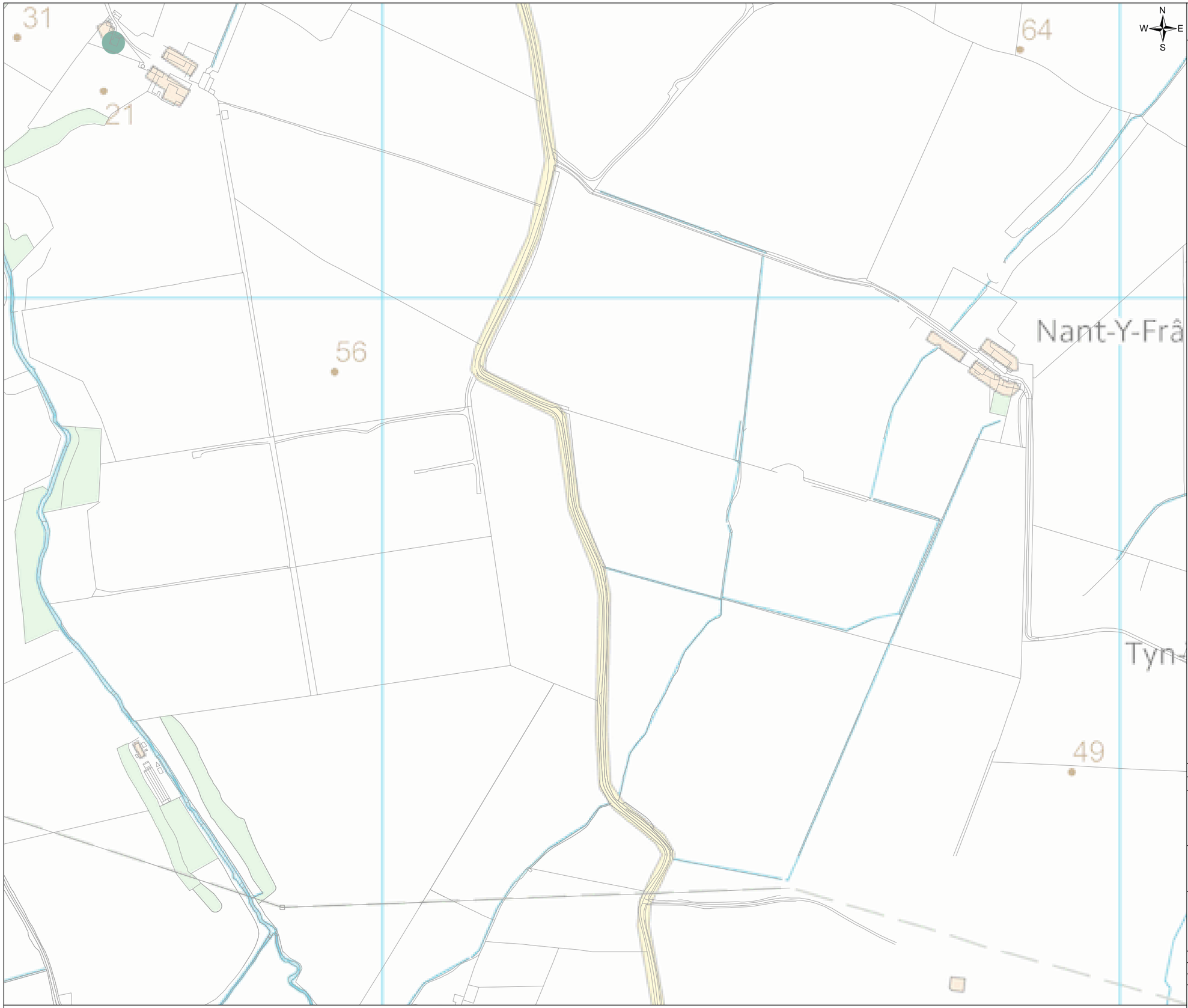


FIGURE 2

Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (EVENING)
SHEET 16 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS7TO9_EVENING

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0 125 250 500 metres

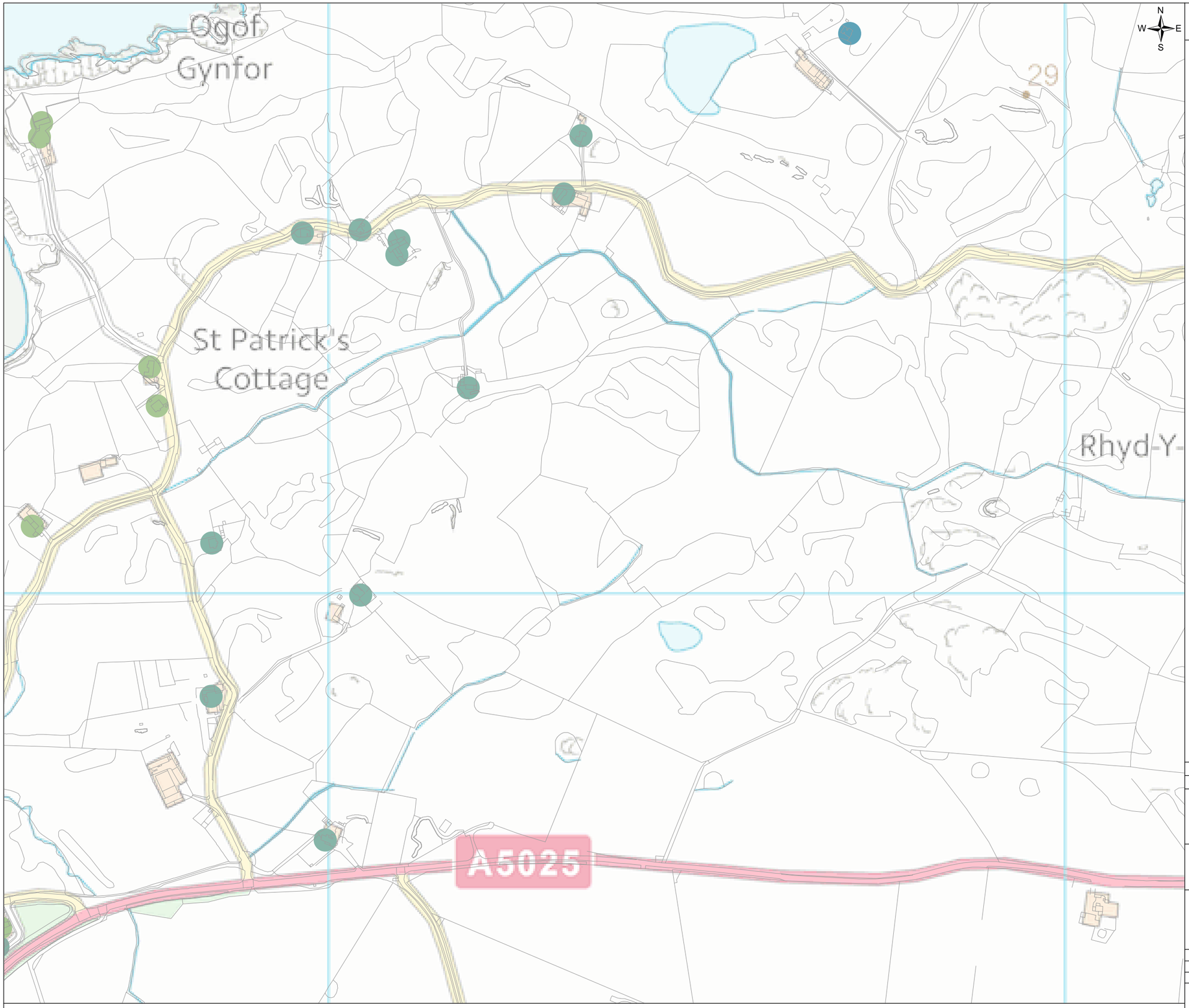


FIGURE 2

Legend

Predicted noise levels dB $L_{Aeq, 1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (EVENING)
SHEET 17 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

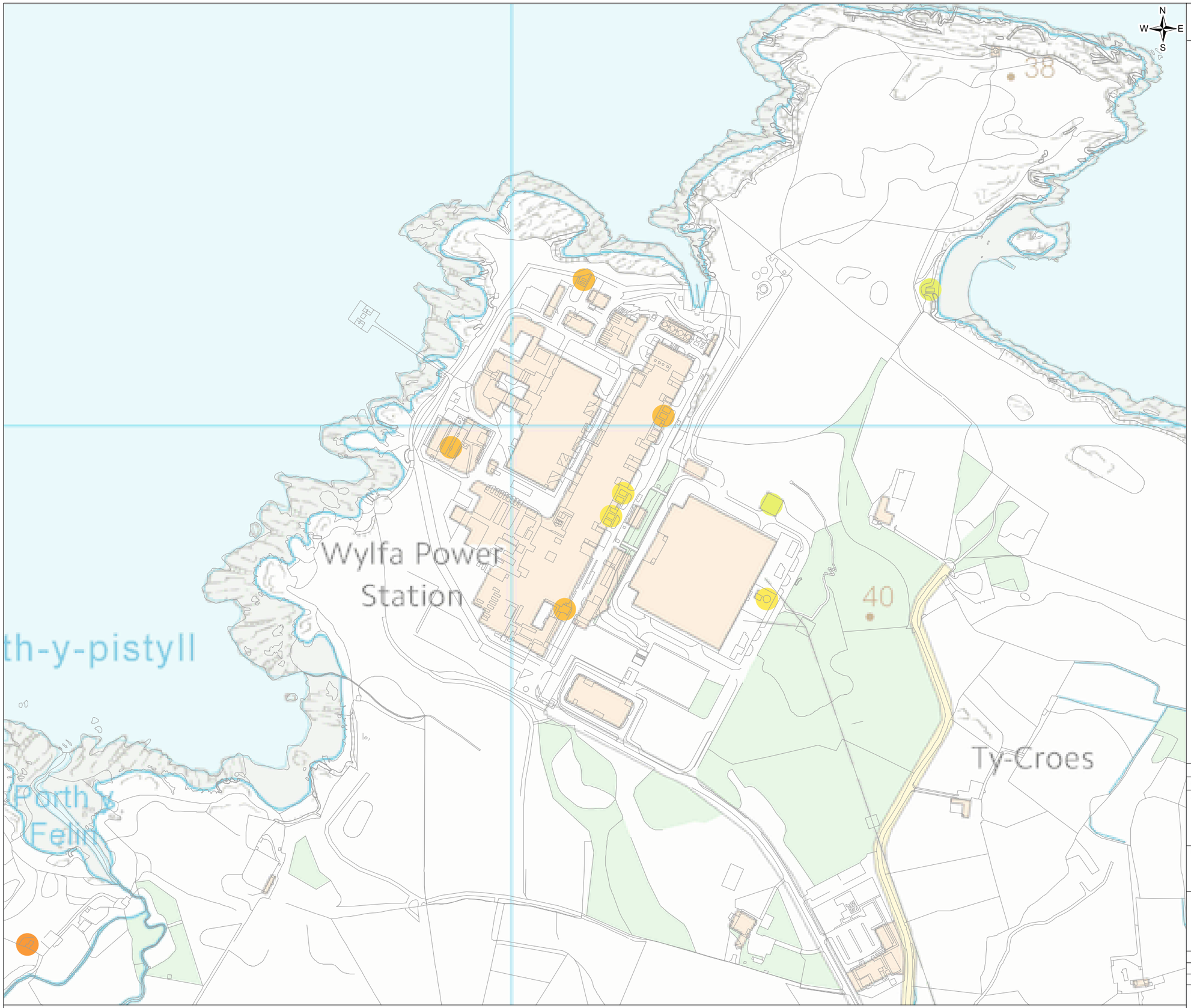
60PO80AS_NOISE_RfNMC_MONTHS7TO9_EVENING

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0 125 250 500 metres

FIGURE 3



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (NIGHT-TIME)
SHEET 1 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS7TO9_NIGHTTIME

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0 125 250 500 metres



FIGURE 3

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (NIGHT-TIME)
SHEET 2 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS7TO9_NIGHTTIME

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0 125 250 500 metres

FIGURE 3

Pennant
42
Tregele
Caerdegog
Isaf
37
49
Cromlech
26

N
W
E
S

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (NIGHT-TIME)
SHEET 3 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

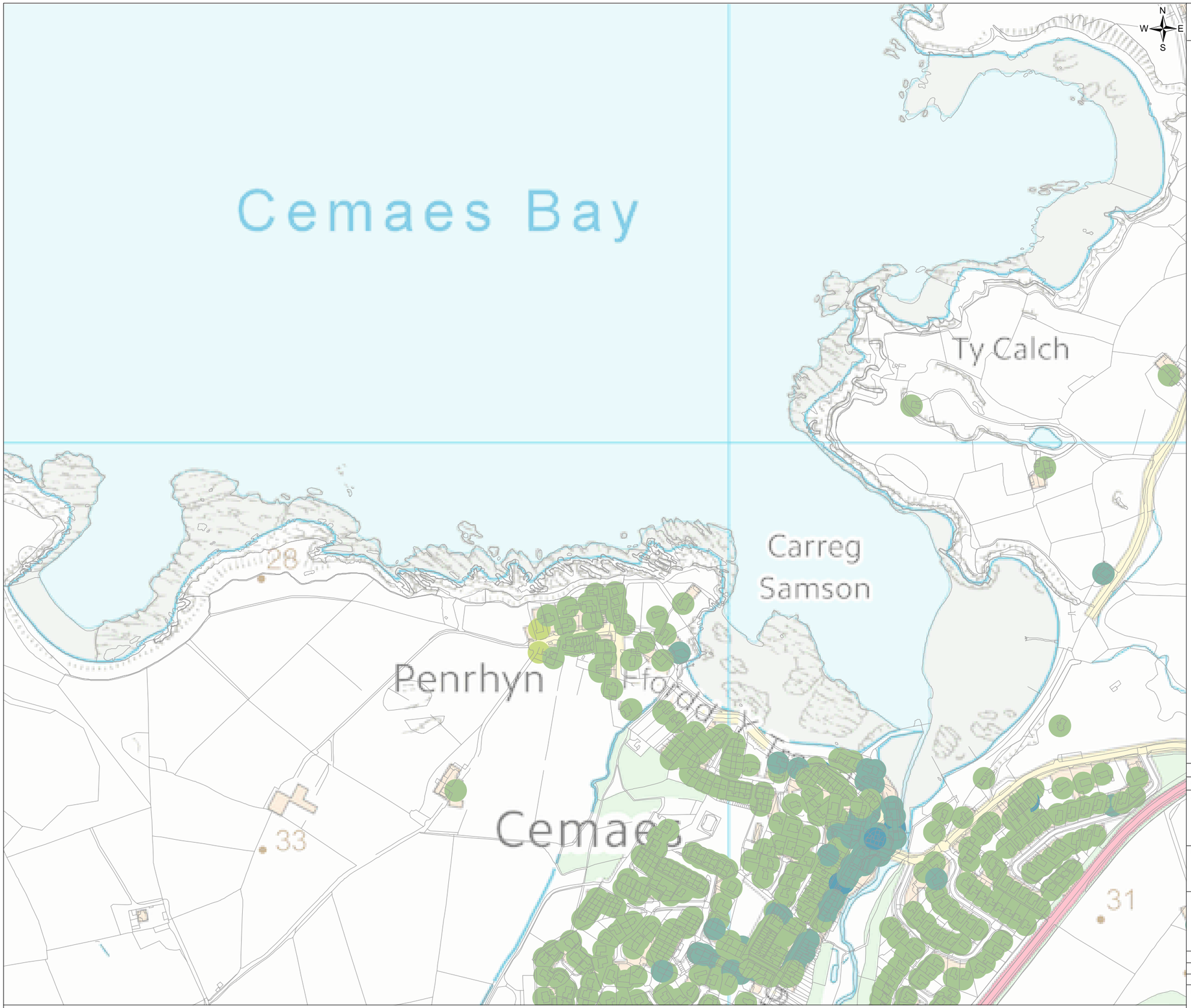
60PO80AS_NOISE_RfNMC_MONTHS7TO9_NIGHTTIME

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0 125 250 500 metres

FIGURE 3



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (NIGHT-TIME)
SHEET 4 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS7TO9_NIGHTTIME

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0 125 250 500 metres

FIGURE 3



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (NIGHT-TIME)
SHEET 5 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS7TO9_NIGHTTIME

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0 125 250 500 metres

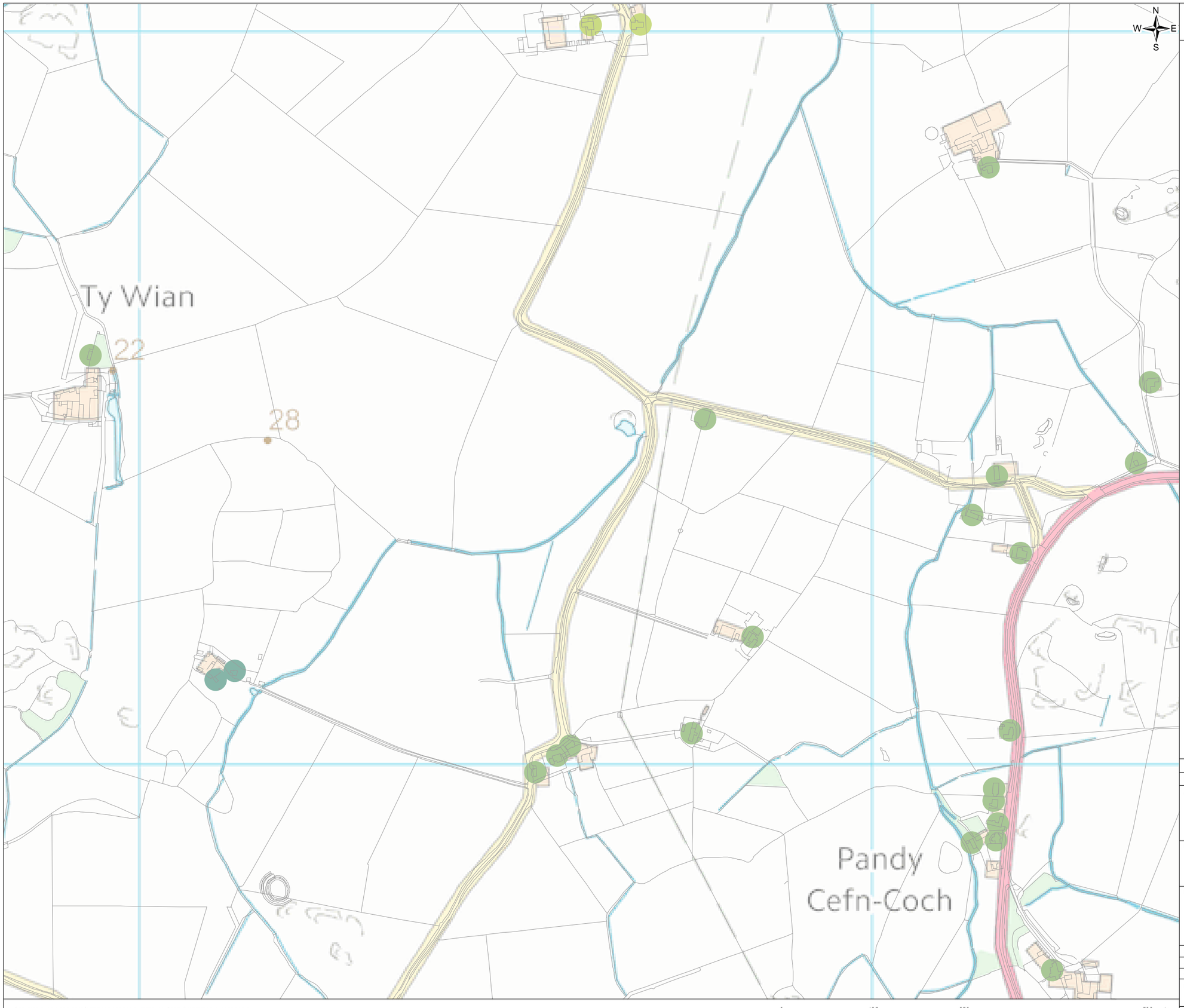


FIGURE 3

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (NIGHT-TIME)
SHEET 6 OF 17

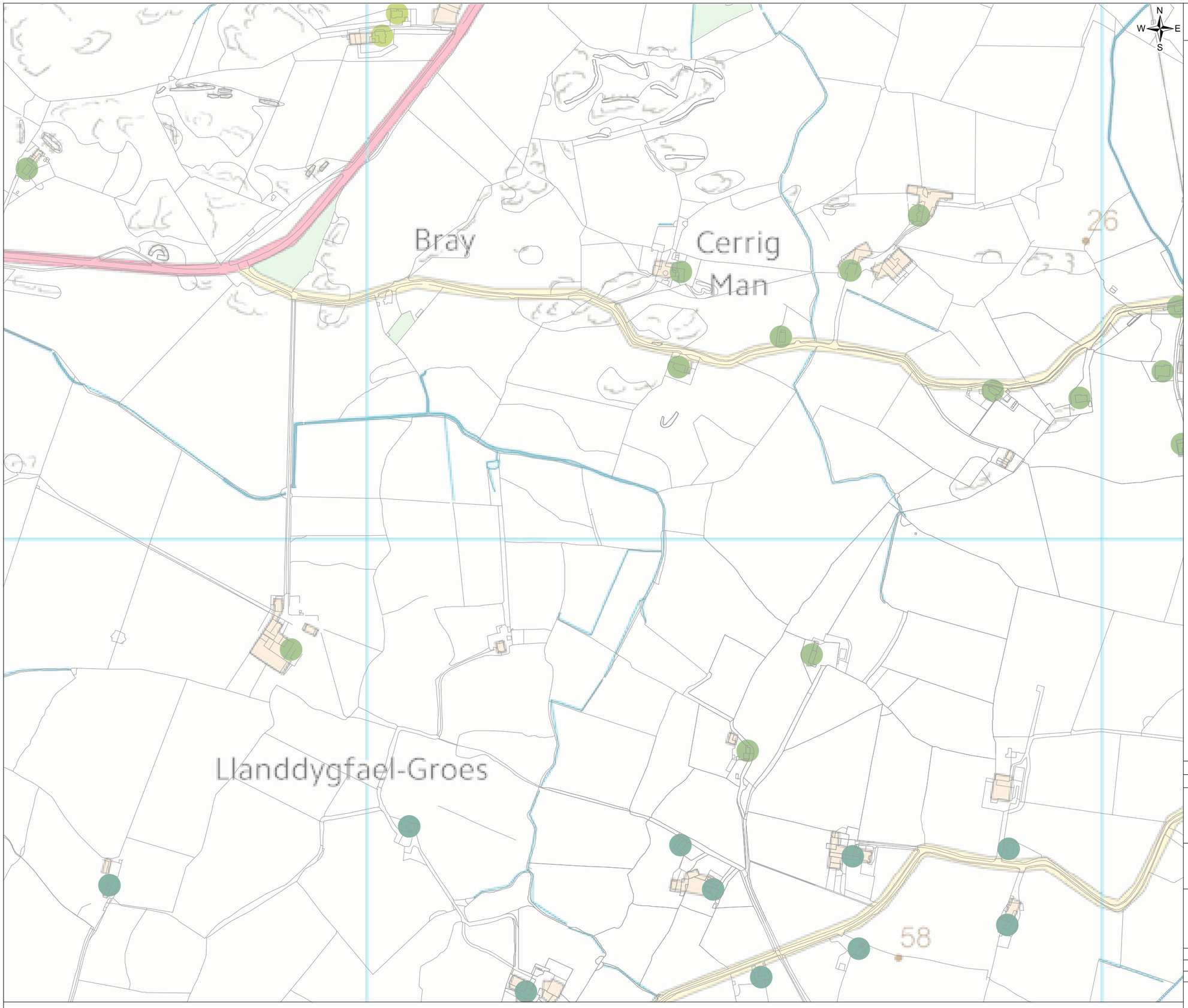
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Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS7TO9_NIGHTTIME

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FIGURE 3



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (NIGHT-TIME)
SHEET 7 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS7TO9_NIGHTTIME

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0 125 250 500 metres

FIGURE 3

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (NIGHT-TIME)
SHEET 8 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS7TO9_NIGHTTIME

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0 125 250 500 metres

FIGURE 3

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (NIGHT-TIME)
SHEET 9 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS7TO9_NIGHTTIME

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0 125 250 500 metres

FIGURE 3

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (NIGHT-TIME)
SHEET 10 OF 17

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Jacobs No.	60PO80AS	
Client No.		

Drawing No.

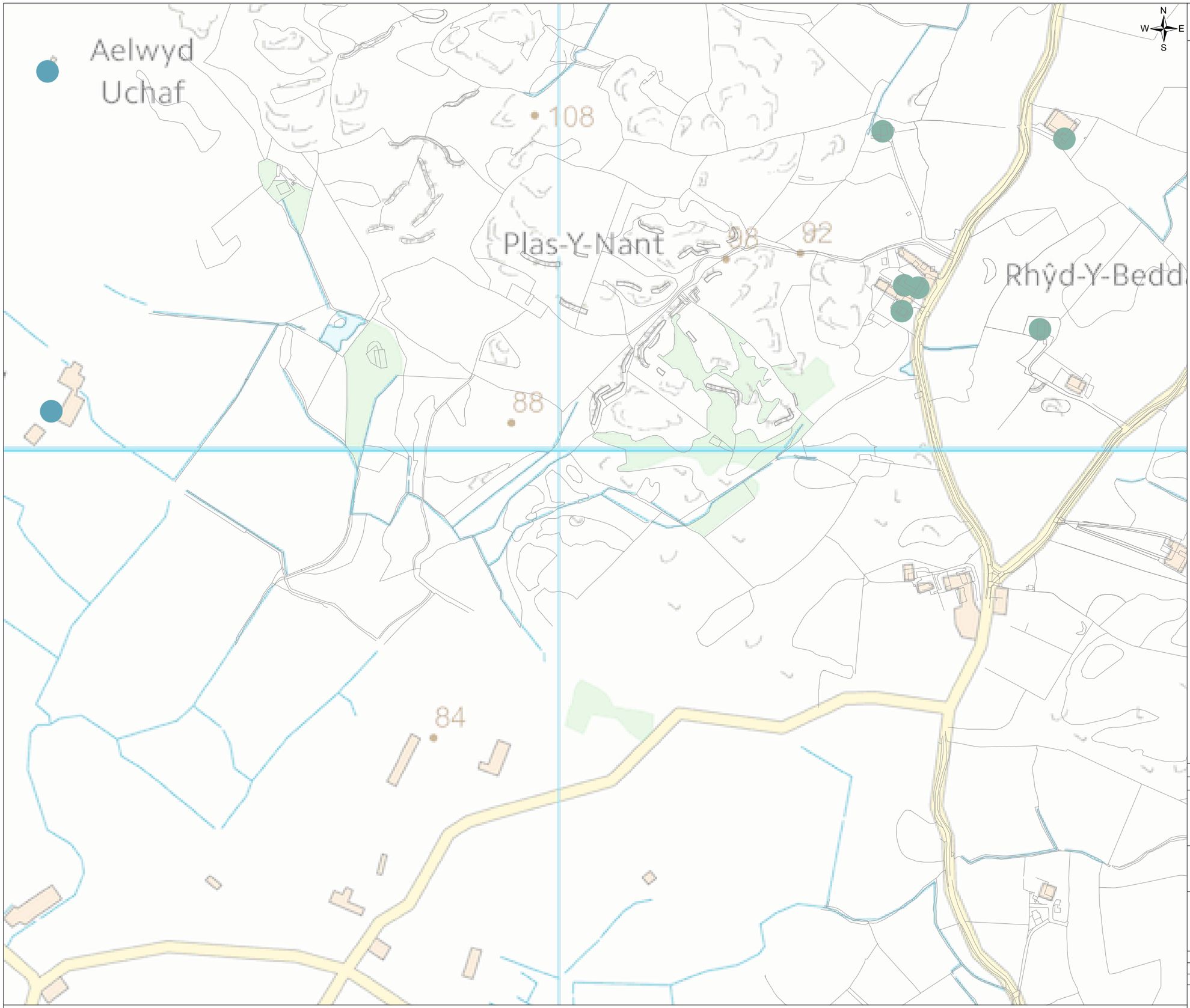
60PO80AS_NOISE_RfNMC_MONTHS7TO9_NIGHTTIME

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0 125 250 500 metres

FIGURE 3



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (NIGHT-TIME)
SHEET 11 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

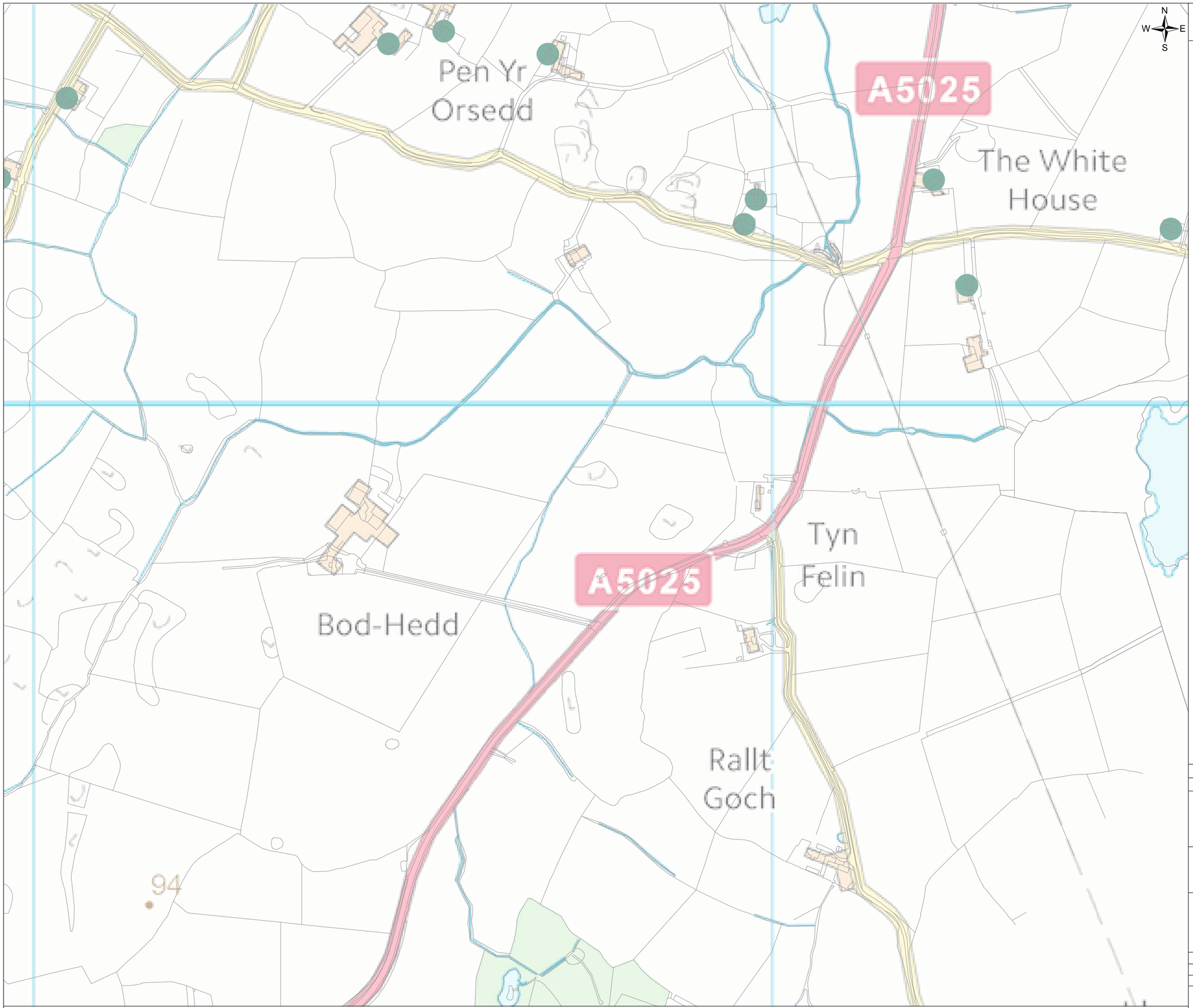
60PO80AS_NOISE_RfNMC_MONTHS7TO9_NIGHTTIME

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0 125 250 500 metres

FIGURE 3



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (NIGHT-TIME)
SHEET 12 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

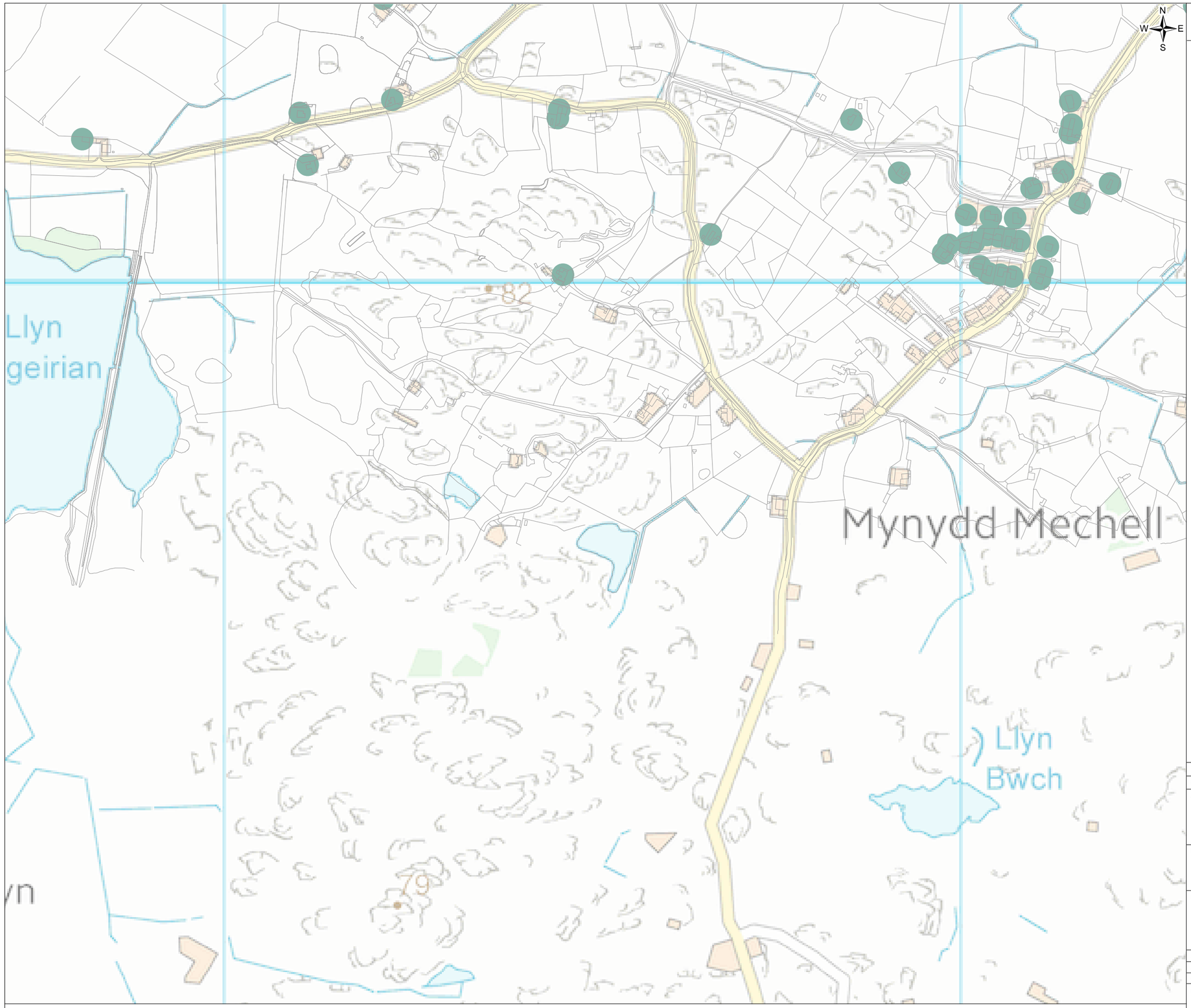
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS7TO9_NIGHTTIME

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0 125 250 500 metres

FIGURE 3



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (NIGHT-TIME)
SHEET 13 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS7TO9_NIGHTTIME

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0 125 250 500 metres

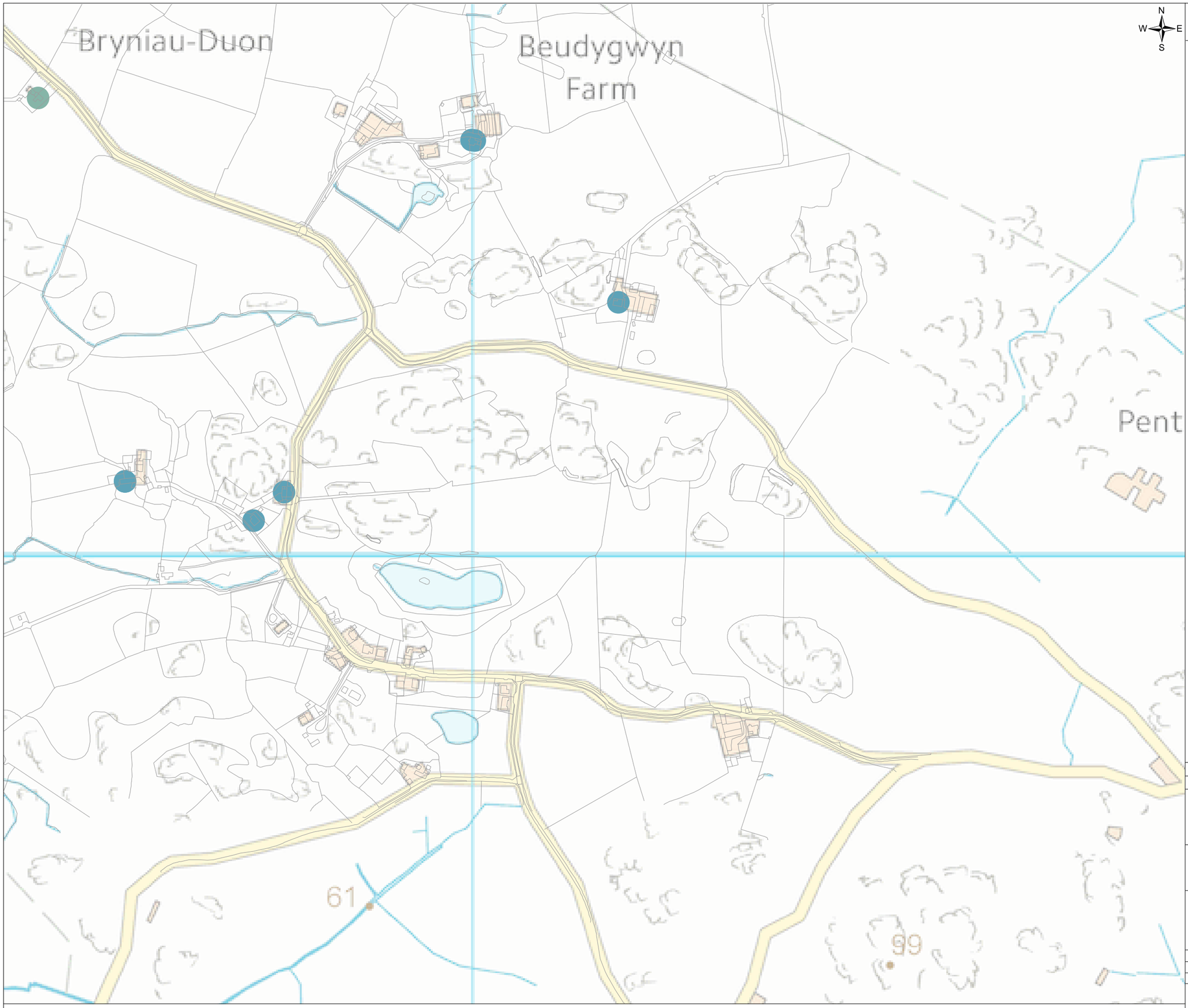


FIGURE 3

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (NIGHT-TIME)
SHEET 14 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

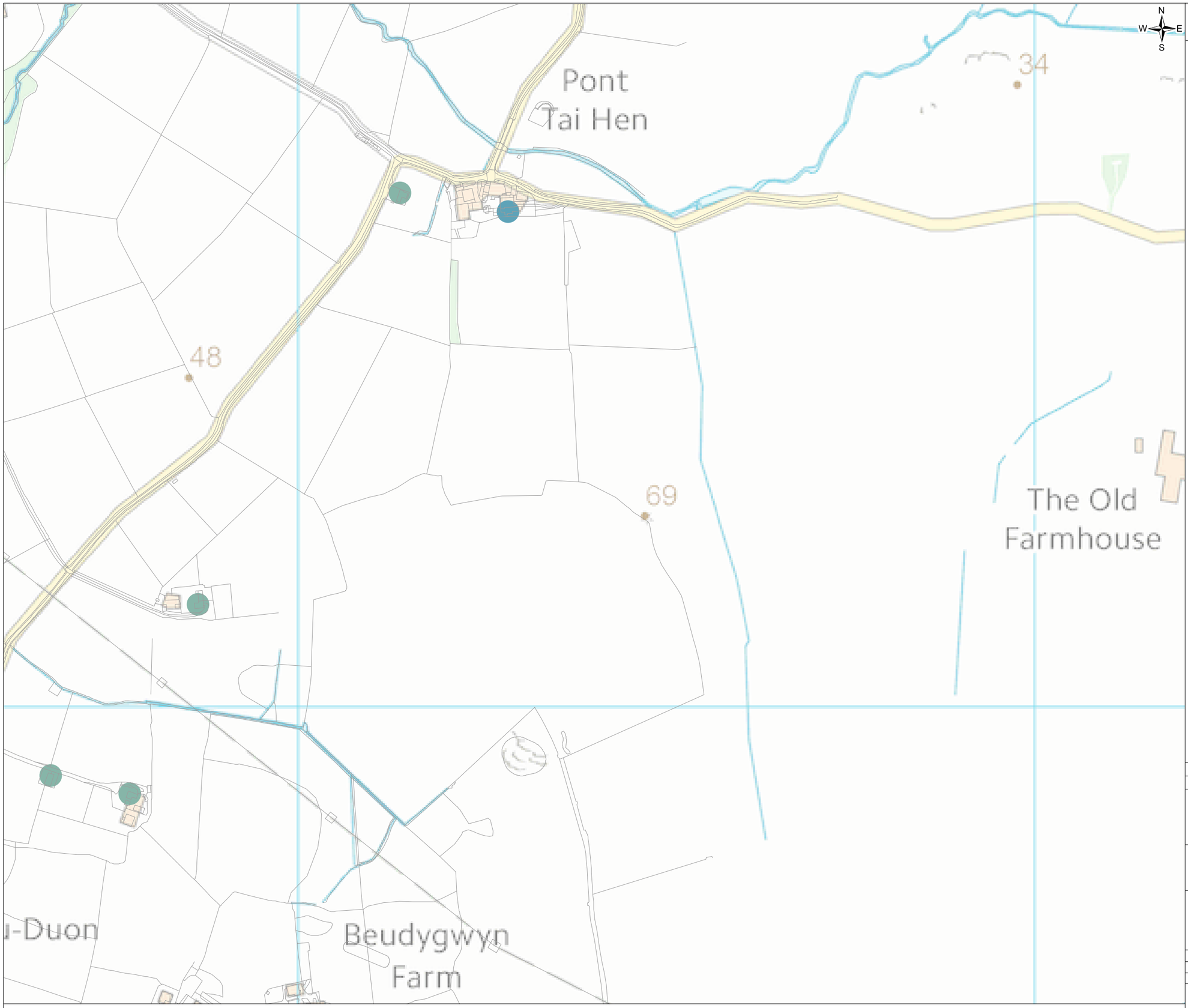
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS7TO9_NIGHTTIME

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0 125 250 500 metres

FIGURE 3



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 7 TO 9 (NIGHT-TIME)
SHEET 15 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

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60PO80AS_NOISE_RfNMC_MONTHS7TO9_NIGHTTIME

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0 125 250 500 metres

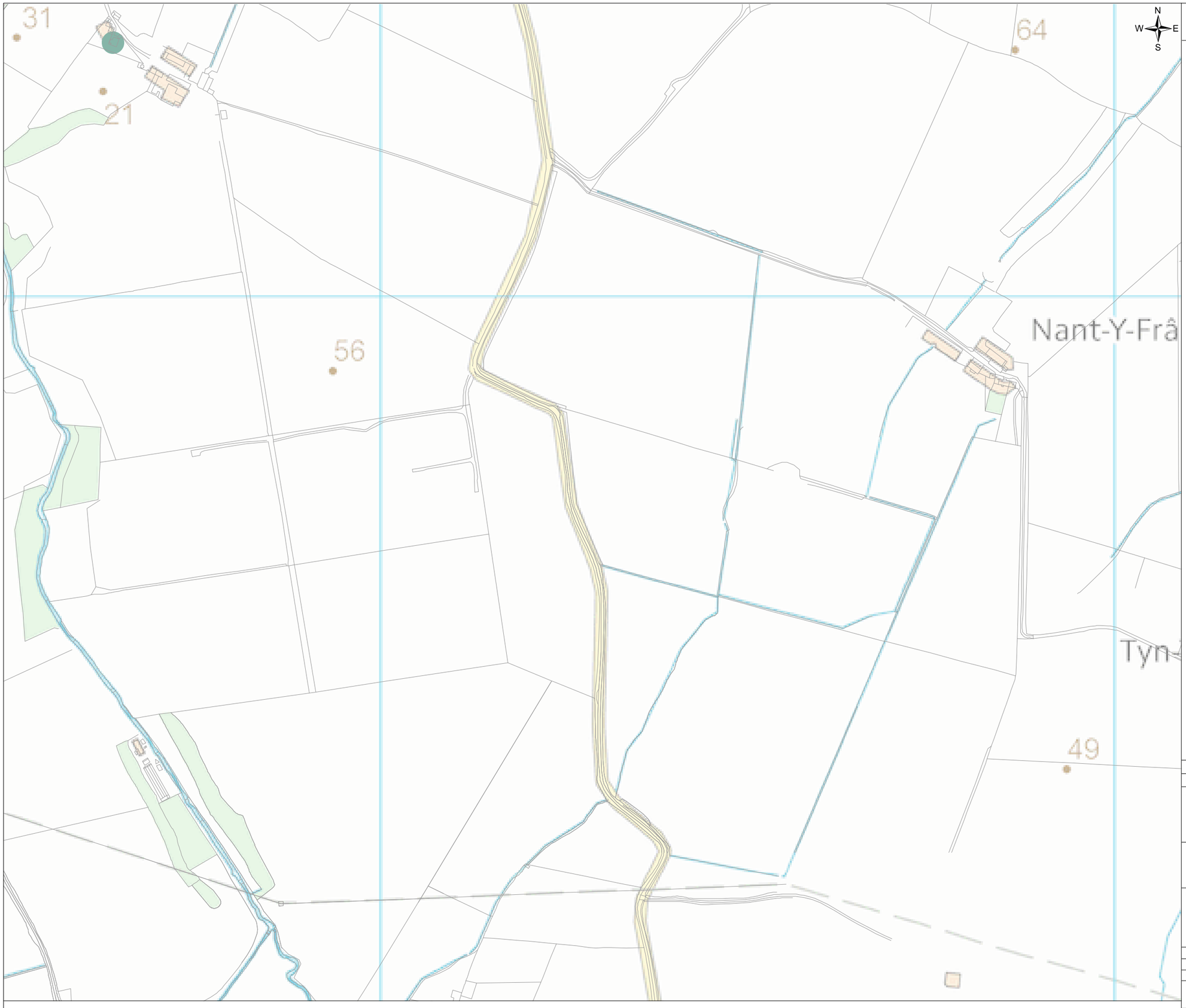


FIGURE 3

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

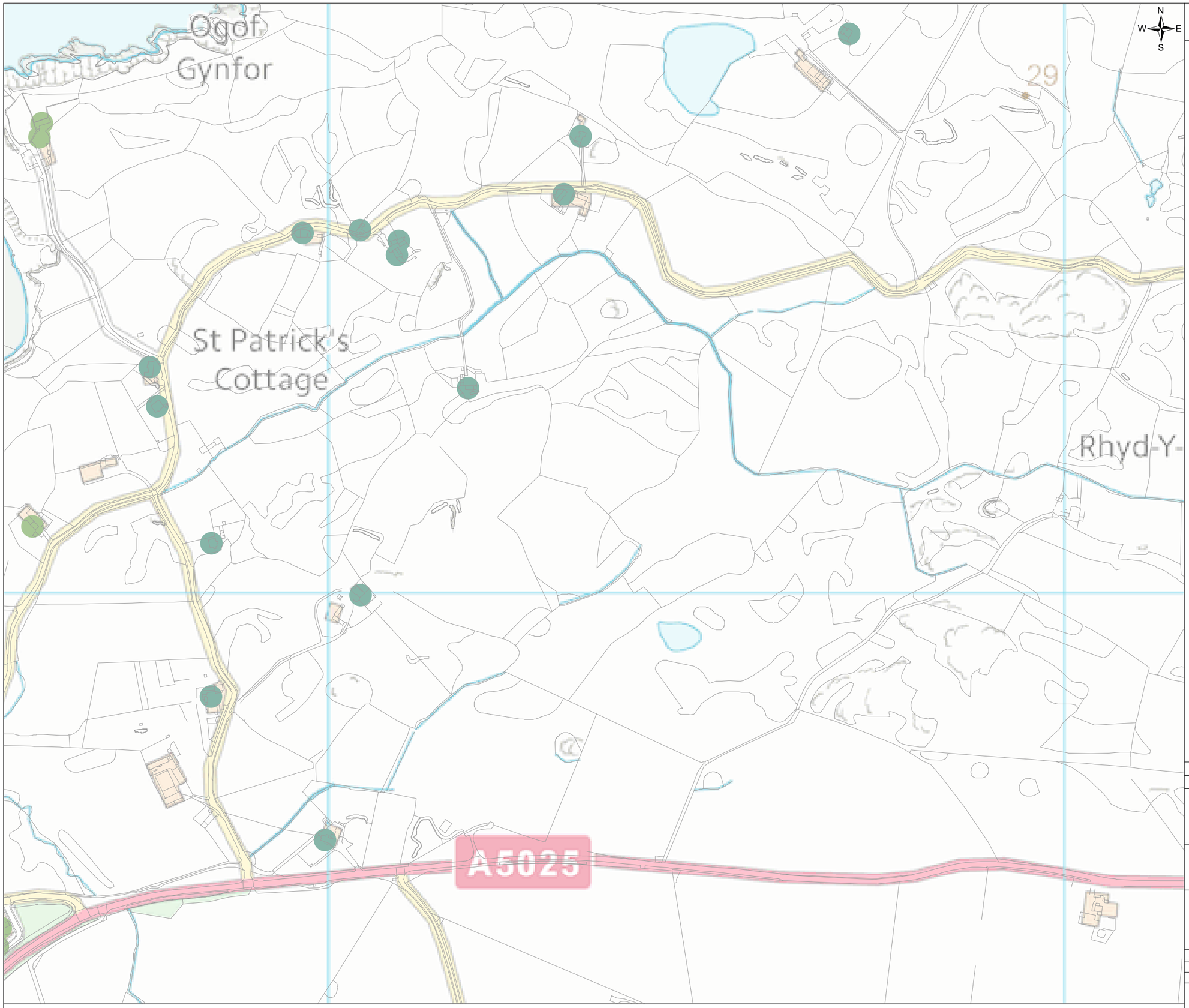
Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (NIGHT-TIME)
SHEET 16 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

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0 125 250 500 metres

FIGURE 3

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

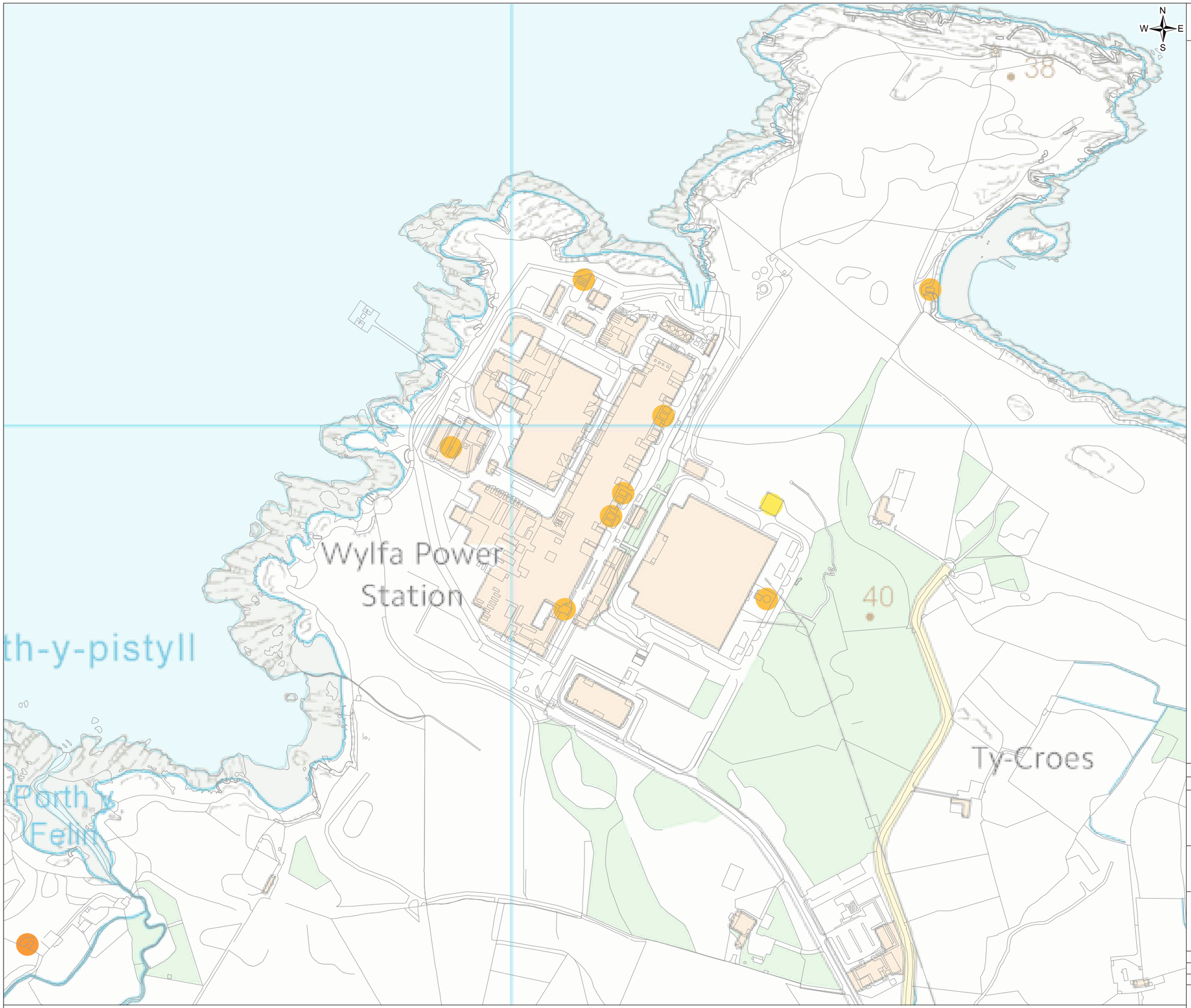
Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 7 TO 9 (NIGHT-TIME)
SHEET 17 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS7TO9_NIGHTTIME

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FIGURE 4



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (DAYTIME)
SHEET 1 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_DAYTIME

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0 125 250 500 metres

FIGURE 4

Esgair Gemlyn

Cemlyn

Capel

Porth Felin

N W E S

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (DAYTIME)
SHEET 2 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

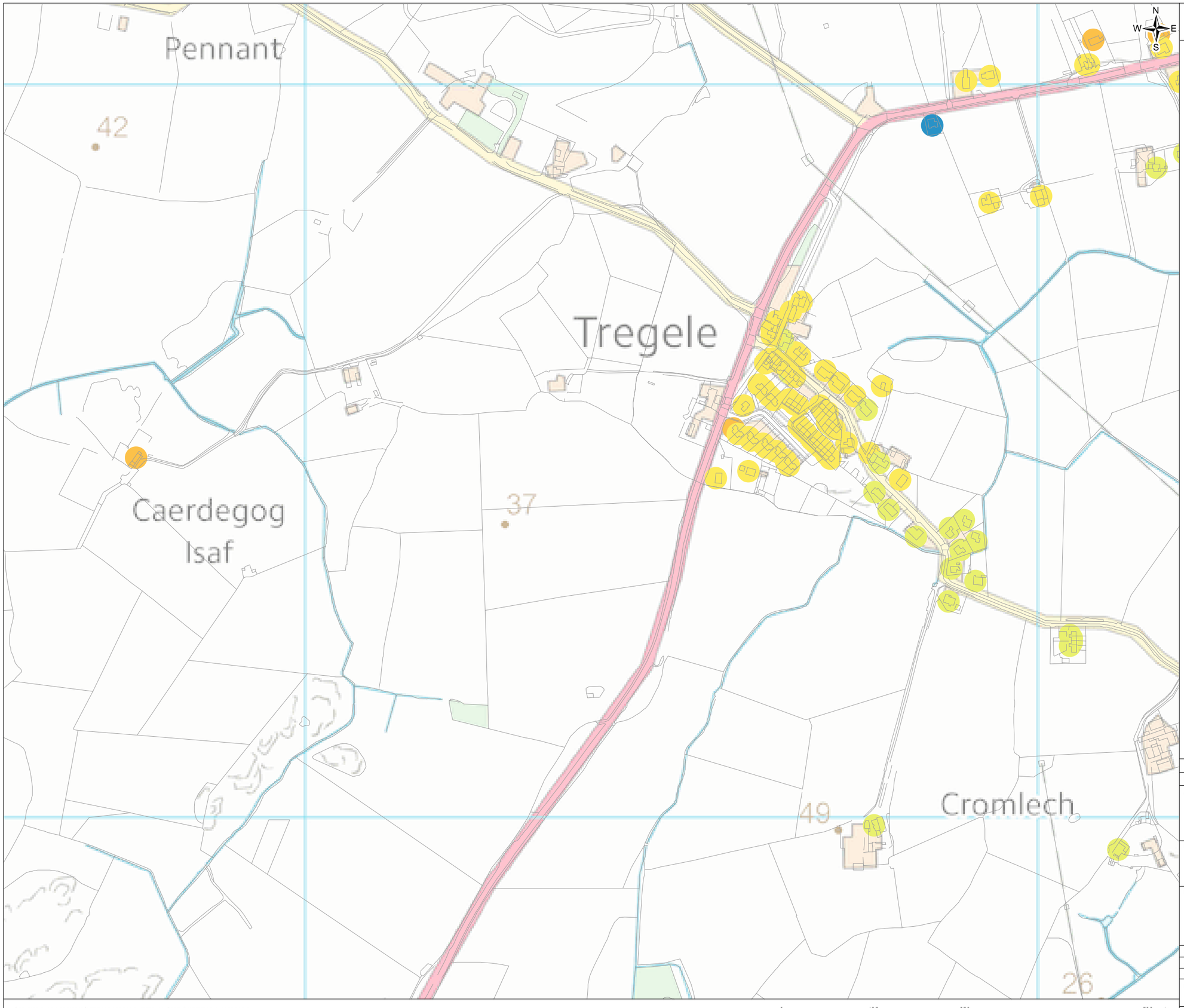
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS10TO12_DAYTIME

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0 125 250 500 metres

FIGURE 4



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (DAYTIME)
SHEET 3 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

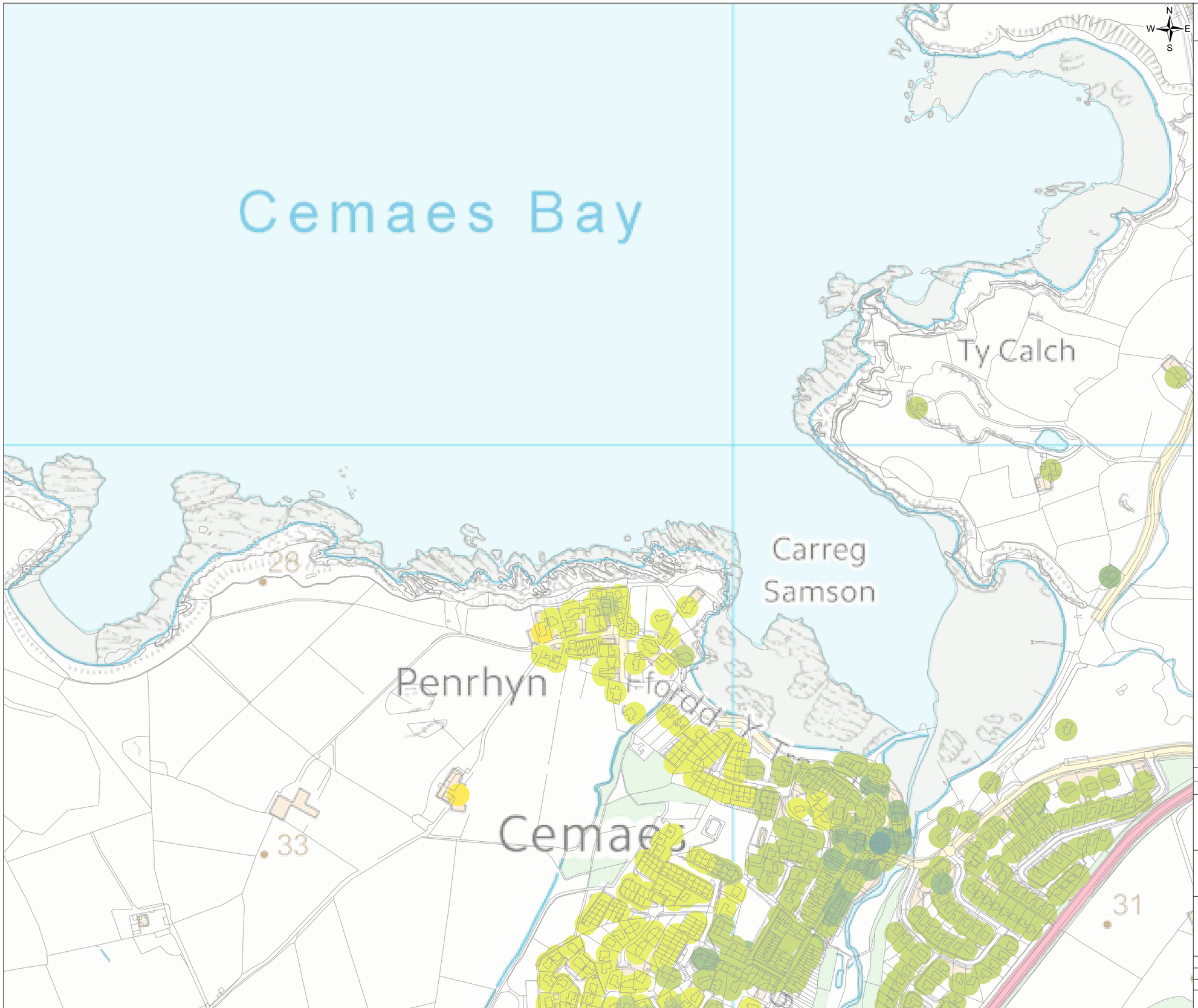
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_DAYTIME

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0 125 250 500 metres

FIGURE 4



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (DAYTIME)
SHEET 4 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_DAYTIME

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0 125 250 500 metres

FIGURE 4



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (DAYTIME)
SHEET 5 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS10TO12_DAYTIME

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0 125 250 500 metres

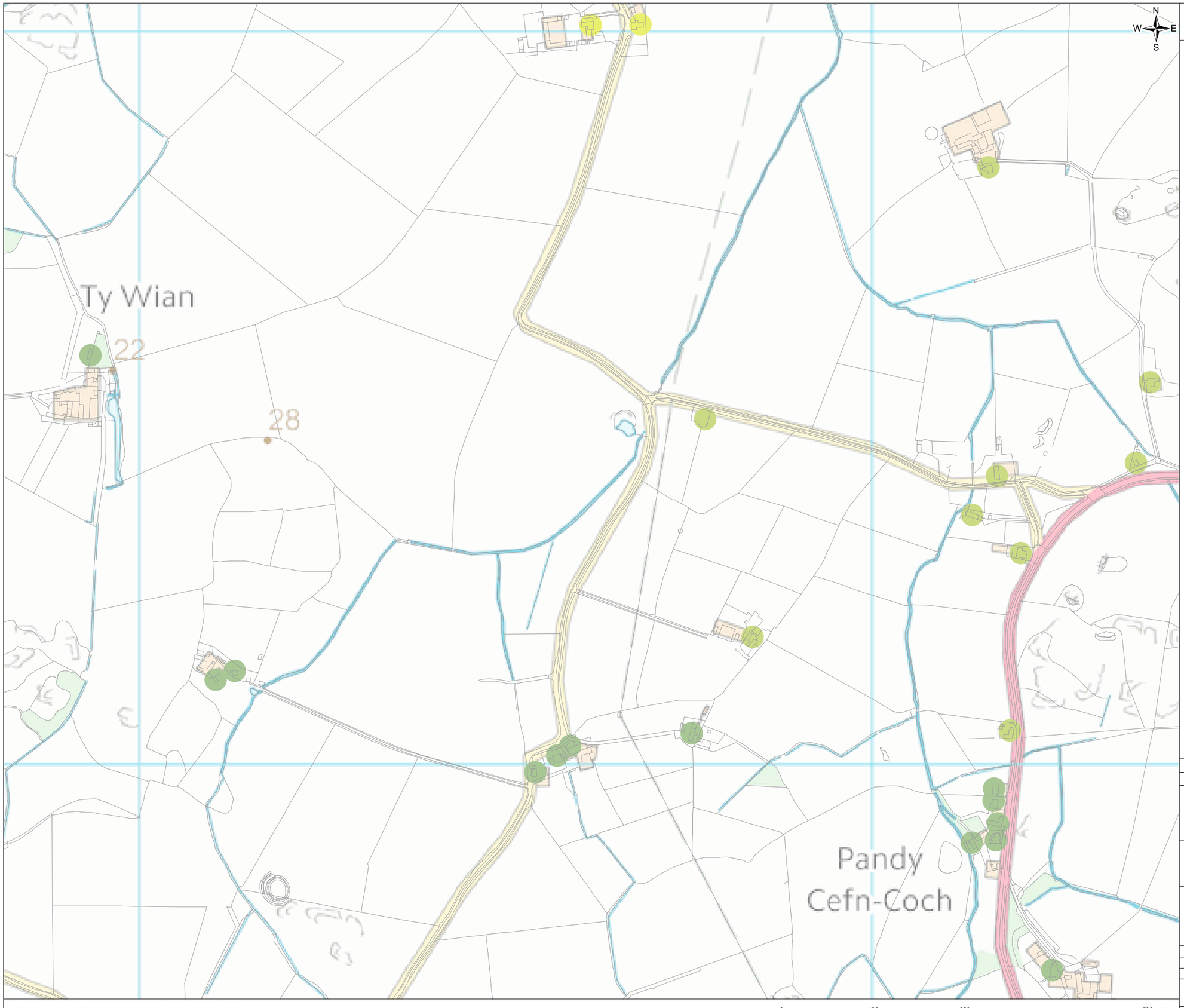


FIGURE 4

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (DAYTIME)
SHEET 6 OF 17

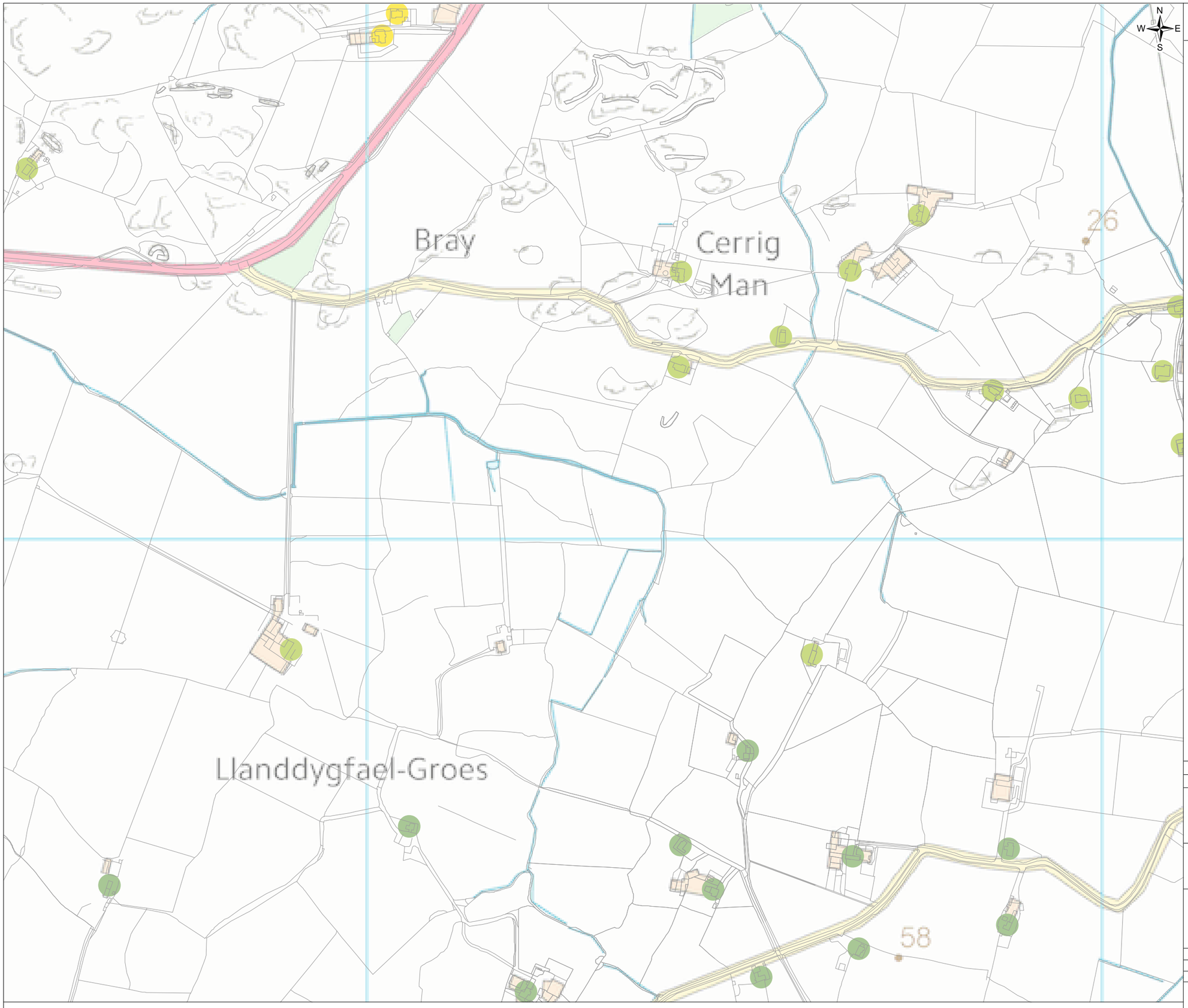
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Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_DAYTIME

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FIGURE 4



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (DAYTIME)
SHEET 7 OF 17

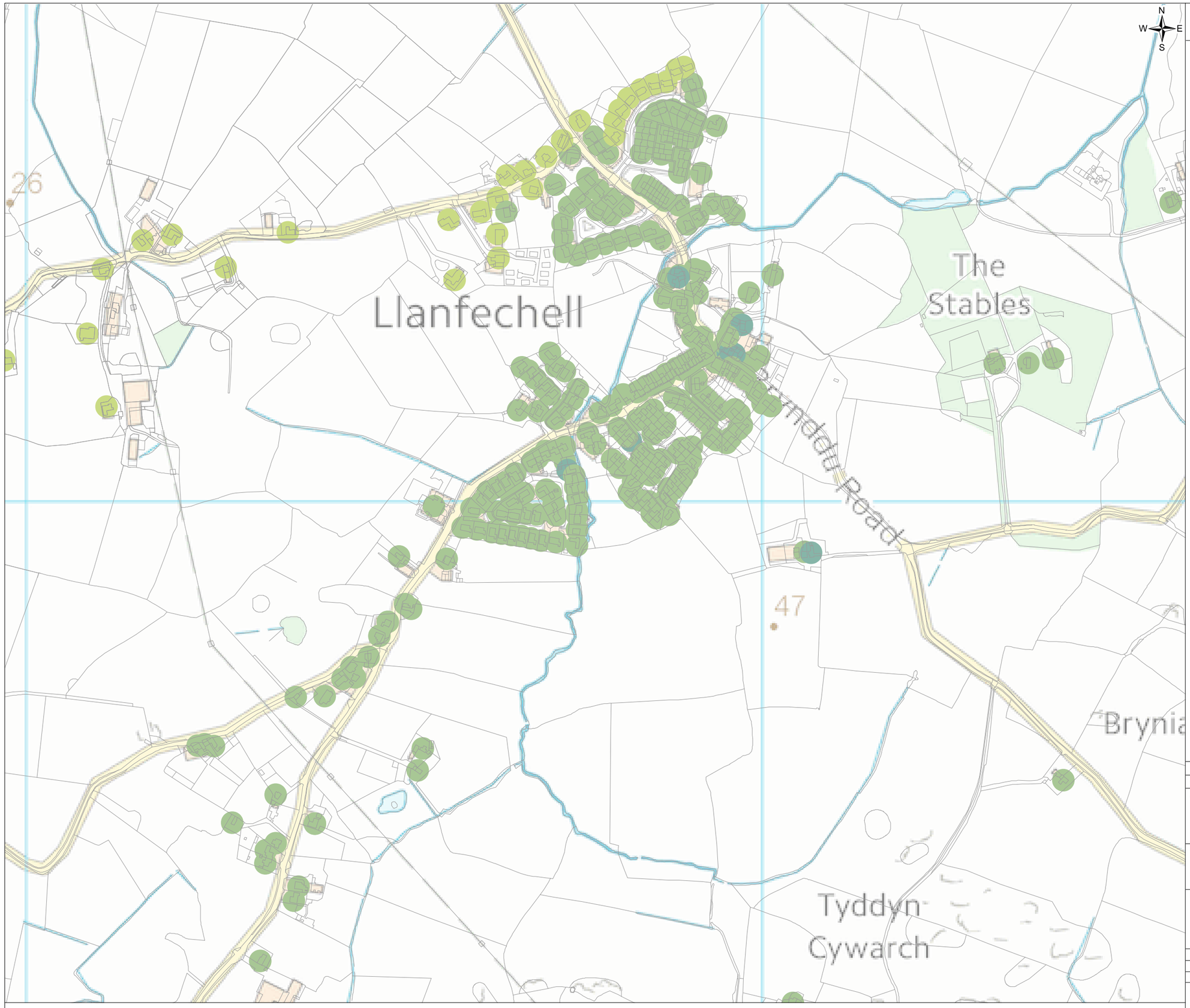
Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS10TO12_DAYTIME

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FIGURE 4



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (DAYTIME)
SHEET 8 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_DAYTIME

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0 125 250 500 metres

FIGURE 4

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (DAYTIME)
SHEET 9 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

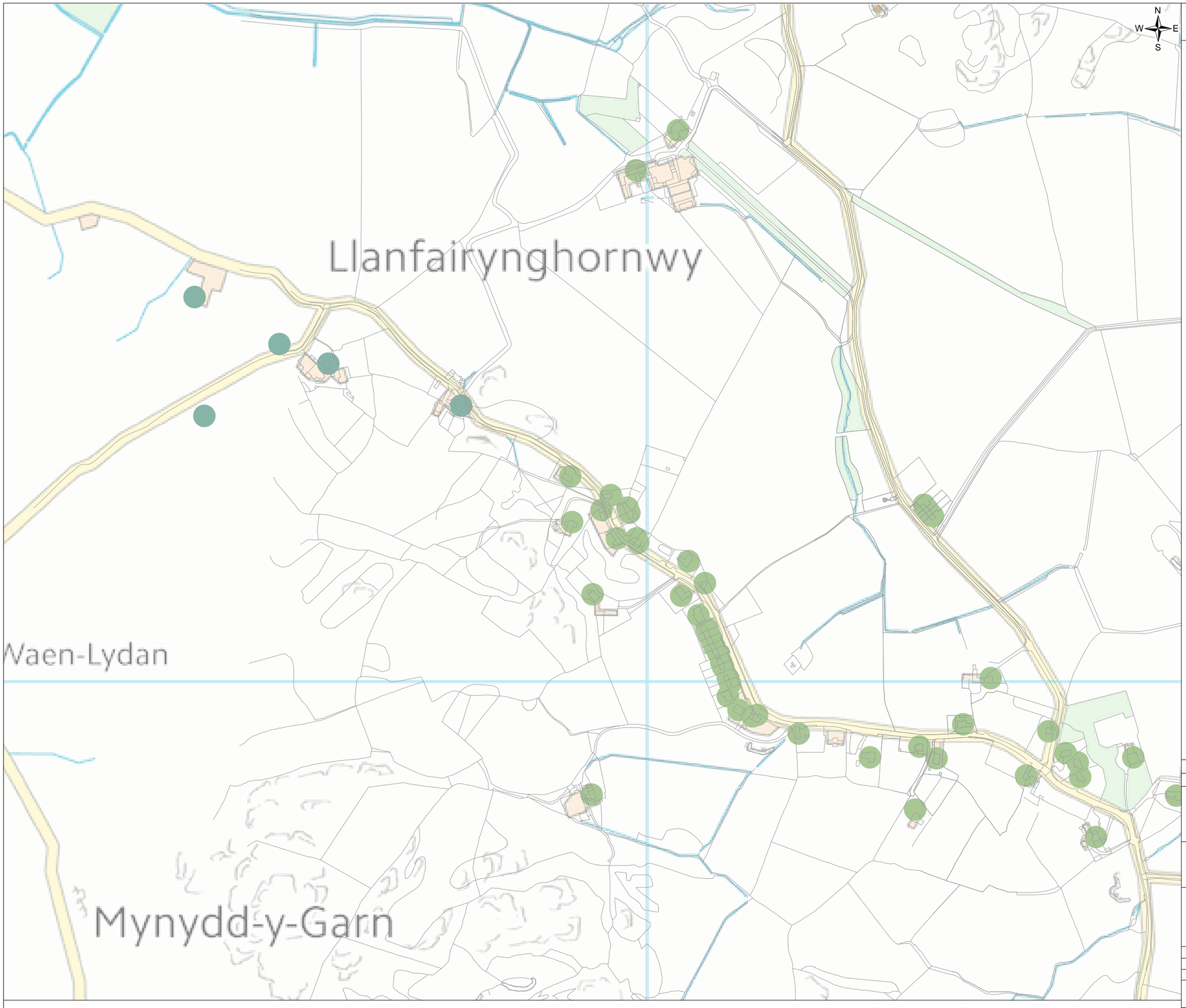
60PO80AS_NOISE_RfNMC_MONTHS10TO12_DAYTIME

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0 125 250 500 metres

FIGURE 4



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (DAYTIME)
SHEET 10 OF 17

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Jacobs No.	60PO80AS	
Client No.		

Drawing No.

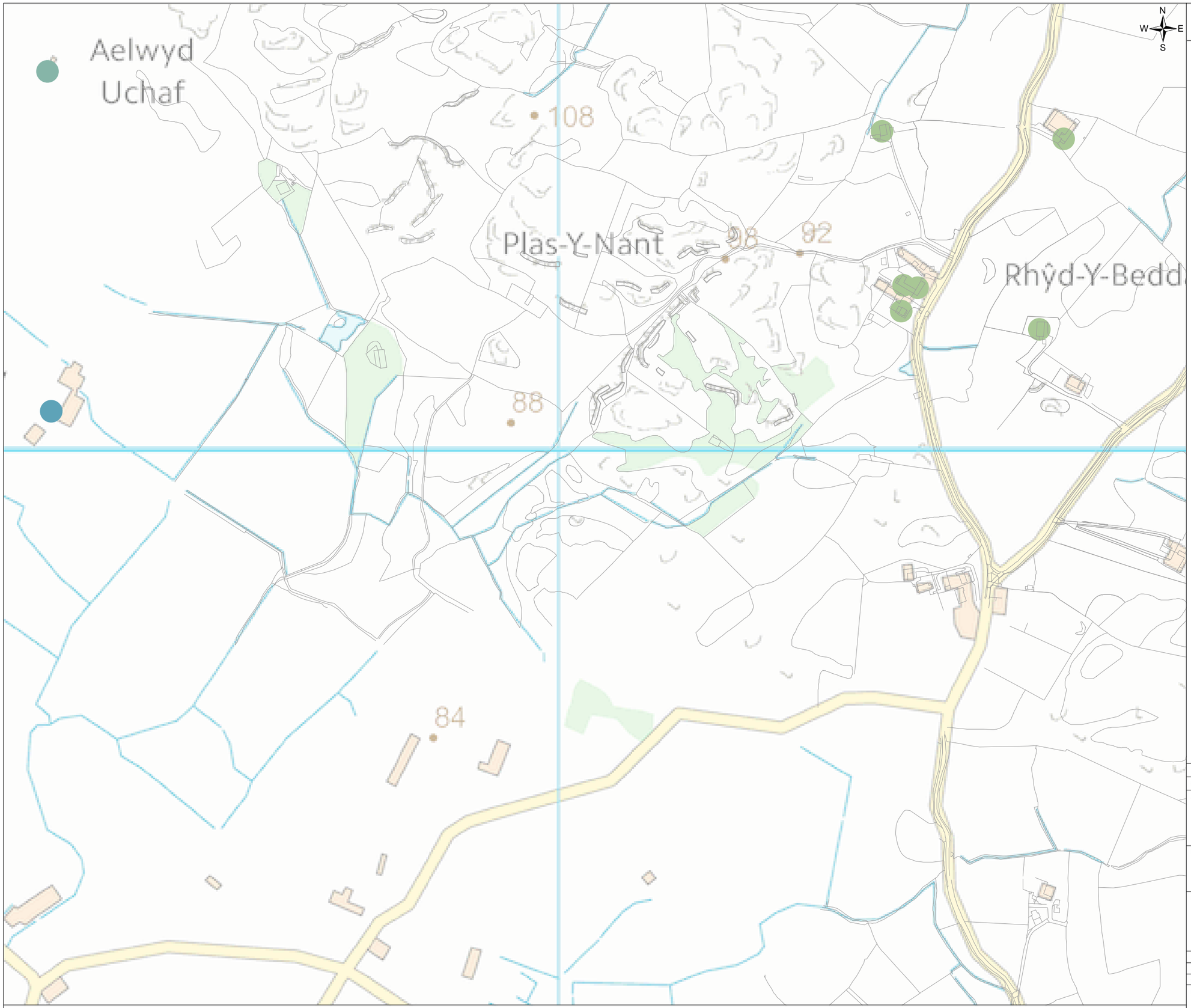
60PO80AS_NOISE_RfNMC_MONTHS10TO12_DAYTIME

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0 125 250 500 metres

FIGURE 4



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 10 TO 12 (DAYTIME)
SHEET 11 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS10TO12_DAYTIME

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0 125 250 500 metres

FIGURE 4

Pen Yr Orsedd

A5025

The White House

Tyn Felin

A5025

Bod-Hedd

Rallt Goch

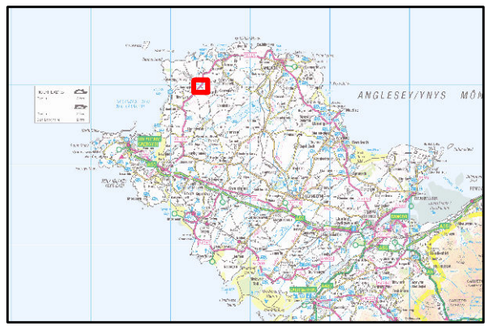
94

N
W E
S

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (DAYTIME)
SHEET 12 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

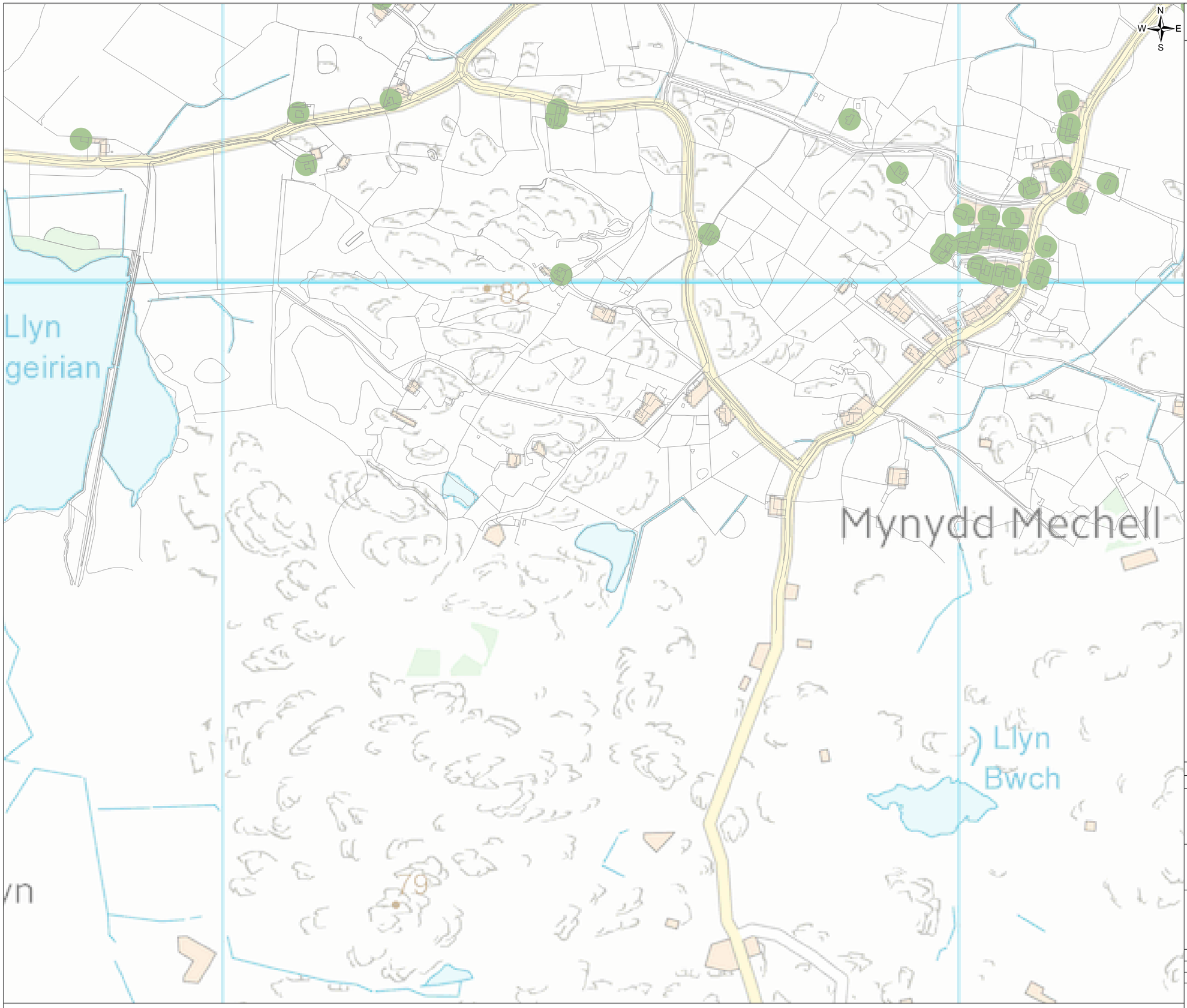
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_DAYTIME

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0 125 250 500 metres

FIGURE 4



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (DAYTIME)
SHEET 13 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_DAYTIME

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0 125 250 500 metres

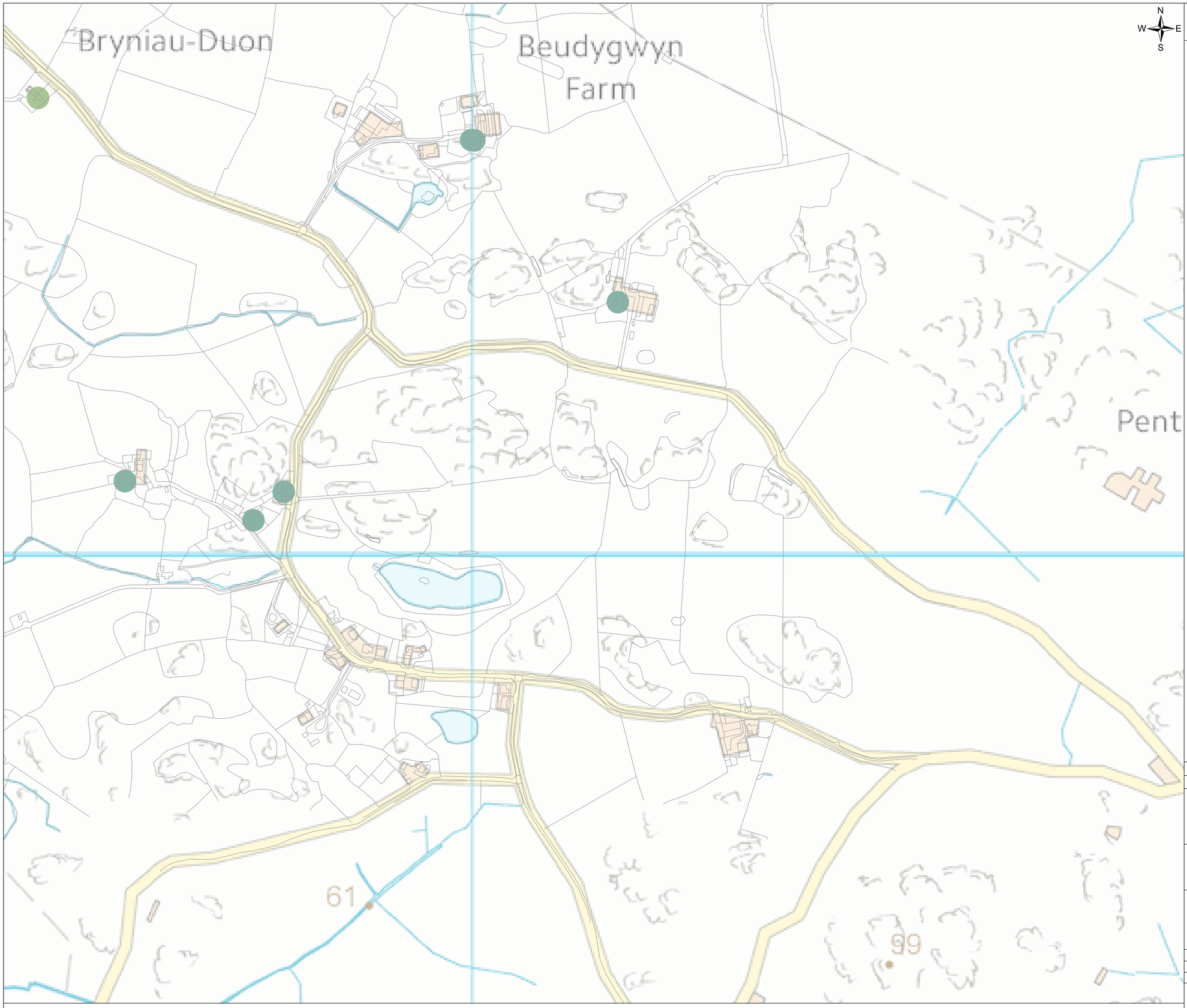


FIGURE 4

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (DAYTIME)
SHEET 14 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

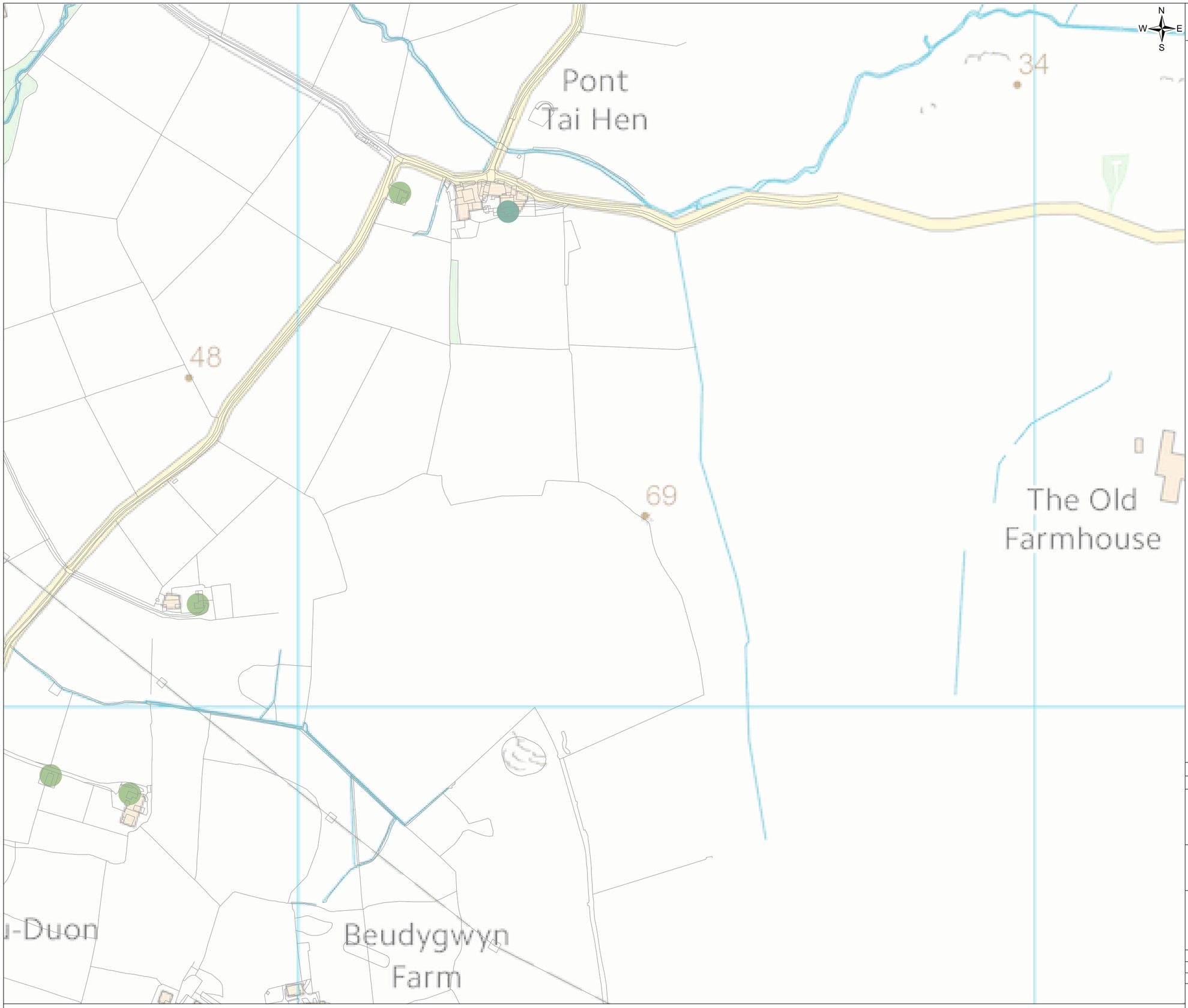
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_DAYTIME

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0 125 250 500 metres

FIGURE 4



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 10 TO 12 (DAYTIME)
SHEET 15 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS10TO12_DAYTIME

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0 125 250 500 metres

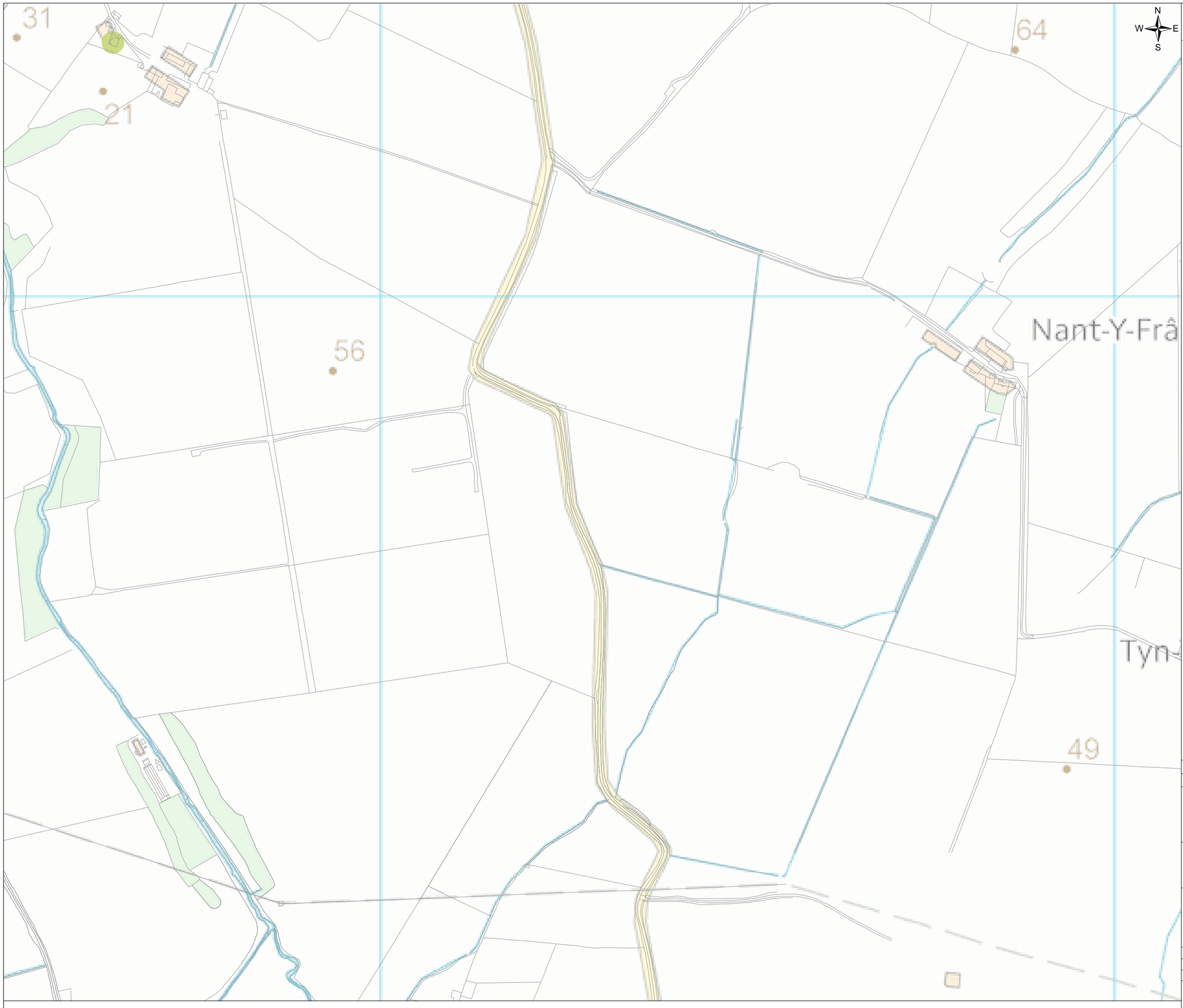


FIGURE 4

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (DAYTIME)
SHEET 16 OF 17

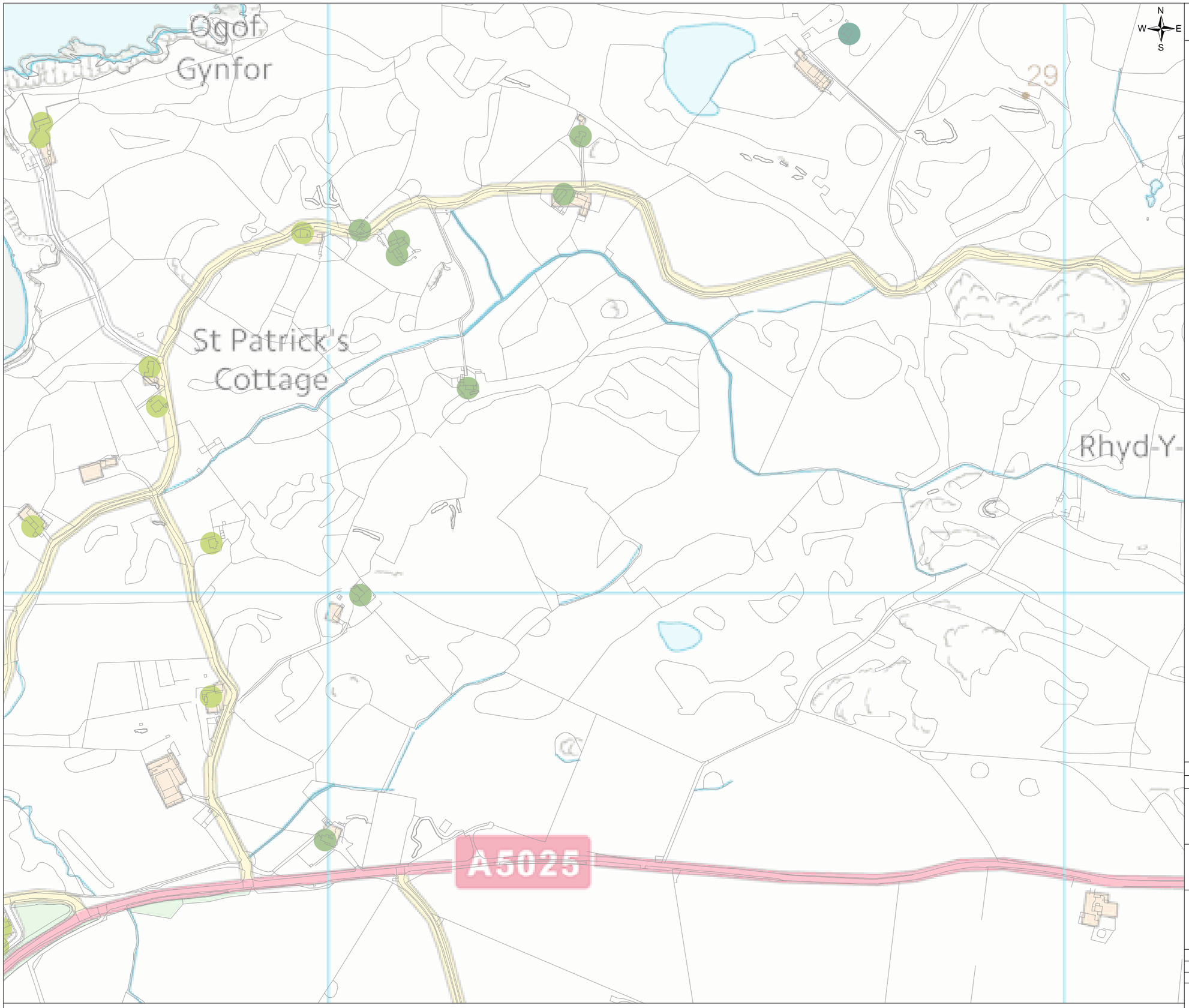
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Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_DAYTIME

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0 125 250 500 metres



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0 125 250 500 metres

FIGURE 4

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 10 TO 12 (DAYTIME)
SHEET 17 OF 17

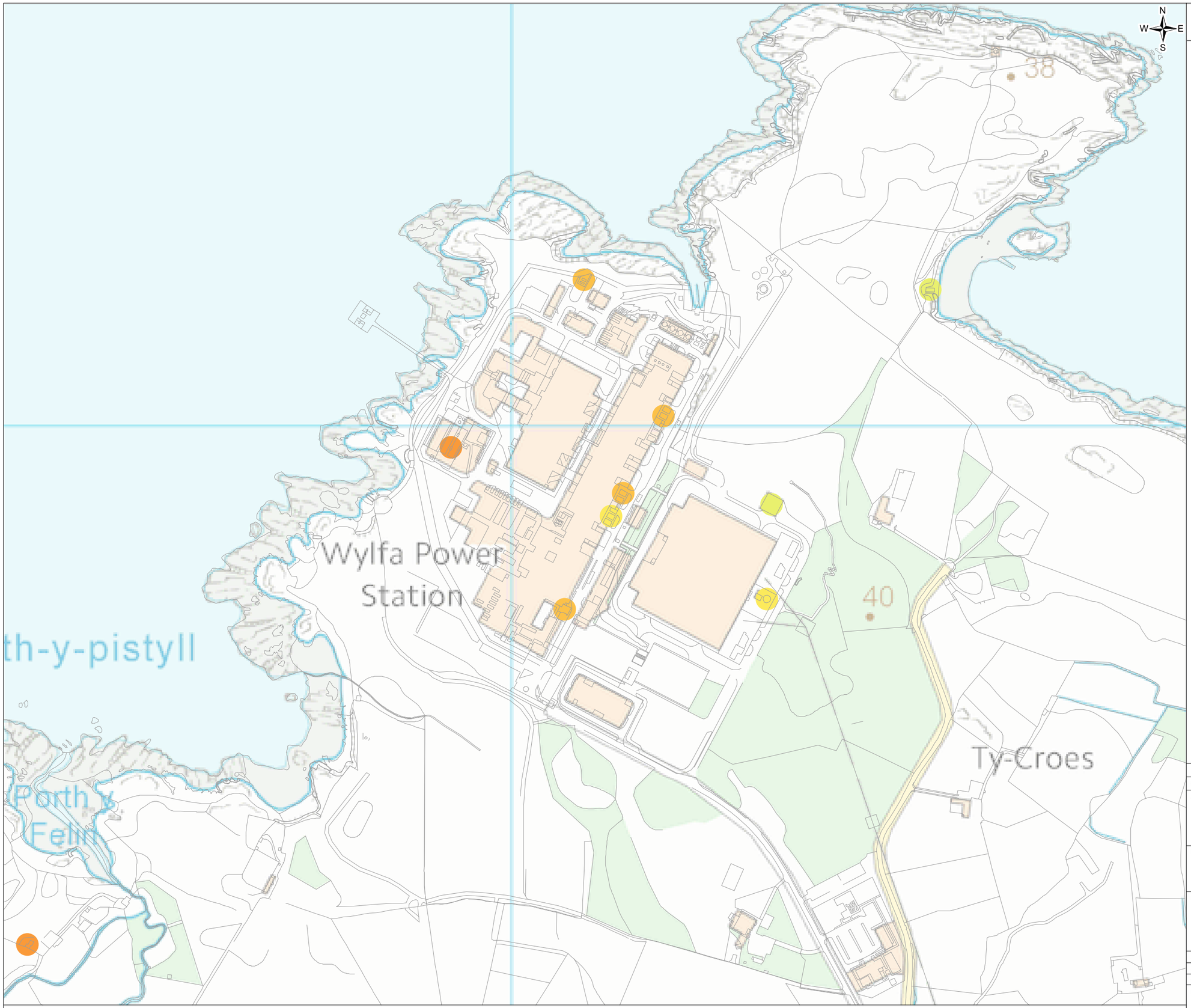
Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS10TO12_DAYTIME

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FIGURE 5



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (EVENING)
SHEET 1 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

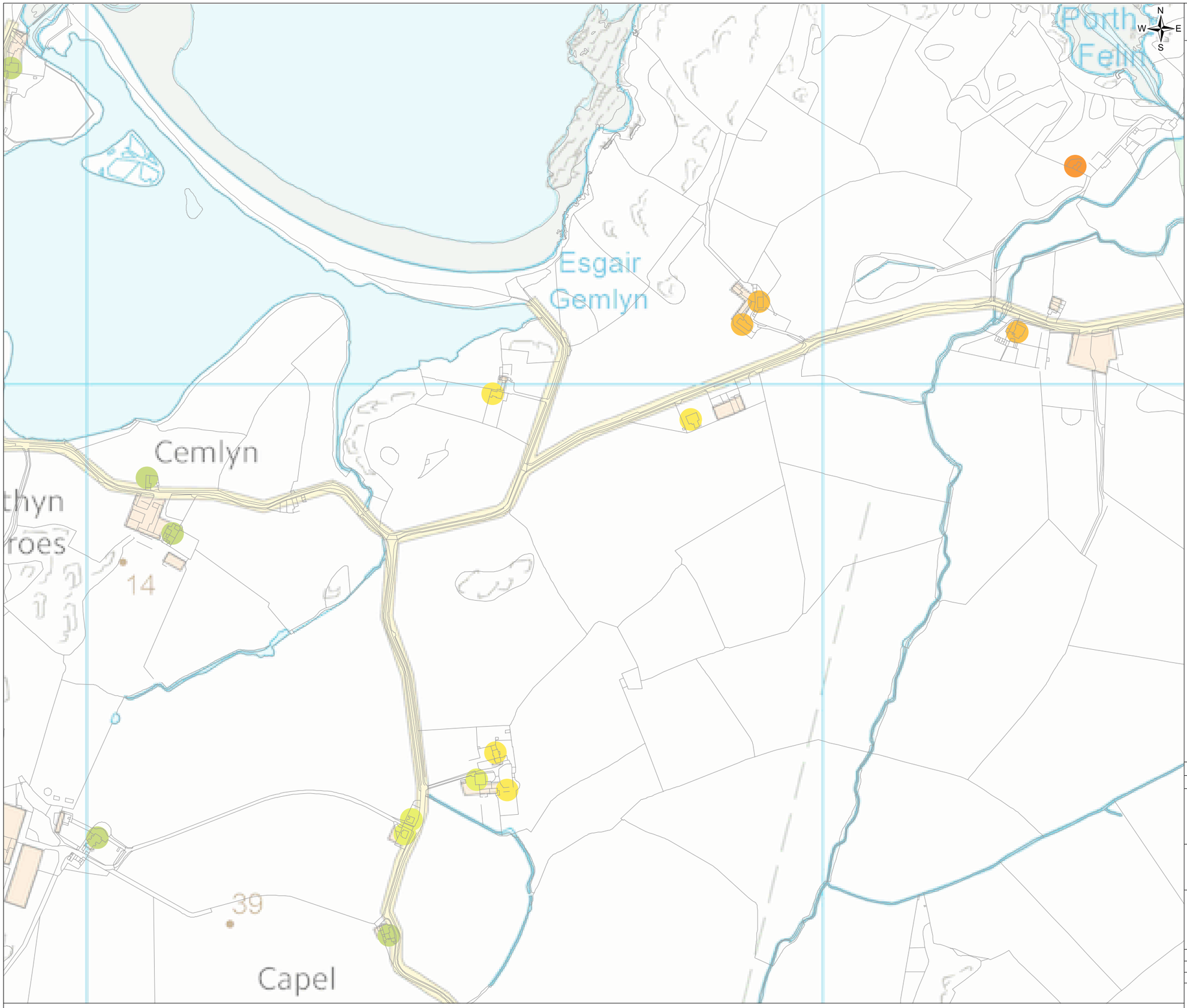
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_EVENING

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0 125 250 500 metres

FIGURE 5



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (EVENING)
SHEET 2 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

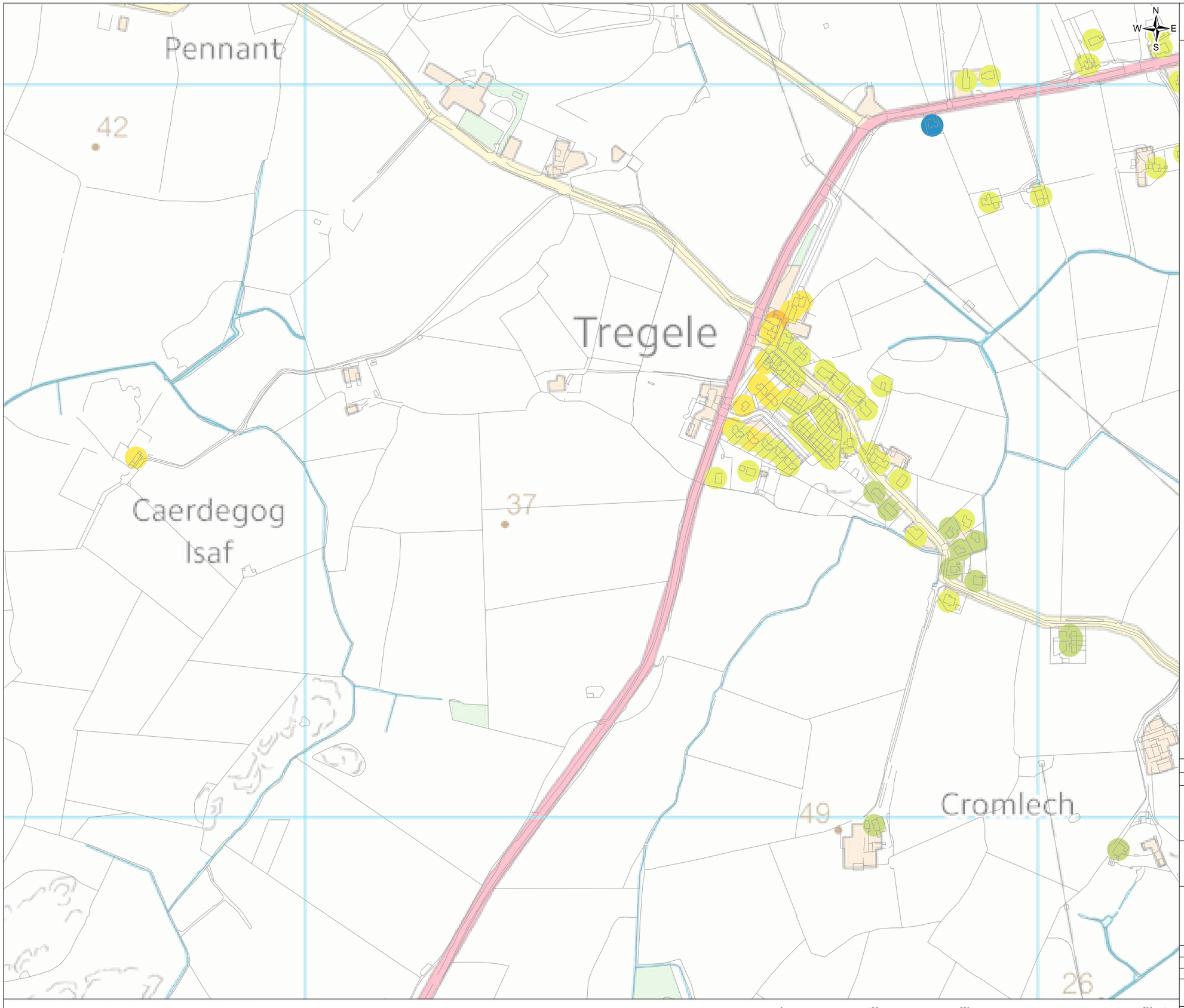
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_EVENING

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0 125 250 500 metres

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FIGURE 5



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (EVENING)
SHEET 3 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

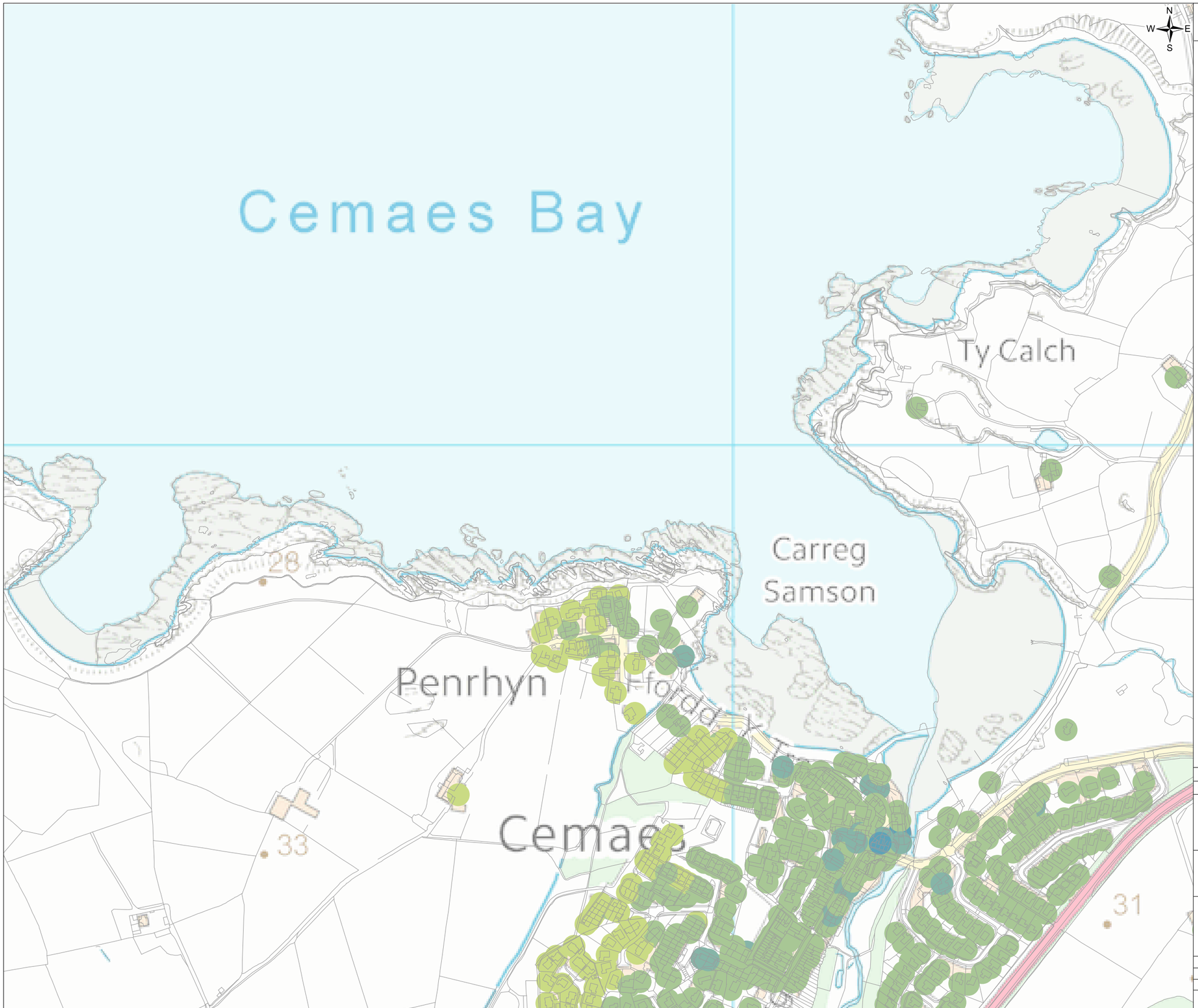
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_EVENING

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0 125 250 500 metres

FIGURE 5



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (EVENING)
SHEET 4 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_EVENING

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0 125 250 500 metres

FIGURE 5



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (EVENING)
SHEET 5 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS10TO12_EVENING

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0 125 250 500 metres

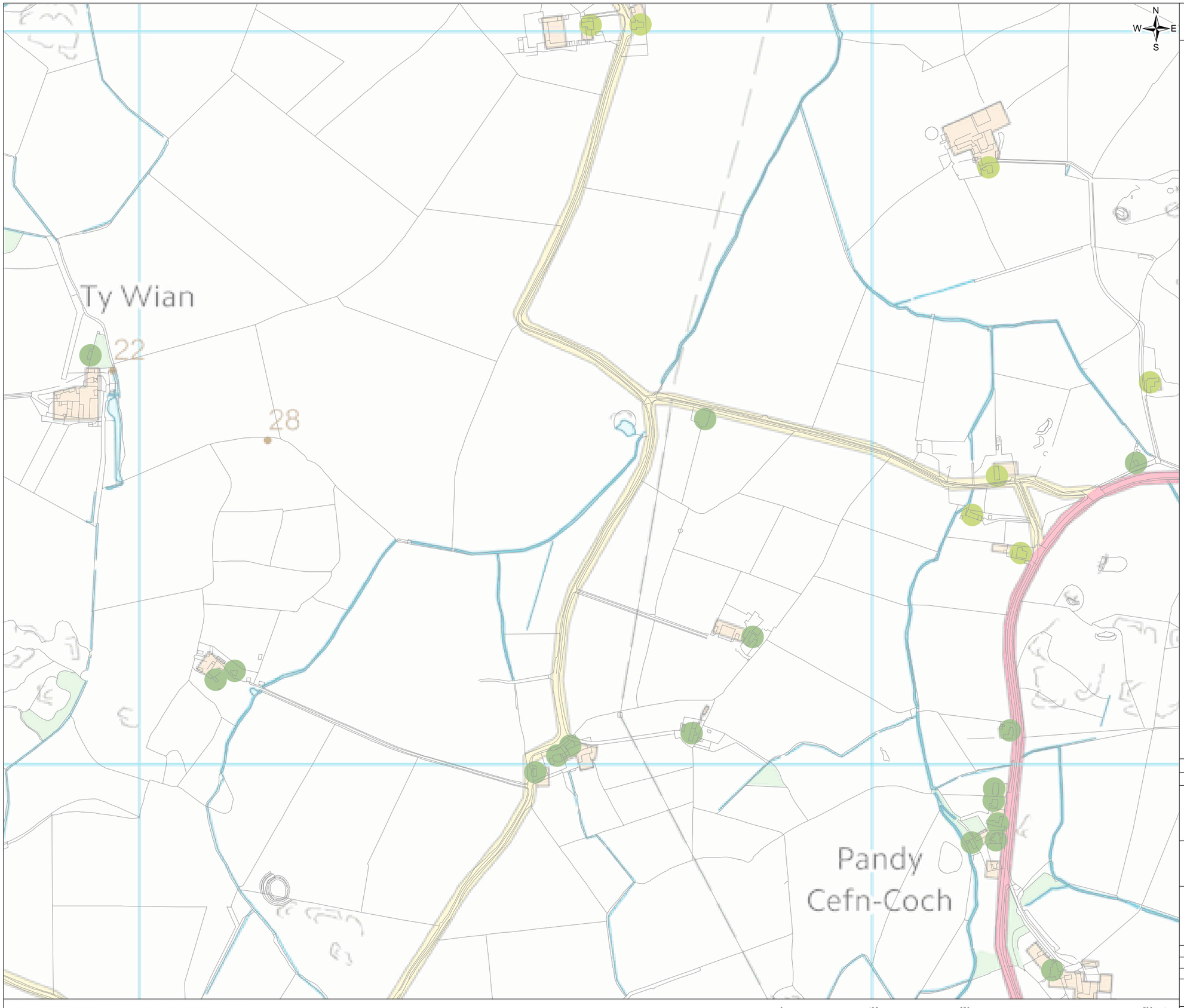


FIGURE 5

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (EVENING)
SHEET 6 OF 17

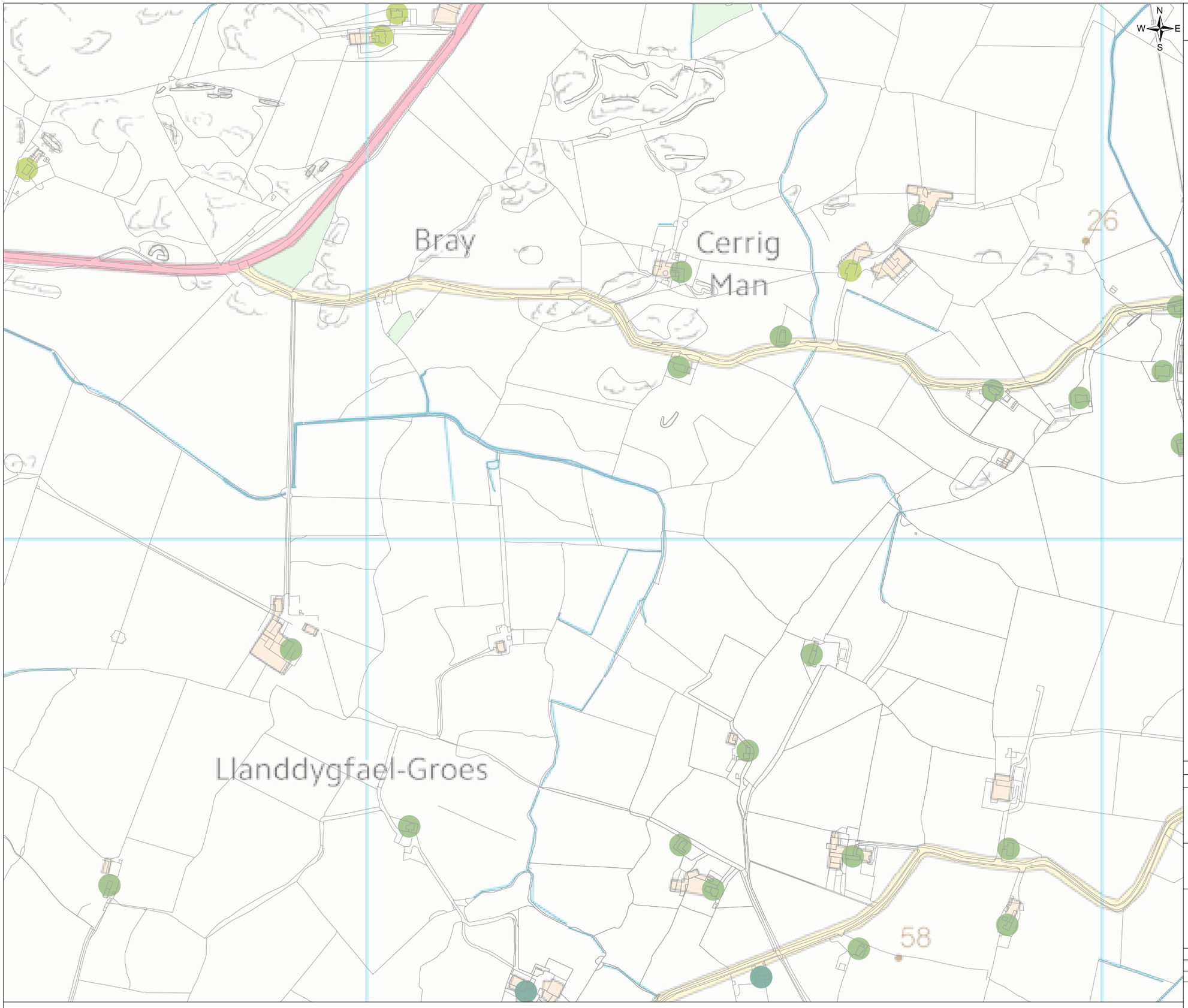
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Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_EVENING

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FIGURE 5



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (EVENING)
SHEET 7 OF 17

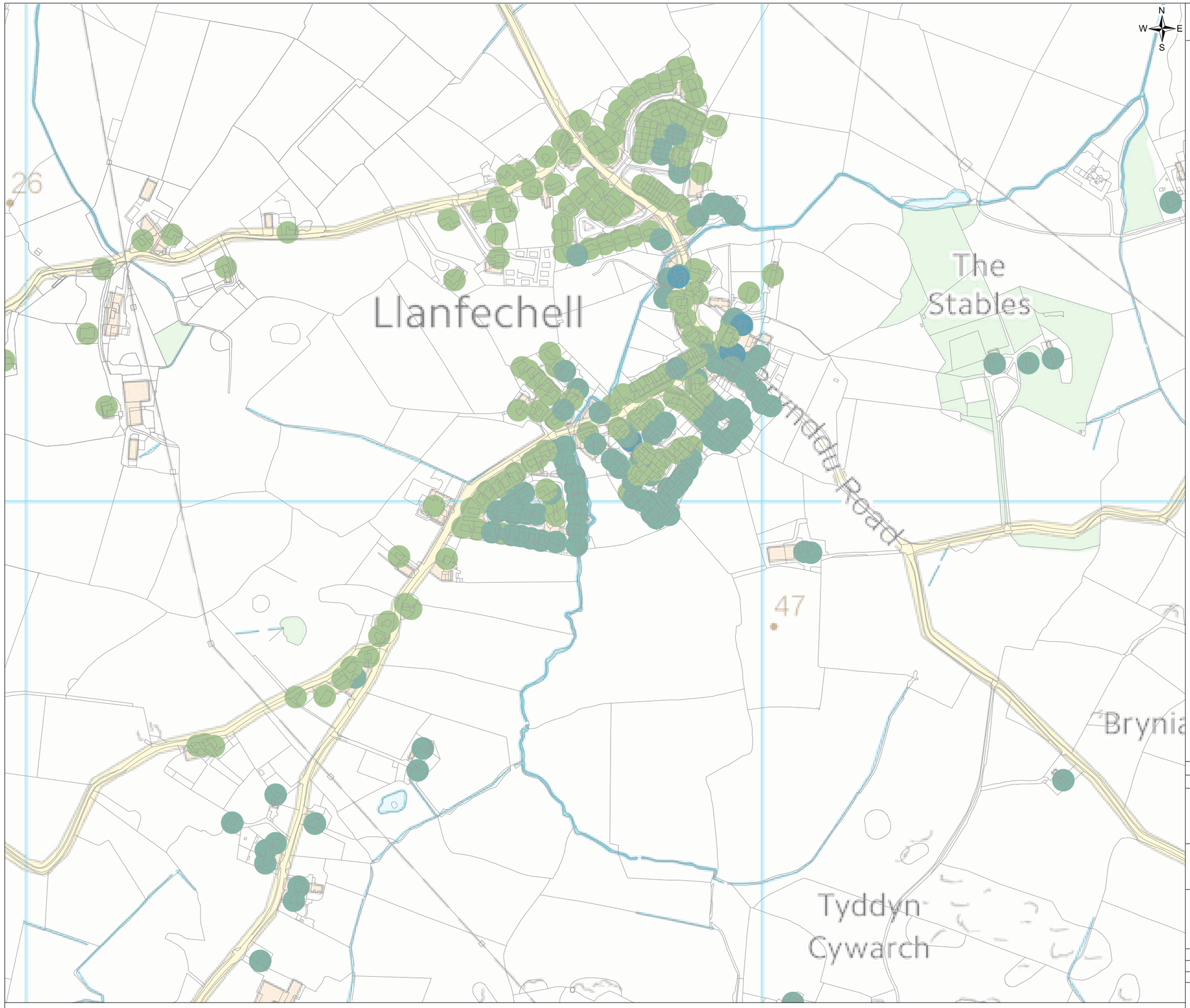
Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS10TO12_EVENING

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FIGURE 5



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (EVENING)
SHEET 8 OF 17

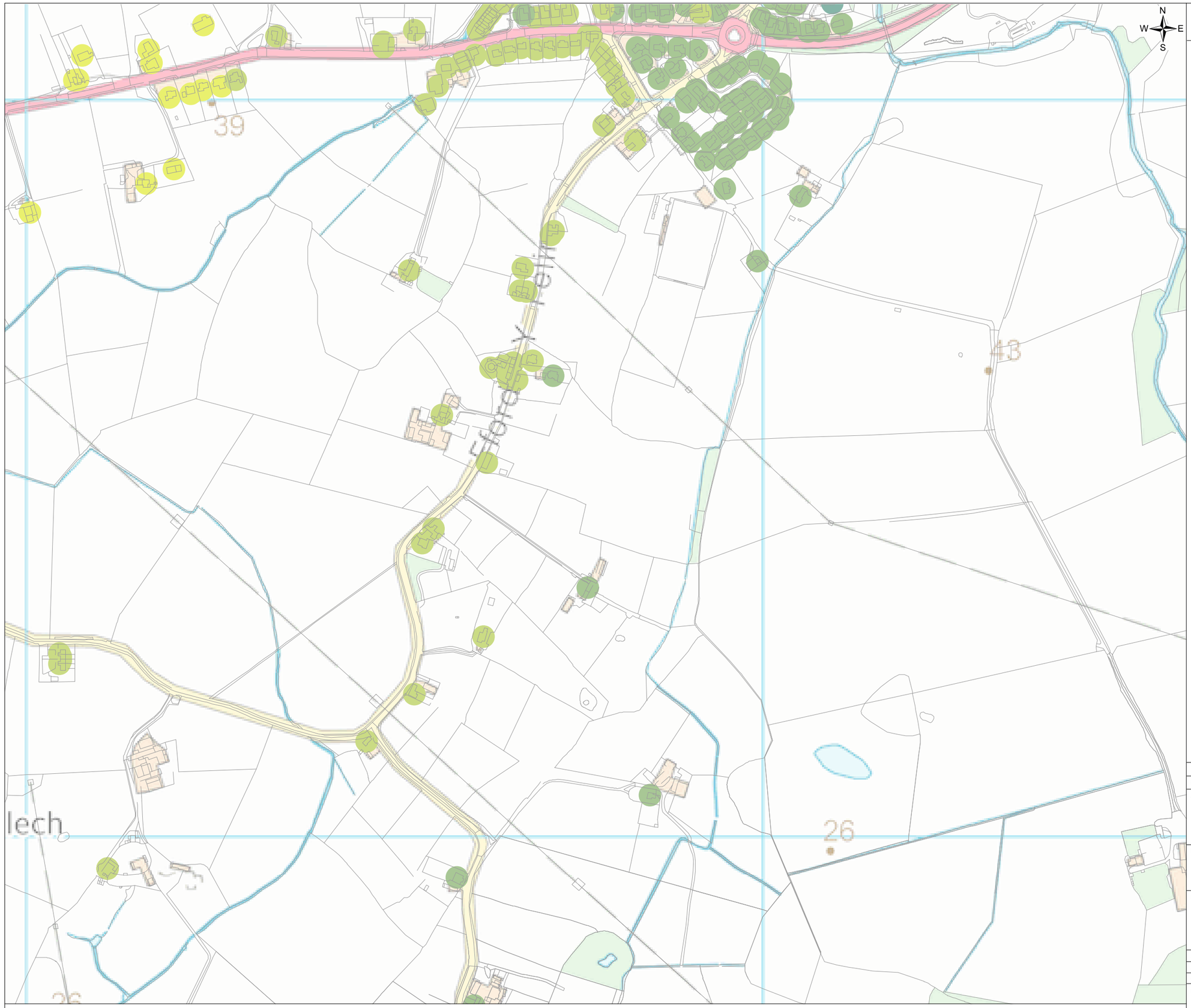
Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS10TO12_EVENING

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FIGURE 5



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (EVENING)
SHEET 9 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

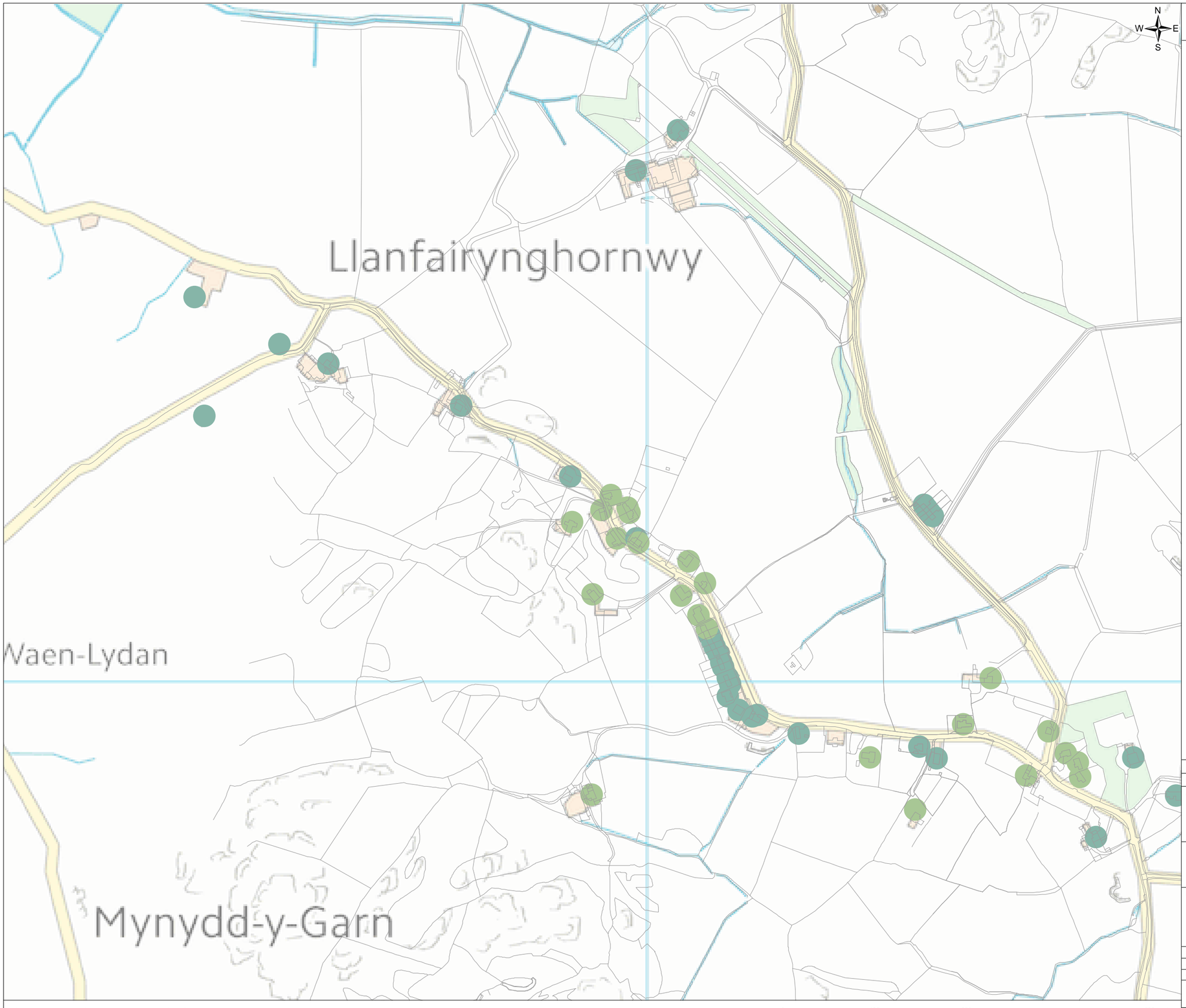
60PO80AS_NOISE_RfNMC_MONTHS10TO12_EVENING

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0 125 250 500 metres

FIGURE 5



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (EVENING)
SHEET 10 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS10TO12_EVENING

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0 125 250 500 metres

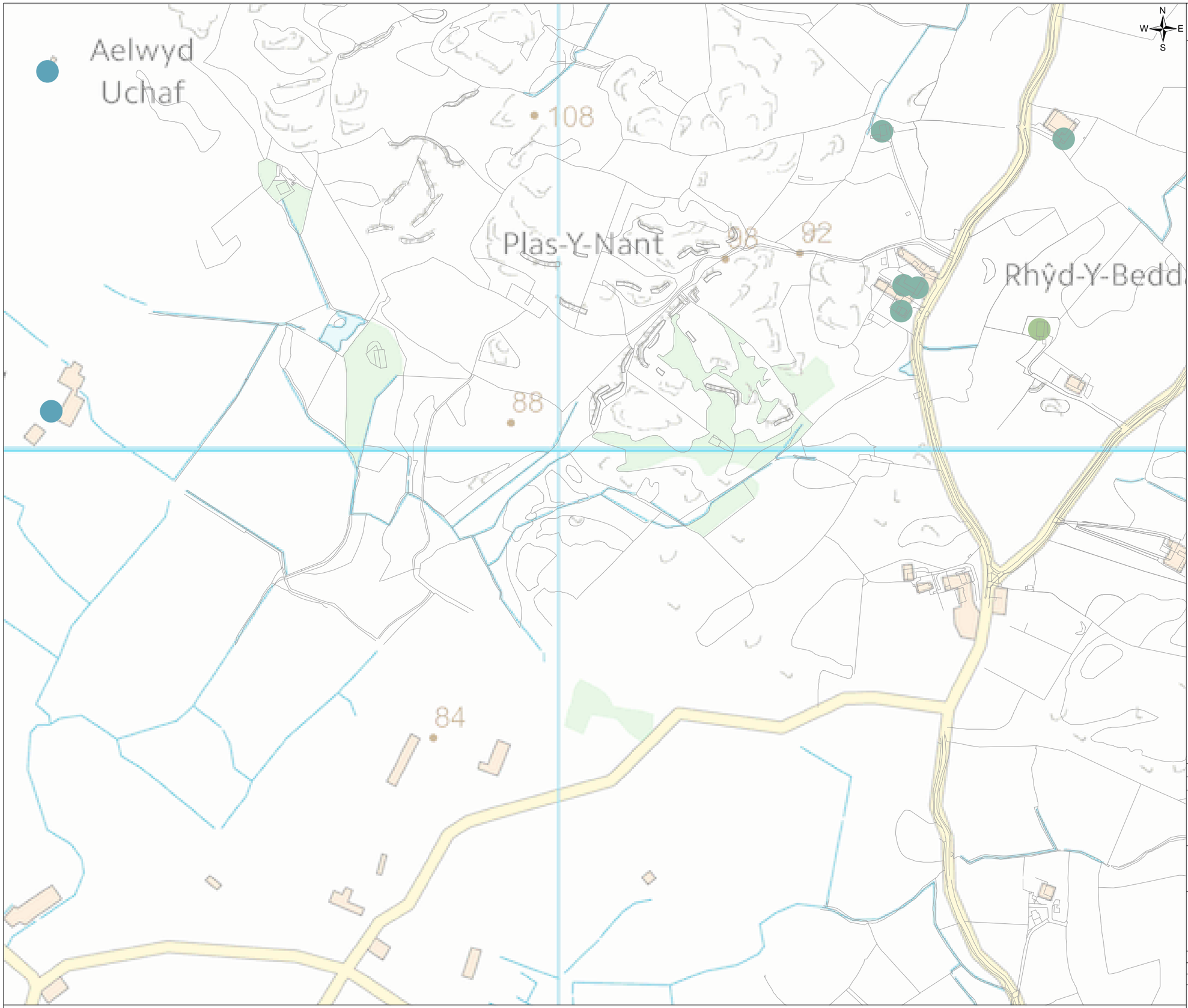


FIGURE 5

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 10 TO 12 (EVENING)
SHEET 11 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS10TO12_EVENING

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0 125 250 500 metres

FIGURE 5

Pen Yr Orsedd

A5025

The White House

Tyn Felin

A5025

Bod-Hedd

Rallt Goch

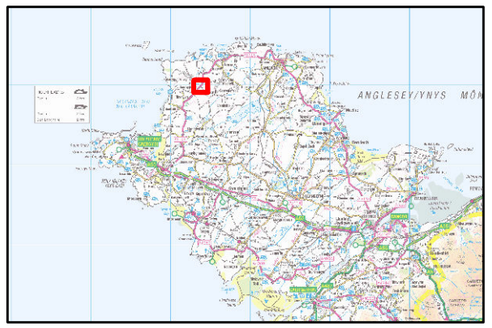
94

N
W E
S

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (EVENING)
SHEET 12 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

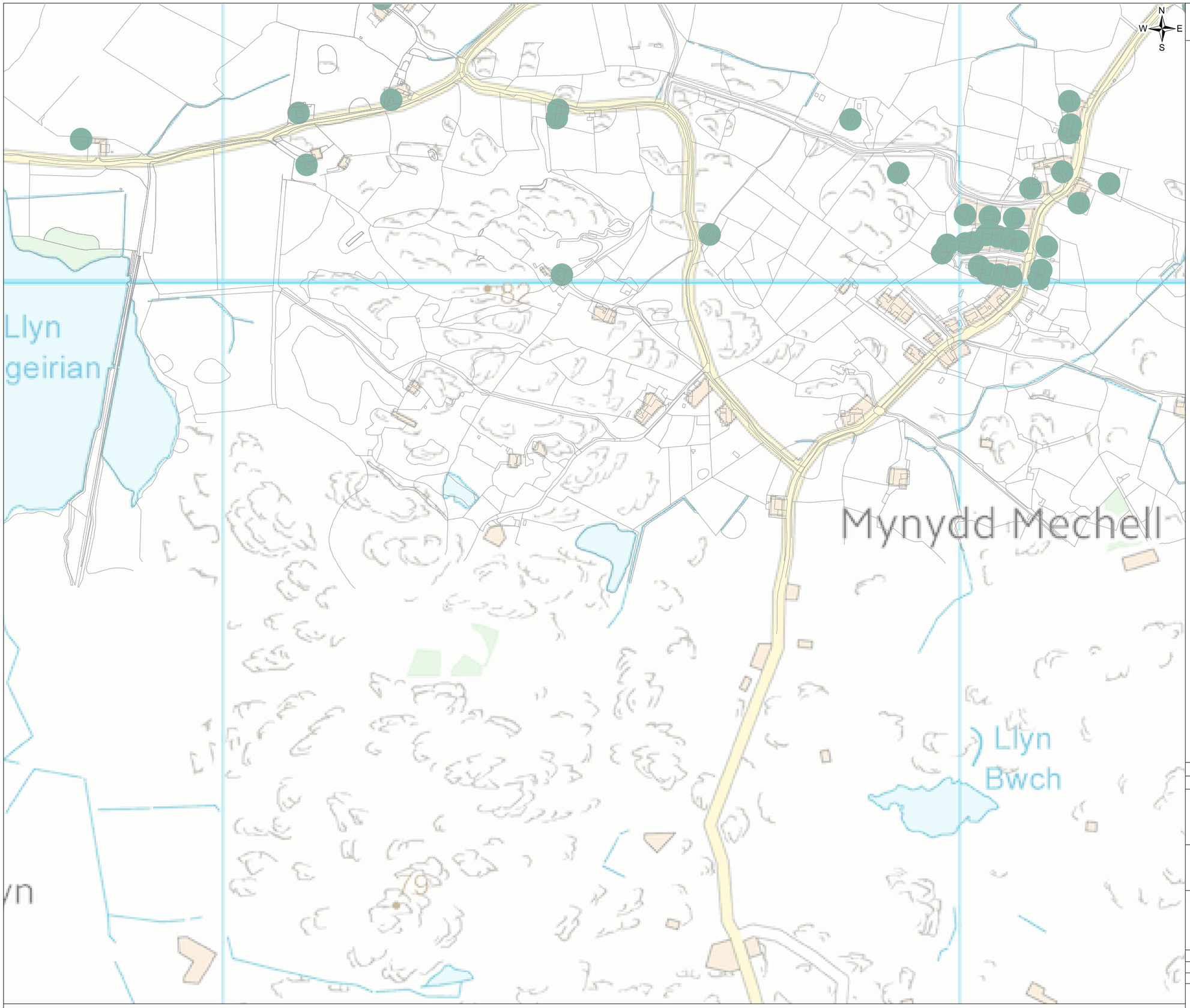
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_EVENING

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0 125 250 500 metres

FIGURE 5



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (EVENING)
SHEET 13 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_EVENING

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0 125 250 500 metres

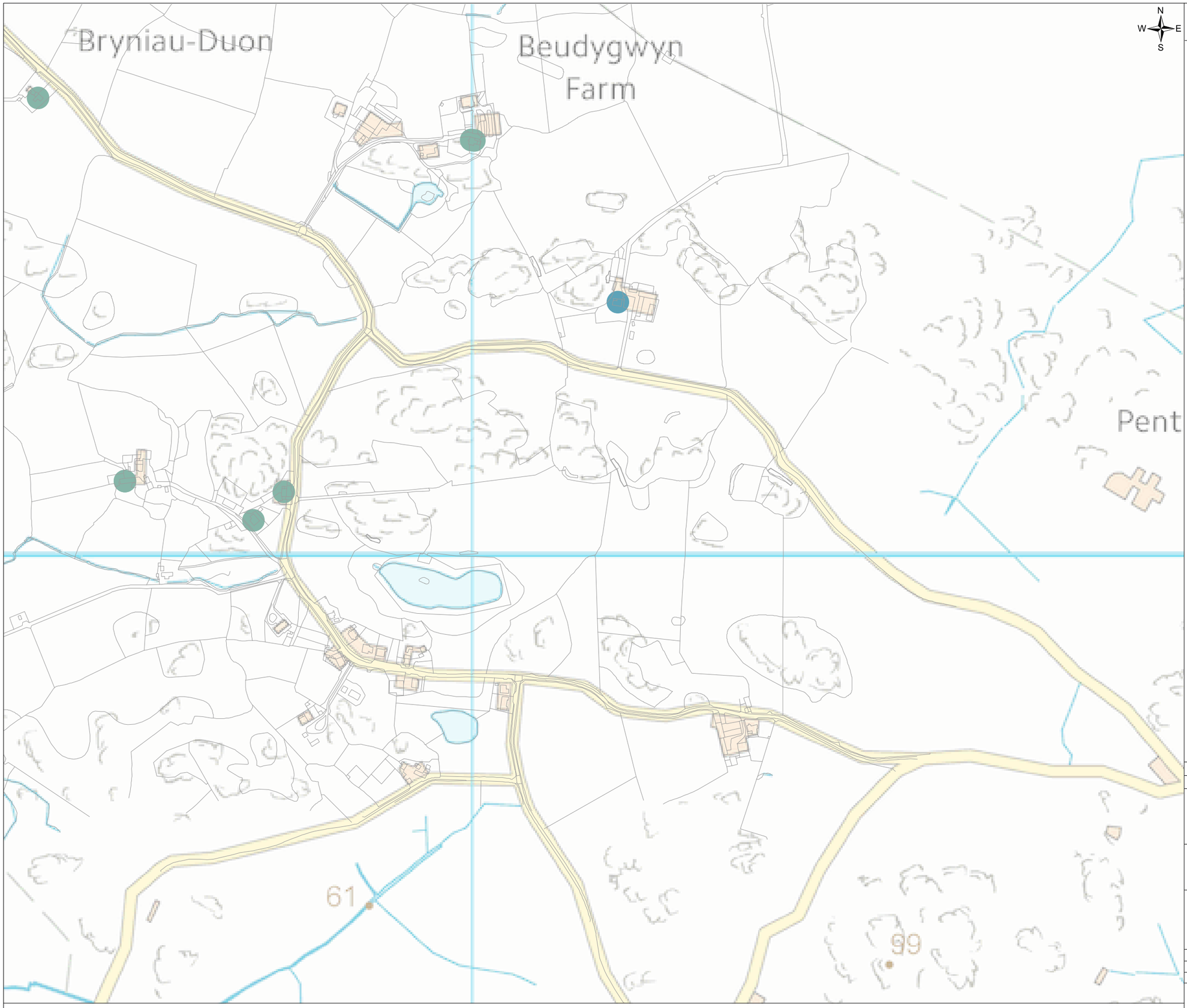


FIGURE 5

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (EVENING)
SHEET 14 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

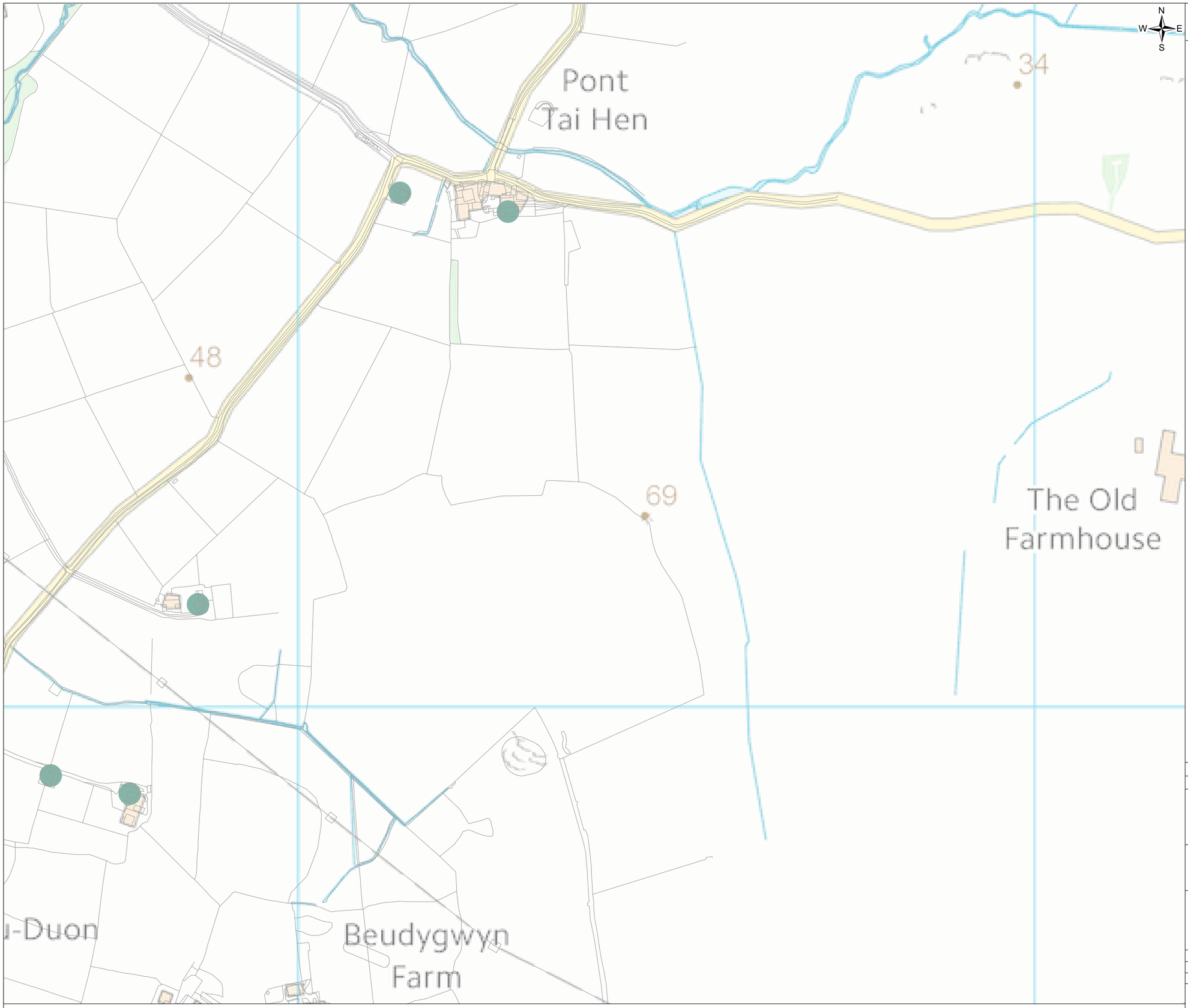
60PO80AS_NOISE_RfNMC_MONTHS10TO12_EVENING

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0 125 250 500 metres

FIGURE 5



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 10 TO 12 (EVENING)
SHEET 15 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS10TO12_EVENING

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0 125 250 500 metres

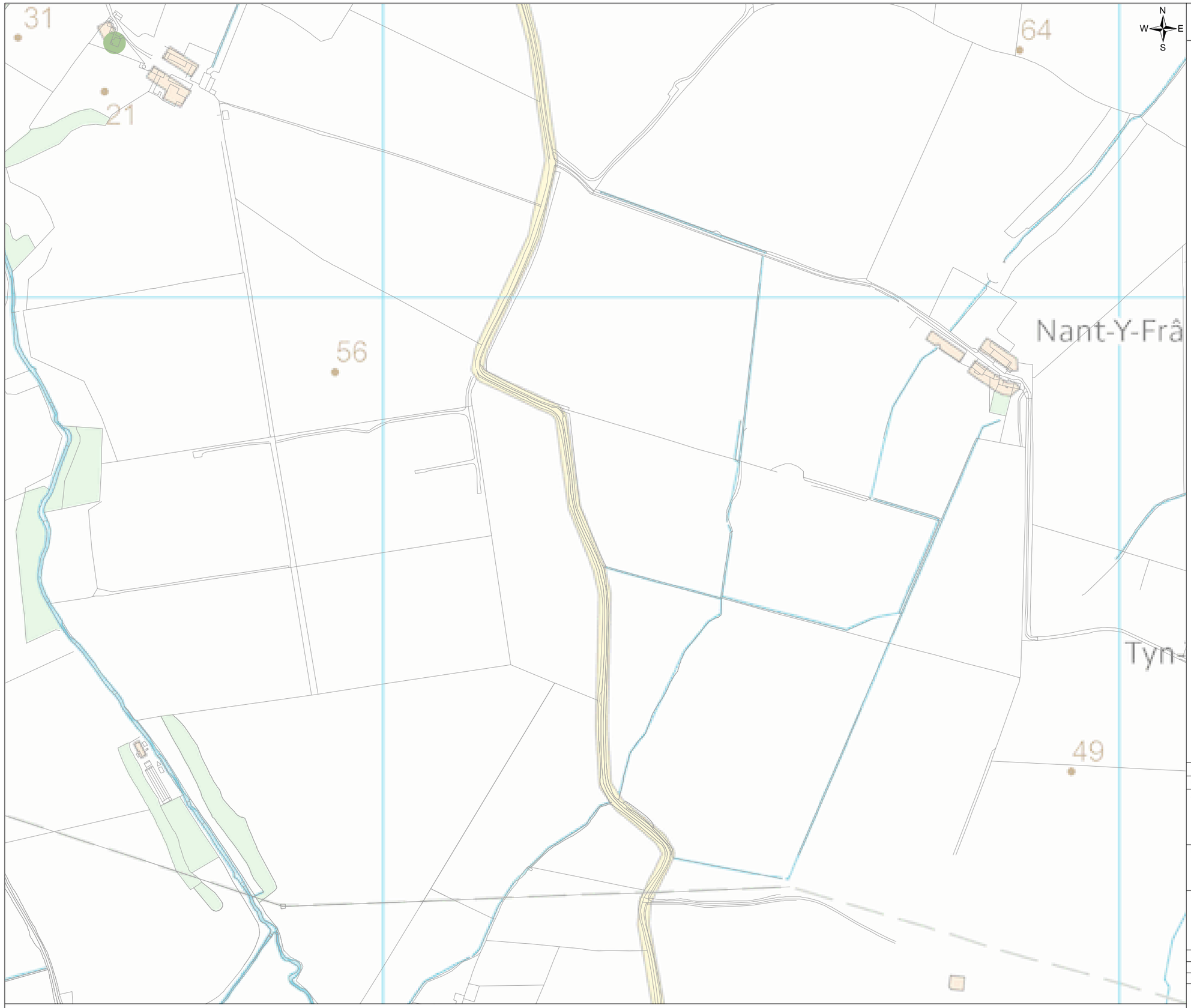


FIGURE 5

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 10 TO 12 (EVENING)
SHEET 16 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

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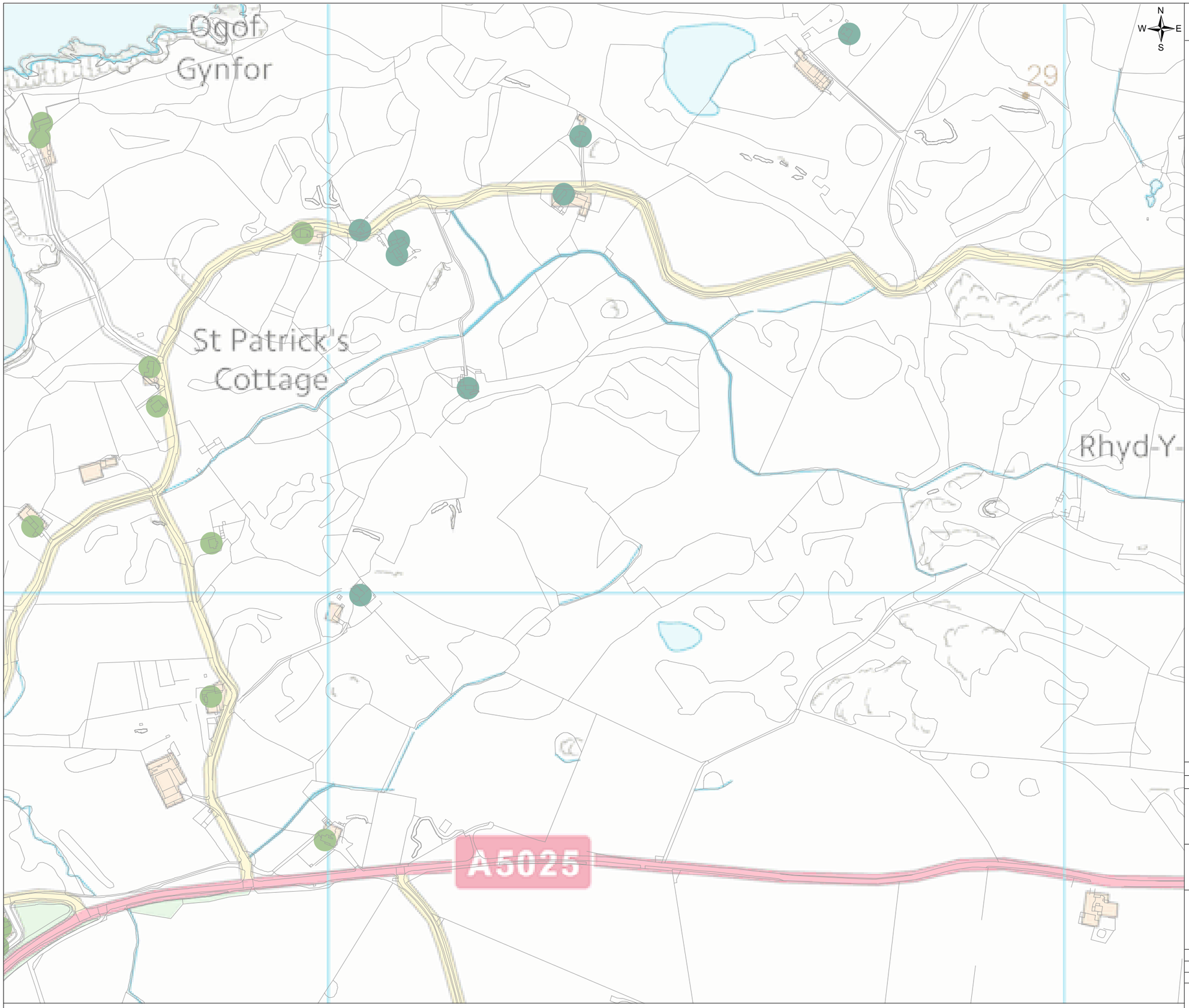


FIGURE 5

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (EVENING)
SHEET 17 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

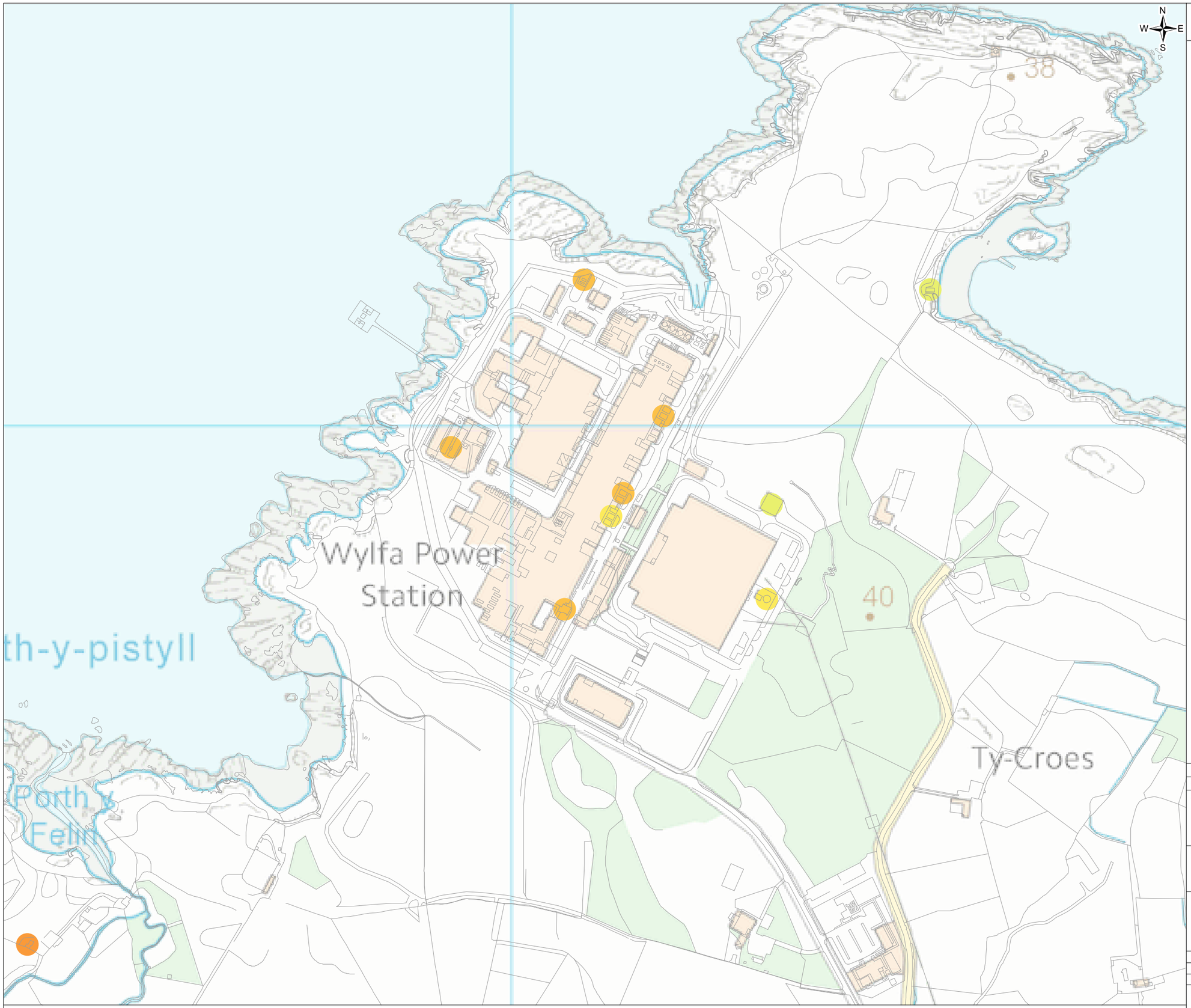
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_EVENING

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0 125 250 500 metres

FIGURE 6



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (NIGHT-TIME)
SHEET 1 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_NIGHTTIME

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0 125 250 500 metres

FIGURE 6

Esgair Gemlyn

Porth Felin

Cemlyn

thyn

roes

14

39

Capel

N
W E
S

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (NIGHT-TIME)
SHEET 2 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

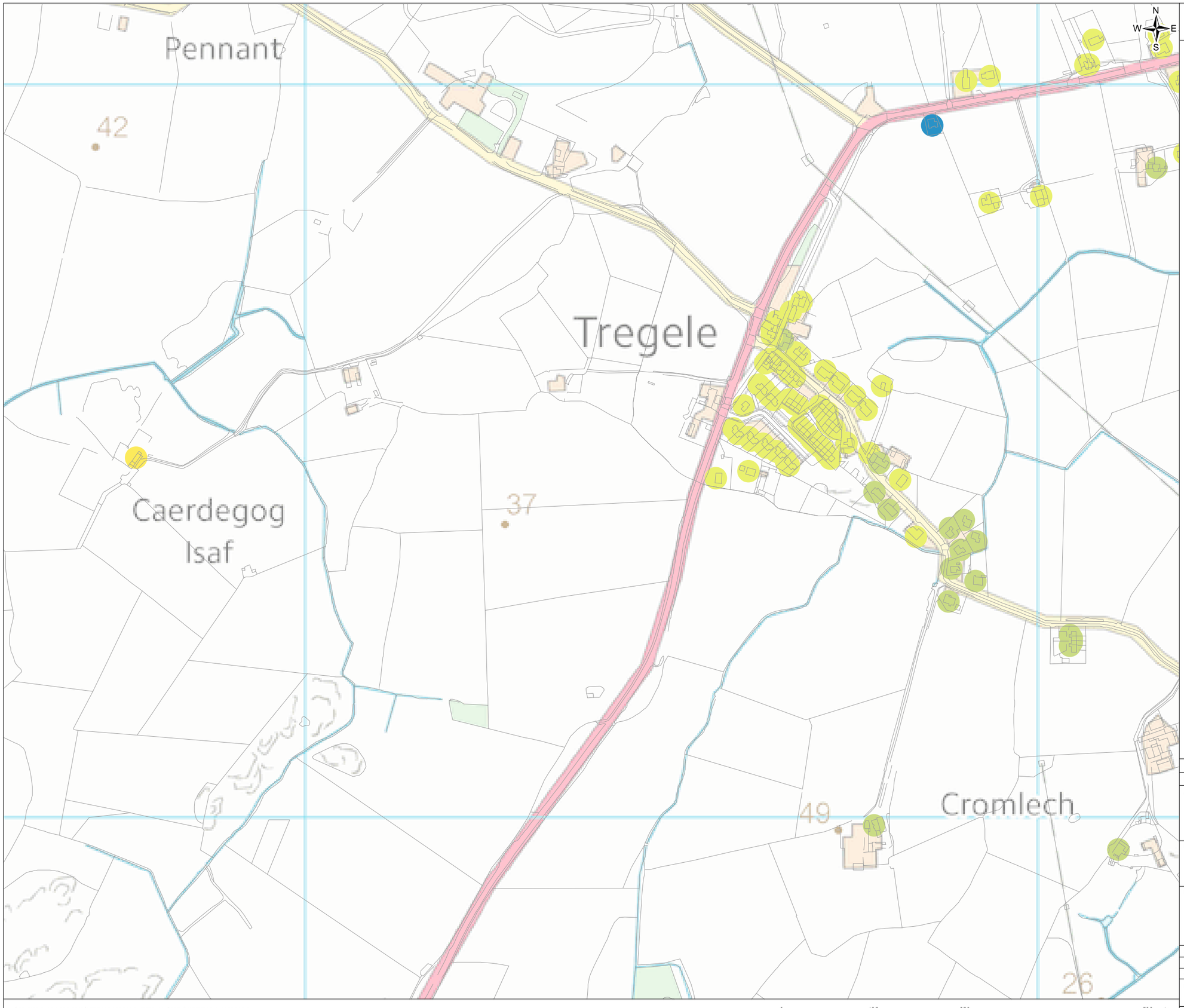
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_NIGHTTIME

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0 125 250 500 metres

FIGURE 6



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (NIGHT-TIME)
SHEET 3 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

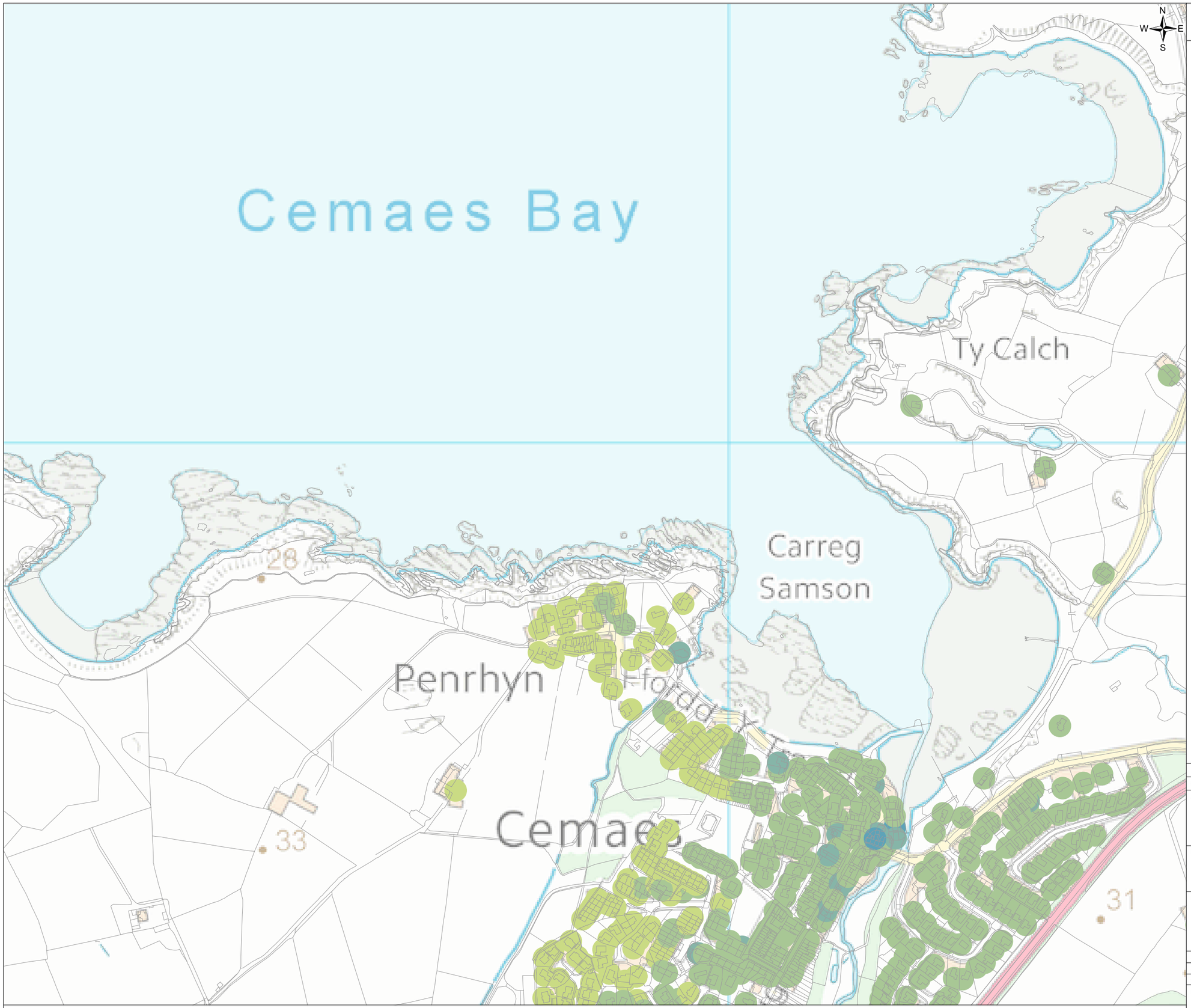
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_NIGHTTIME

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0 125 250 500 metres

FIGURE 6



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (NIGHT-TIME)
SHEET 4 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_NIGHTTIME

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0 125 250 500 metres

FIGURE 6



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (NIGHT-TIME)
SHEET 5 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS10TO12_NIGHTTIME

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0 125 250 500 metres

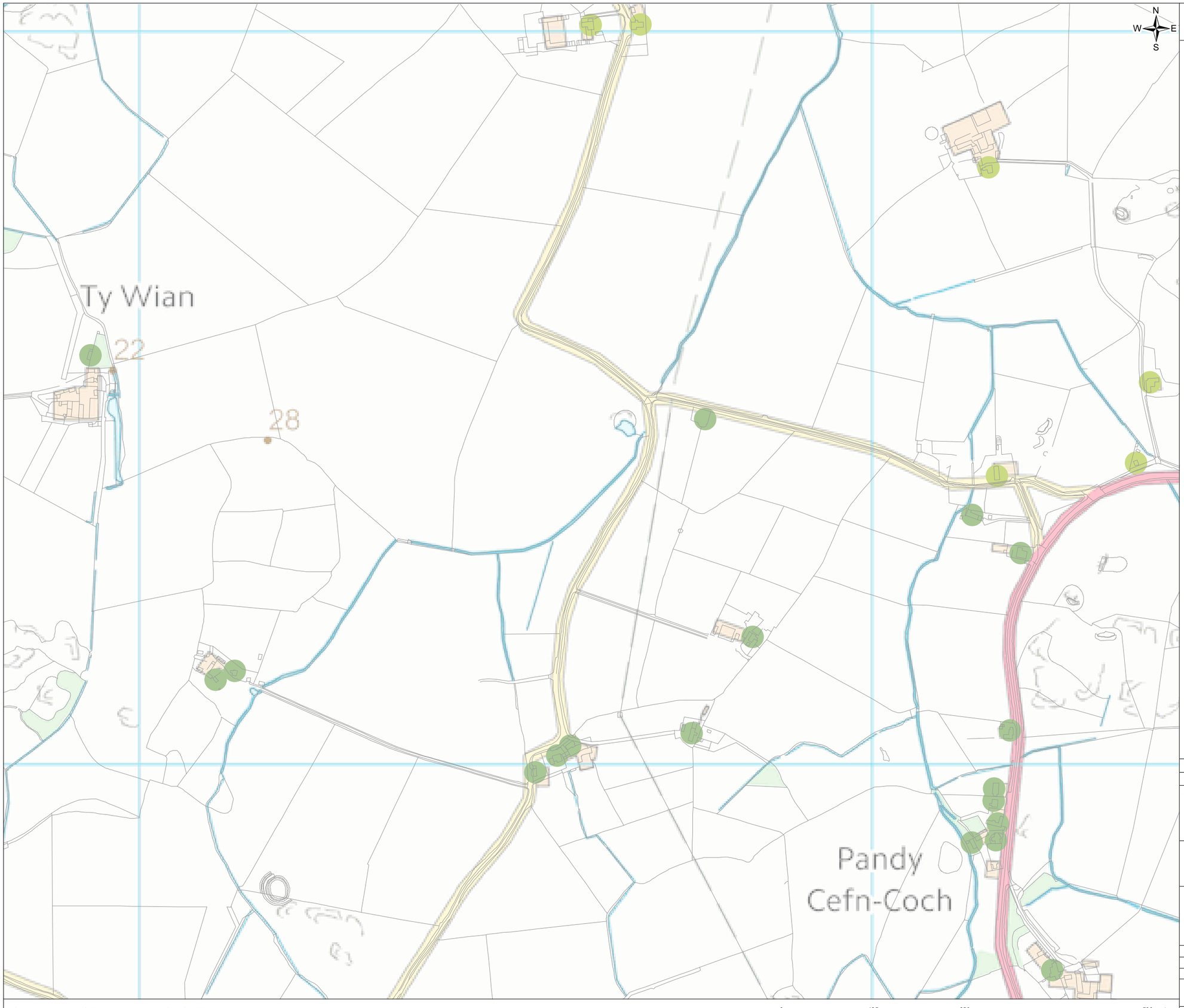


FIGURE 6

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (NIGHT-TIME)
SHEET 6 OF 17

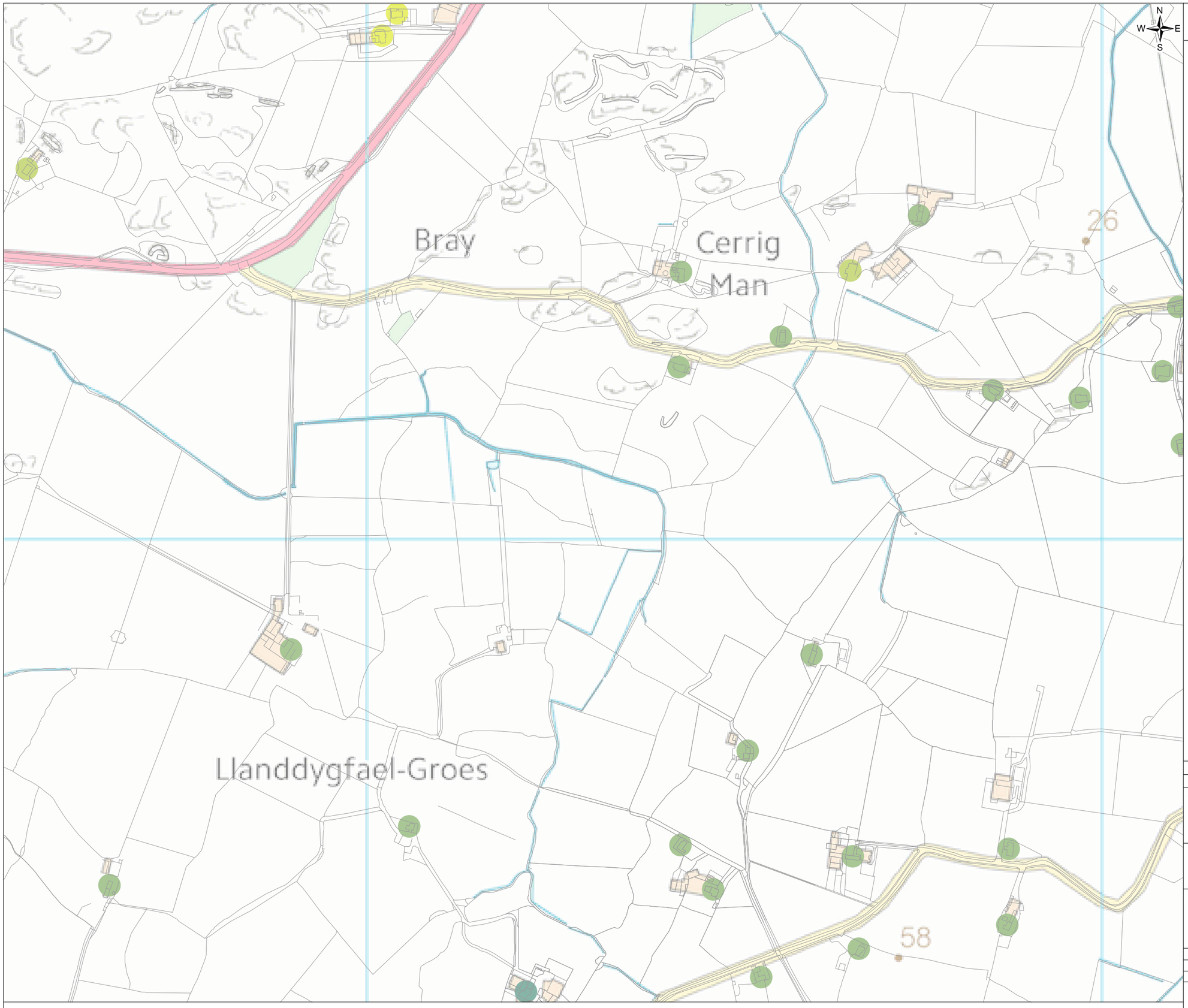
Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS10TO12_NIGHTTIME

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FIGURE 6



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (NIGHT-TIME)
SHEET 7 OF 17

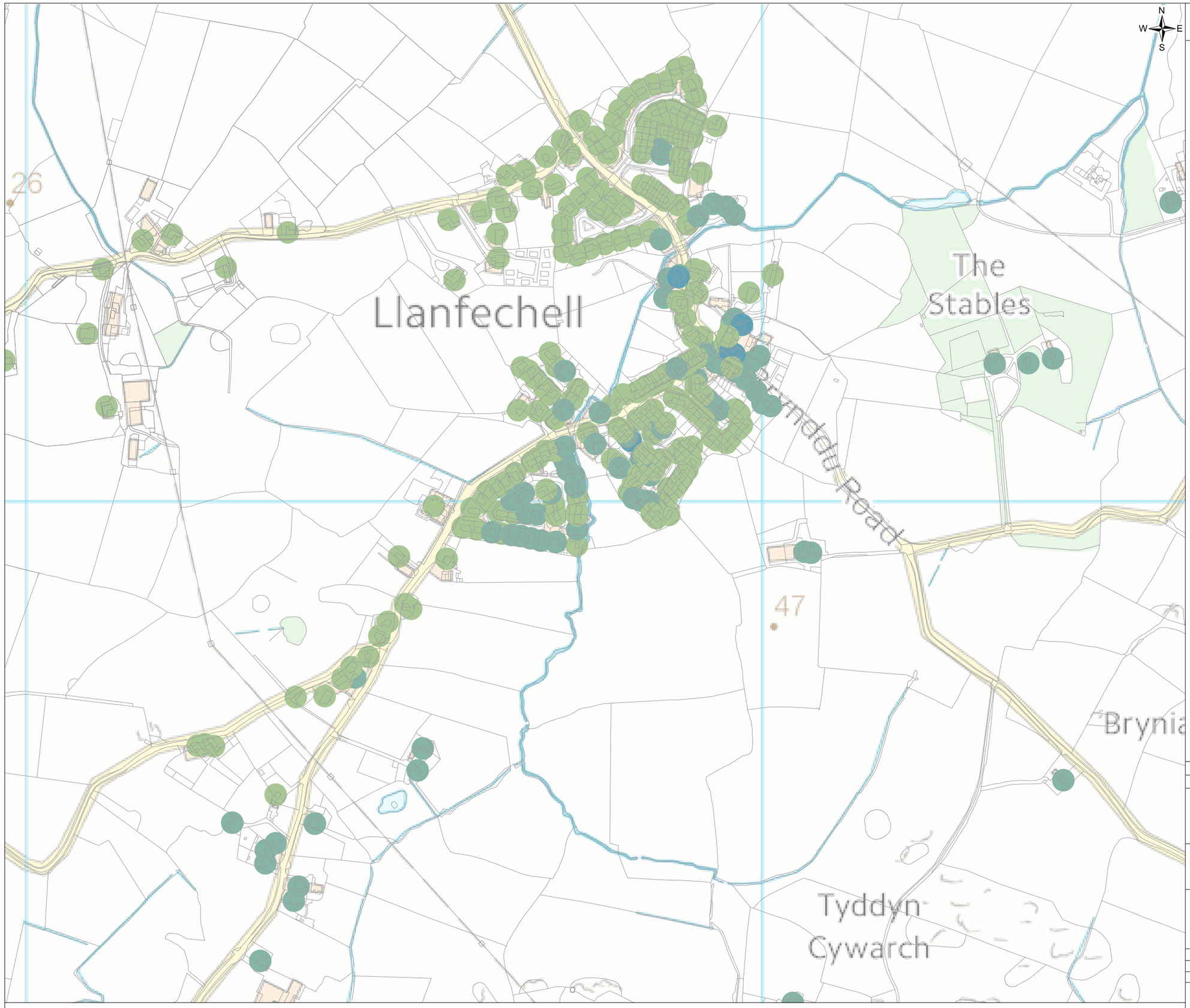
Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS10TO12_NIGHTTIME

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FIGURE 6



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (NIGHT-TIME)
SHEET 8 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_NIGHTTIME

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FIGURE 6

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (NIGHT-TIME)
SHEET 9 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS10TO12_NIGHTTIME

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0 125 250 500 metres

FIGURE 6

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (NIGHT-TIME)
SHEET 10 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS10TO12_NIGHTTIME

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0 125 250 500 metres

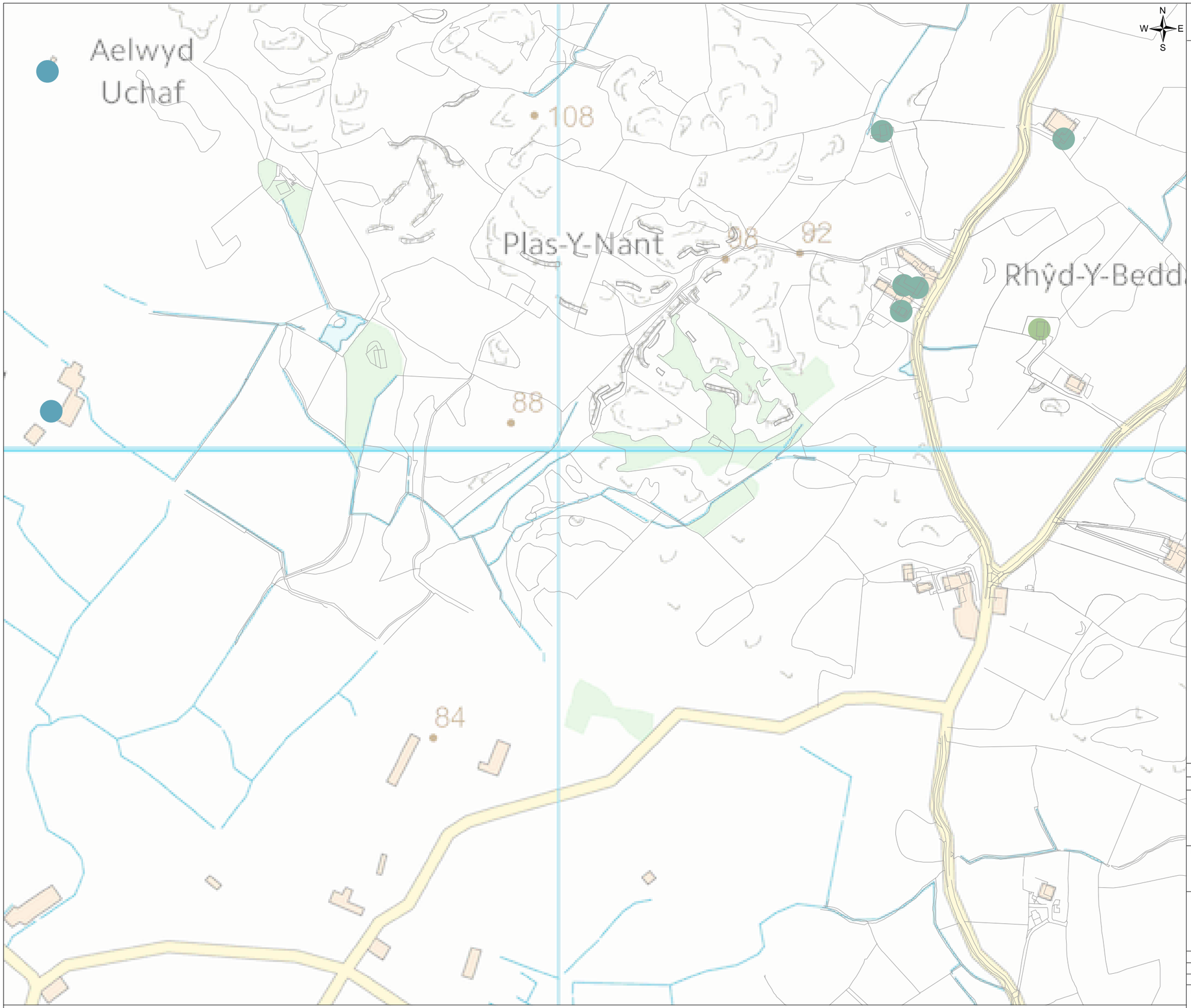


FIGURE 6

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (NIGHT-TIME)
SHEET 11 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

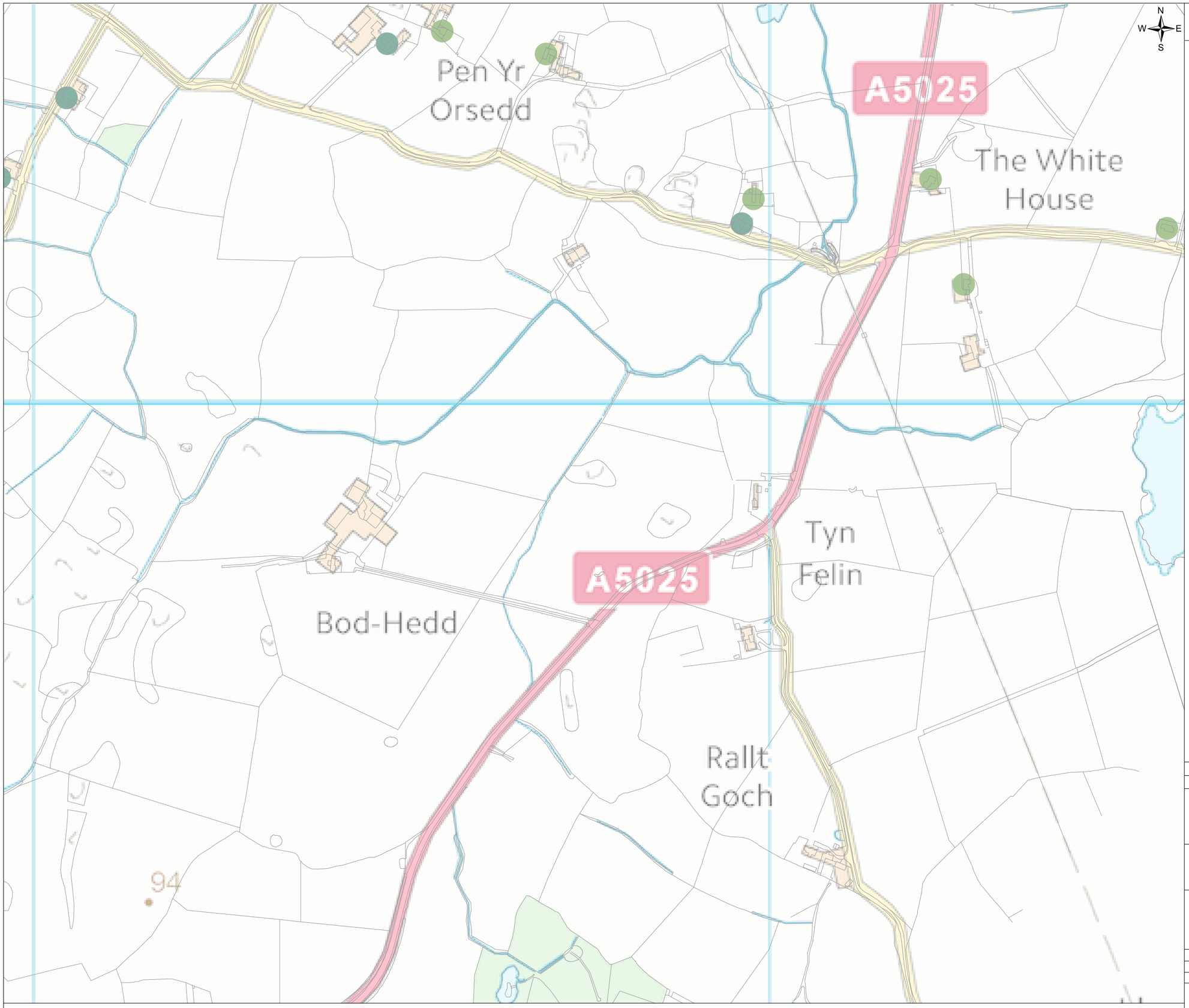
60PO80AS_NOISE_RfNMC_MONTHS10TO12_NIGHTTIME

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0 125 250 500 metres

FIGURE 6



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (NIGHT-TIME)
SHEET 12 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

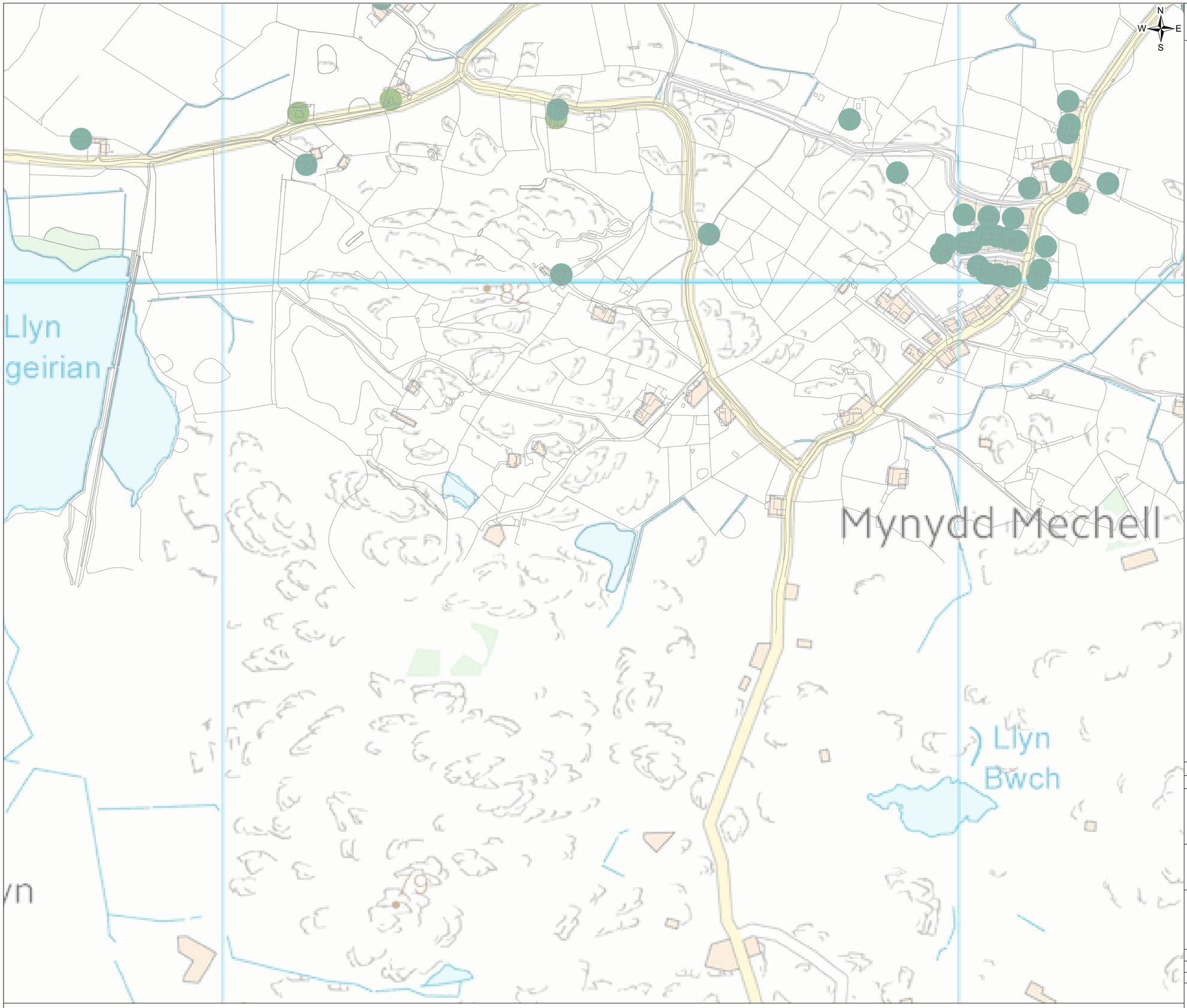
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_NIGHTTIME

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0 125 250 500 metres

FIGURE 6



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (NIGHT-TIME)
SHEET 13 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_NIGHTTIME

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0 125 250 500 metres

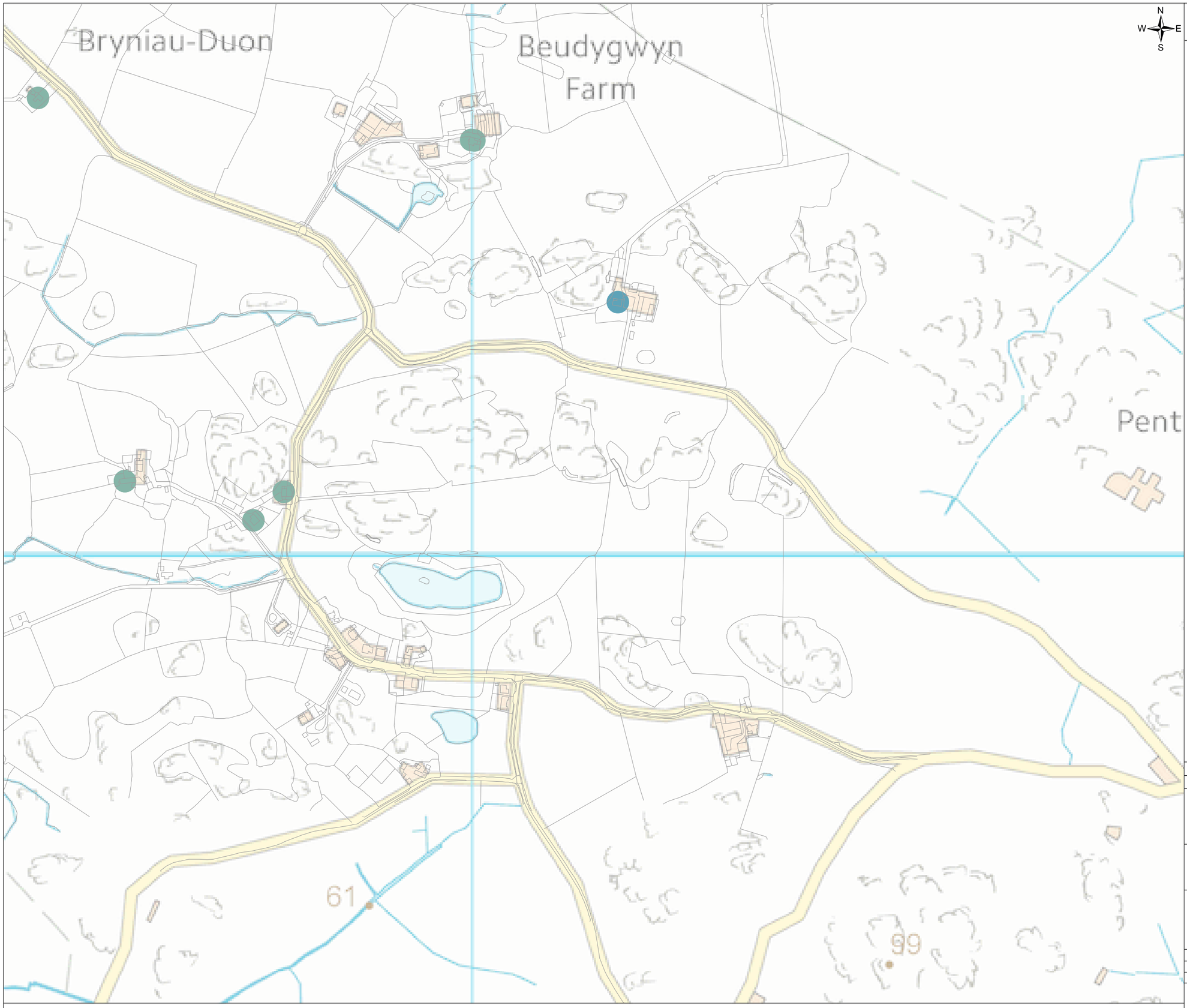


FIGURE 6

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (NIGHT-TIME)
SHEET 14 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

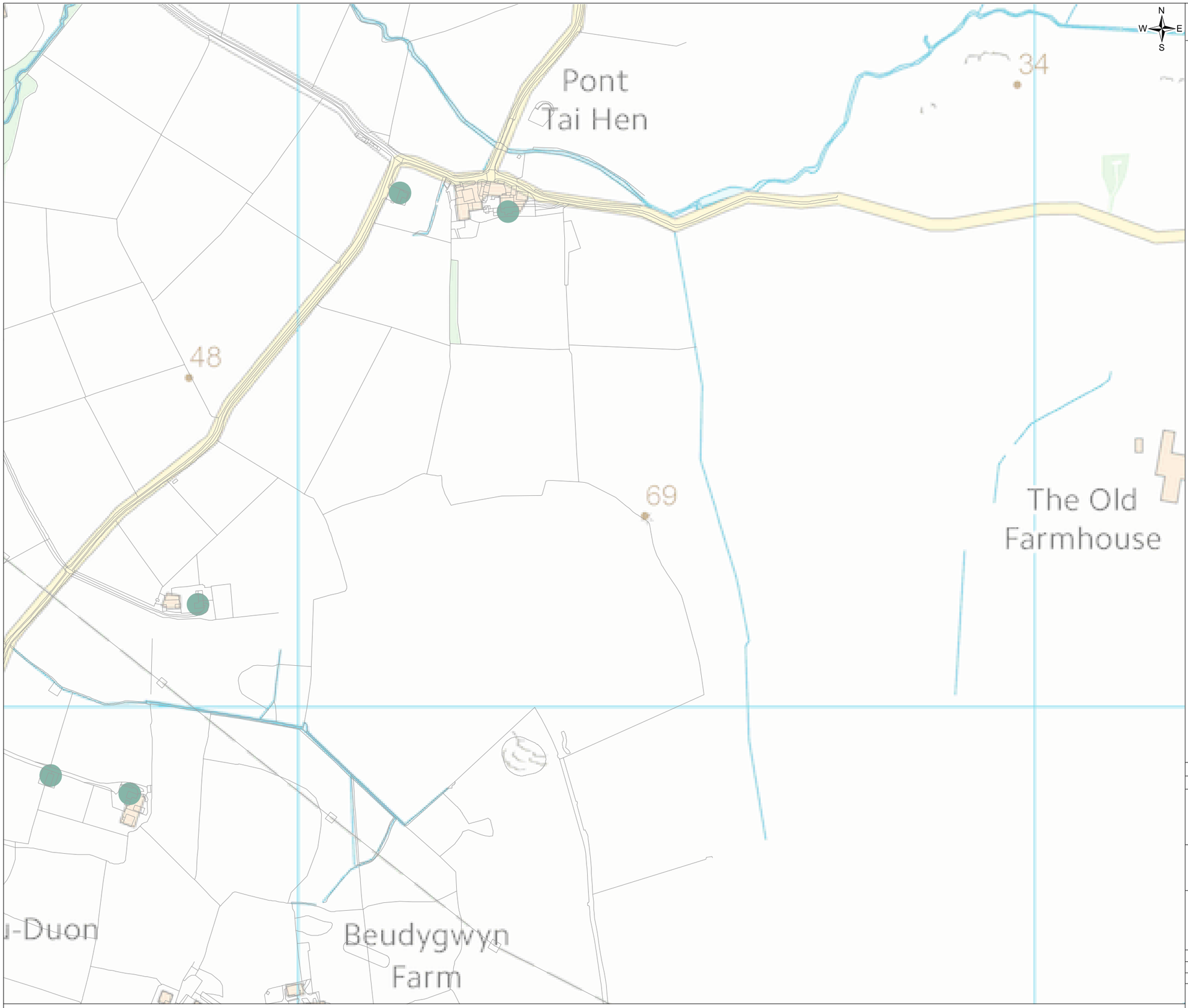
60PO80AS_NOISE_RfNMC_MONTHS10TO12_NIGHTTIME

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0 125 250 500 metres

FIGURE 6



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 10 TO 12 (NIGHT-TIME)
SHEET 15 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS10TO12_NIGHTTIME

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0 125 250 500 metres

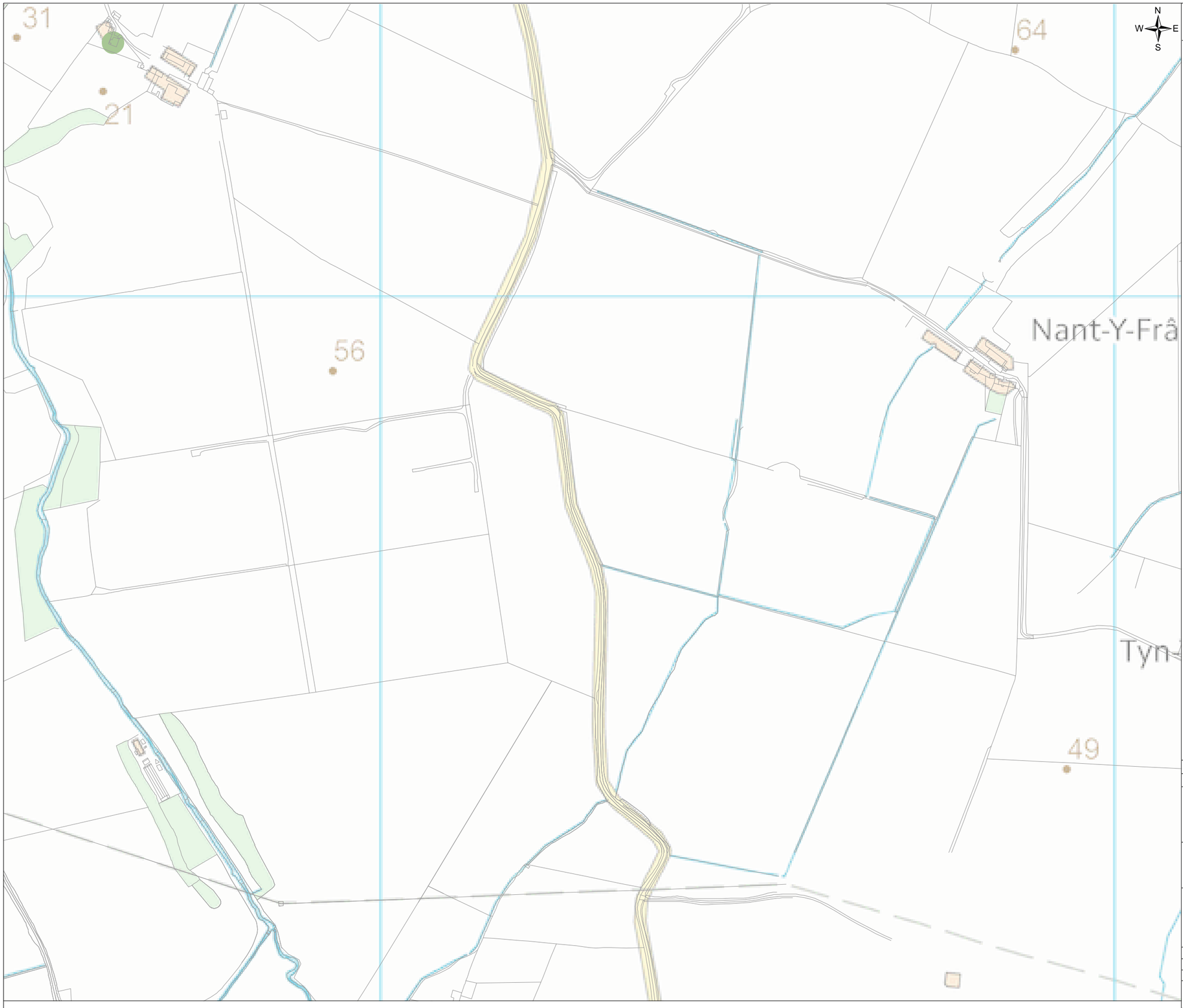


FIGURE 6

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 10 TO 12 (NIGHT-TIME)
SHEET 16 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

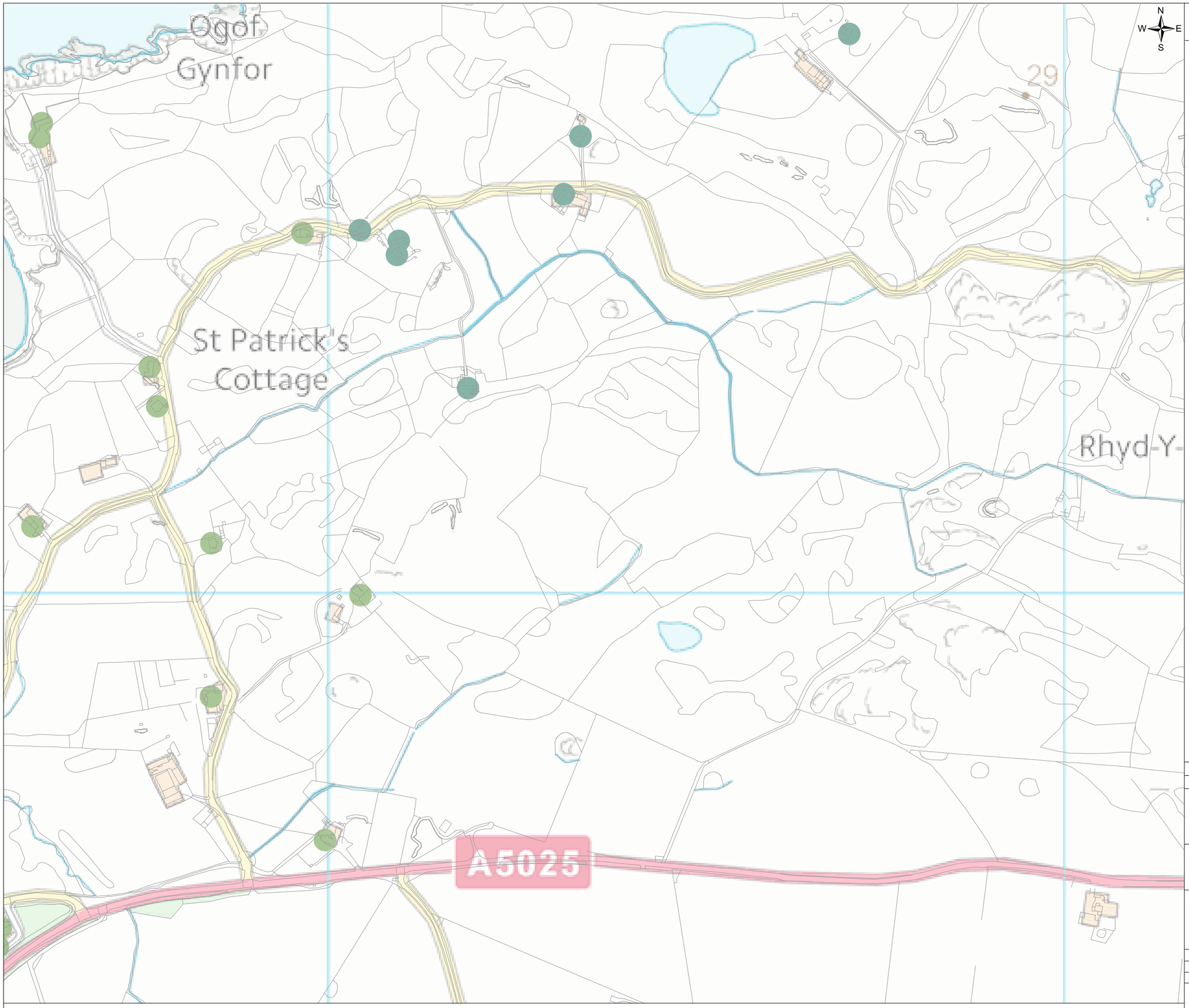
Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS10TO12_NIGHTTIME

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0 125 250 500 metres



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0 125 250 500 metres

FIGURE 6

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

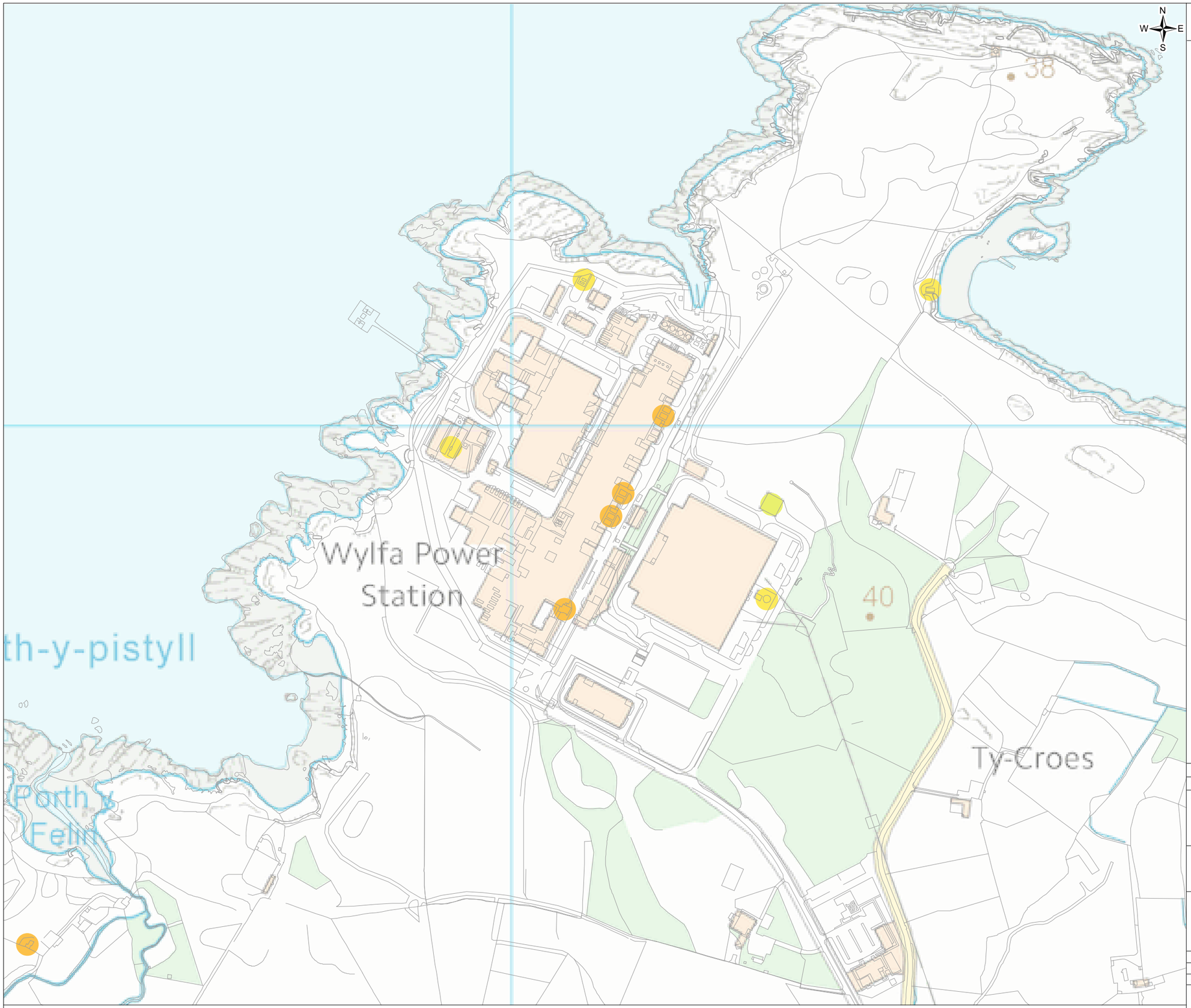
Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 10 TO 12 (NIGHT-TIME)
SHEET 17 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS10TO12_NIGHTTIME

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FIGURE 7



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (DAYTIME)
SHEET 1 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS19TO21_DAYTIME

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0 125 250 500 metres



FIGURE 7

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 19 TO 21 (DAYTIME)
SHEET 2 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

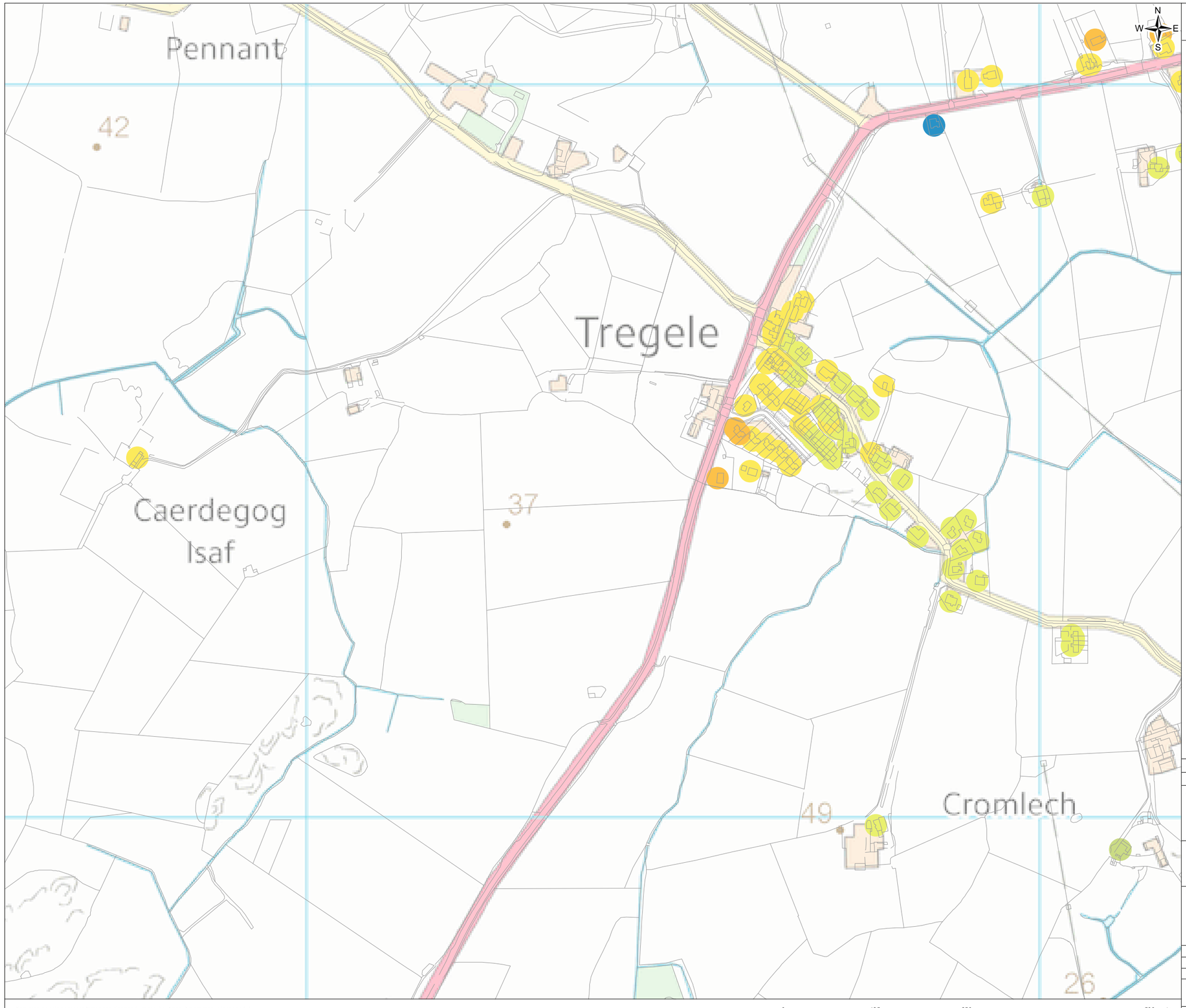
60PO80AS_NOISE_RfNMC_MONTHS19TO21_DAYTIME

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0 125 250 500 metres

FIGURE 7



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (DAYTIME)
SHEET 3 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

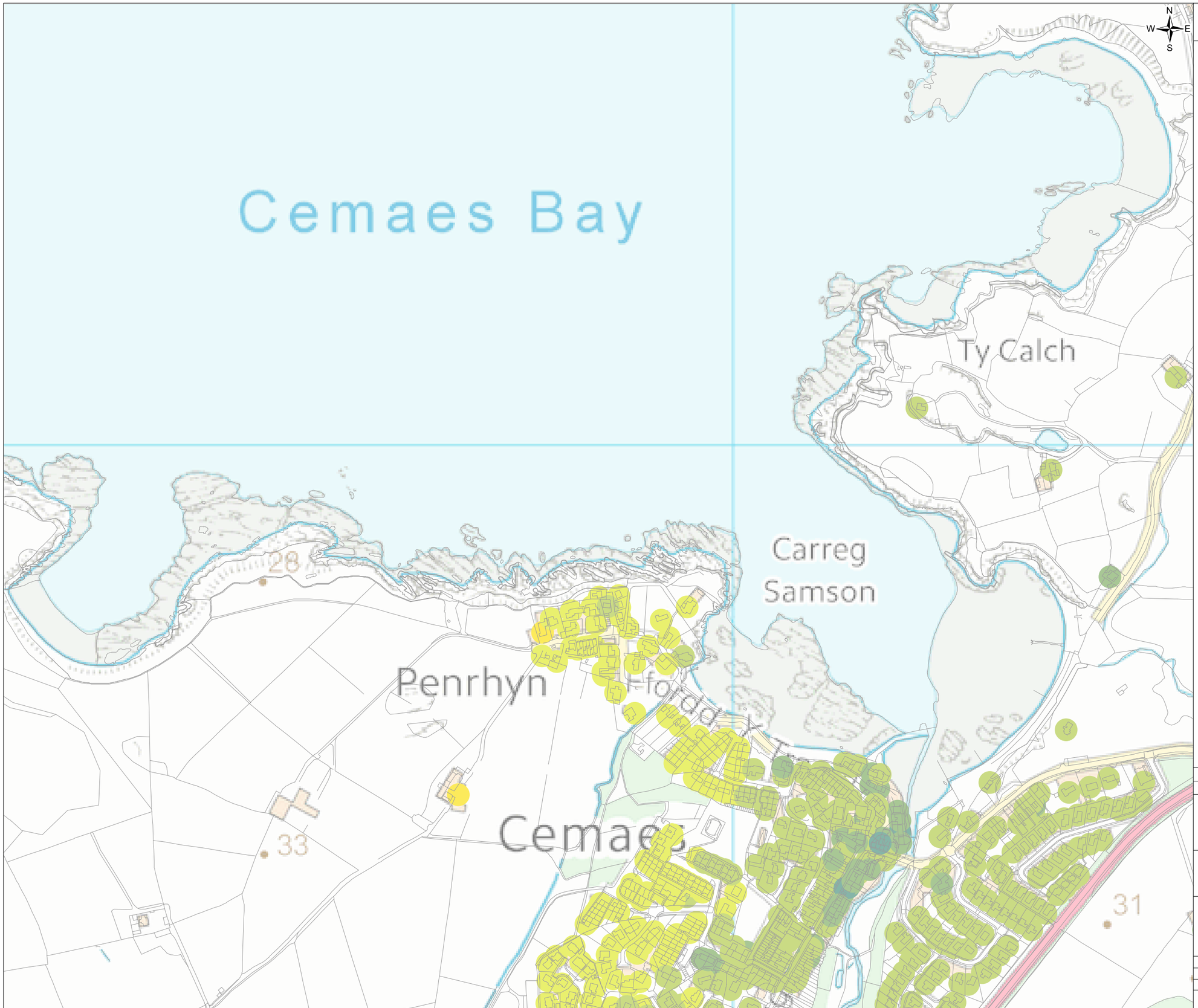
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS19TO21_DAYTIME

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0 125 250 500 metres

FIGURE 7



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (DAYTIME)
SHEET 4 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS19TO21_DAYTIME

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0 125 250 500 metres

FIGURE 7



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (DAYTIME)
SHEET 5 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS19TO21_DAYTIME

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0 125 250 500 metres

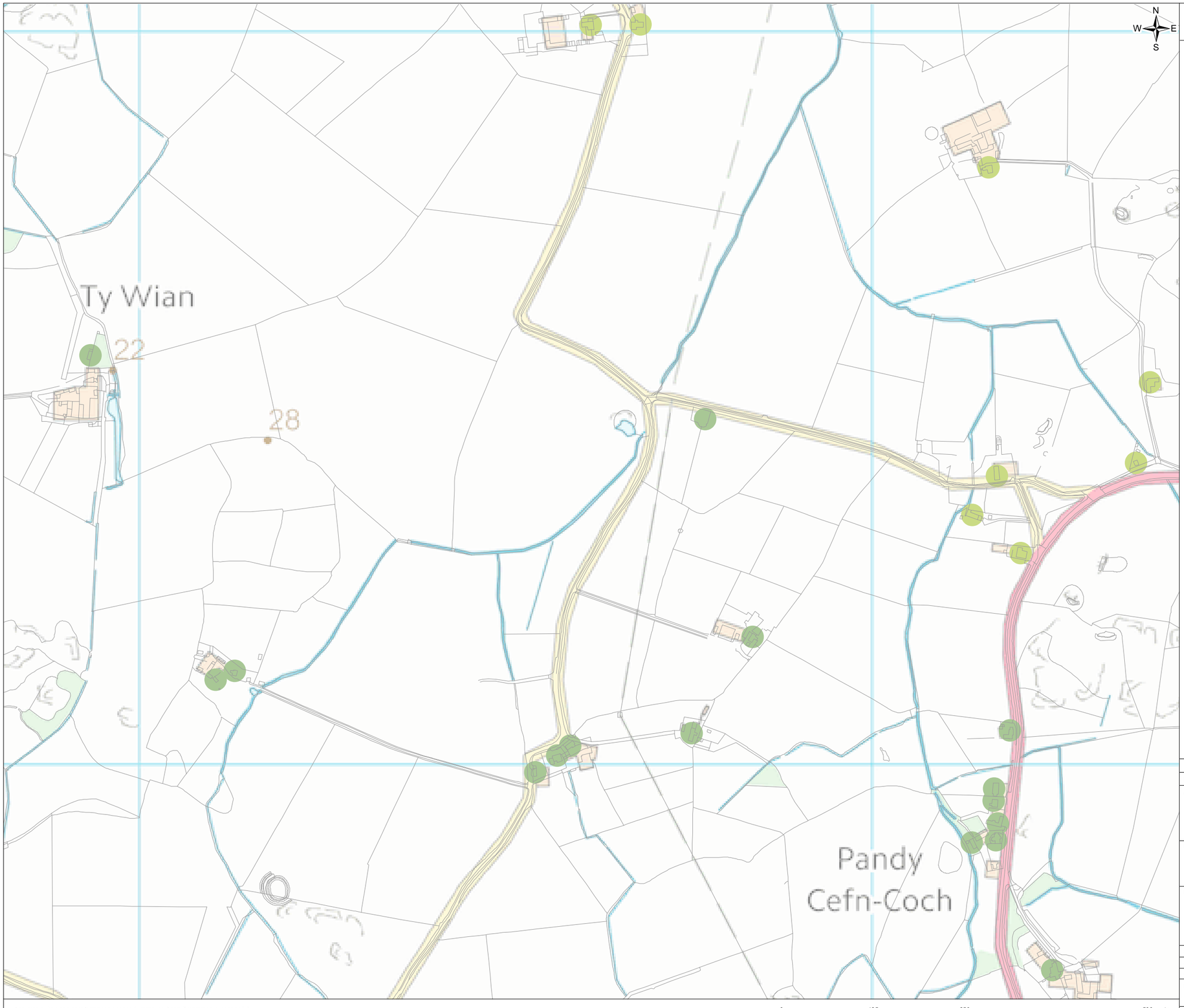


FIGURE 7

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (DAYTIME)
SHEET 6 OF 17

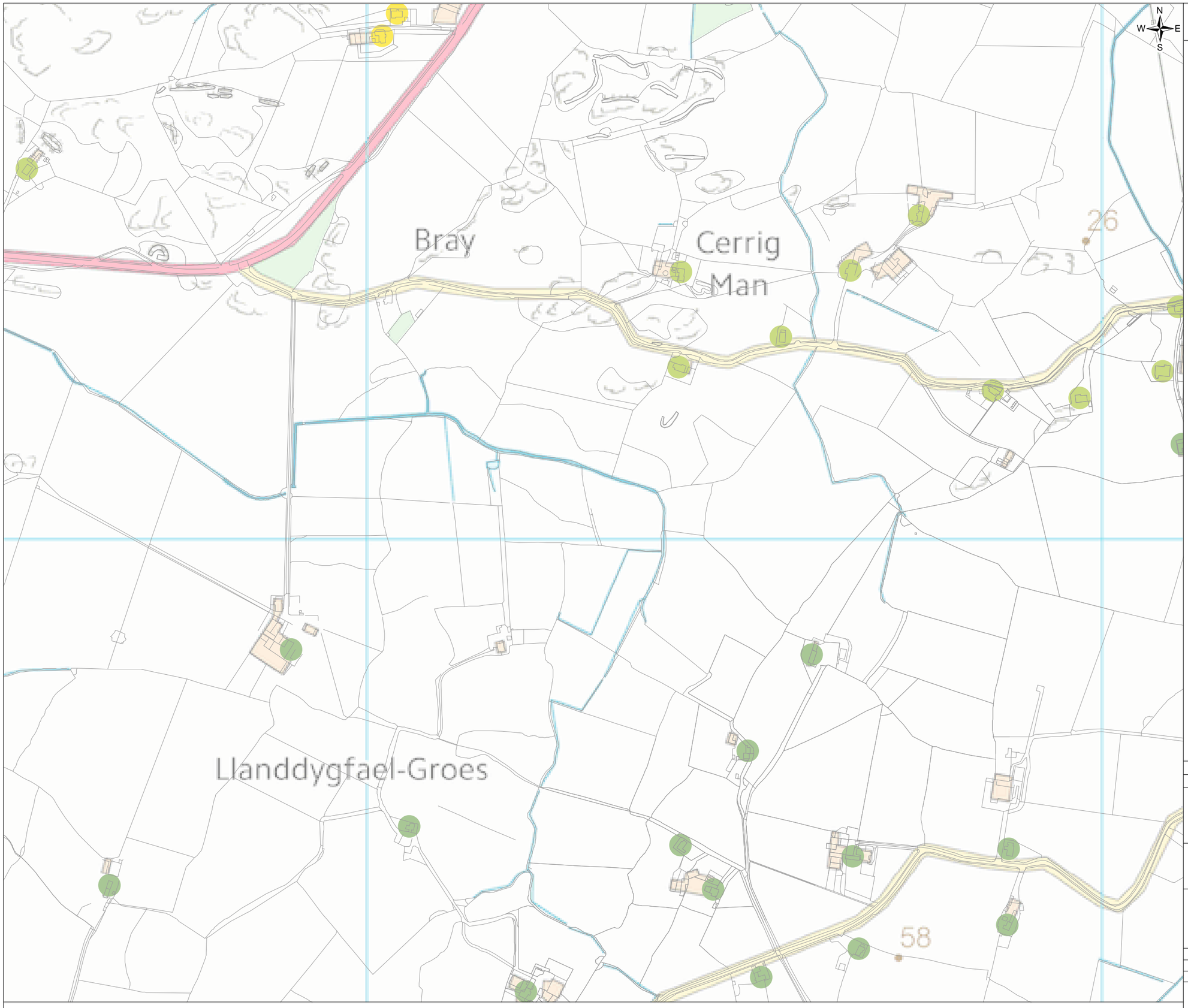
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Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS19TO21_DAYTIME

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FIGURE 7



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (DAYTIME)
SHEET 7 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS19TO21_DAYTIME

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FIGURE 7

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 19 TO 21 (DAYTIME)
SHEET 8 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS19TO21_DAYTIME

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0 125 250 500 metres

FIGURE 7

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (DAYTIME)
SHEET 9 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS19TO21_DAYTIME

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0 125 250 500 metres

FIGURE 7

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (DAYTIME)
SHEET 10 OF 17

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Client No.		

Drawing No.

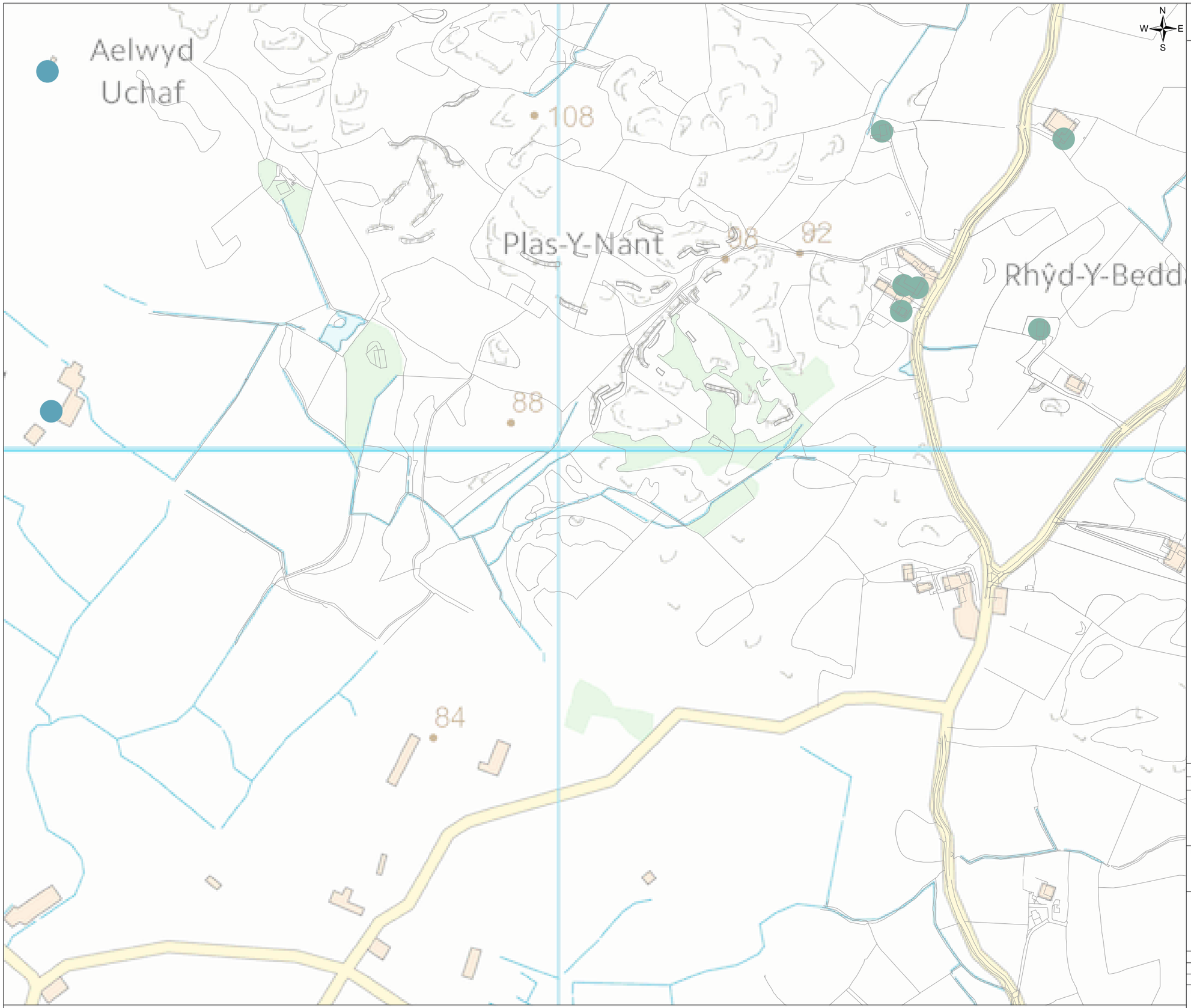
60PO80AS_NOISE_RfNMC_MONTHS19TO21_DAYTIME

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0 125 250 500 metres

FIGURE 7



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 19 TO 21 (DAYTIME)
SHEET 11 OF 17

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Client No.		

Drawing No.

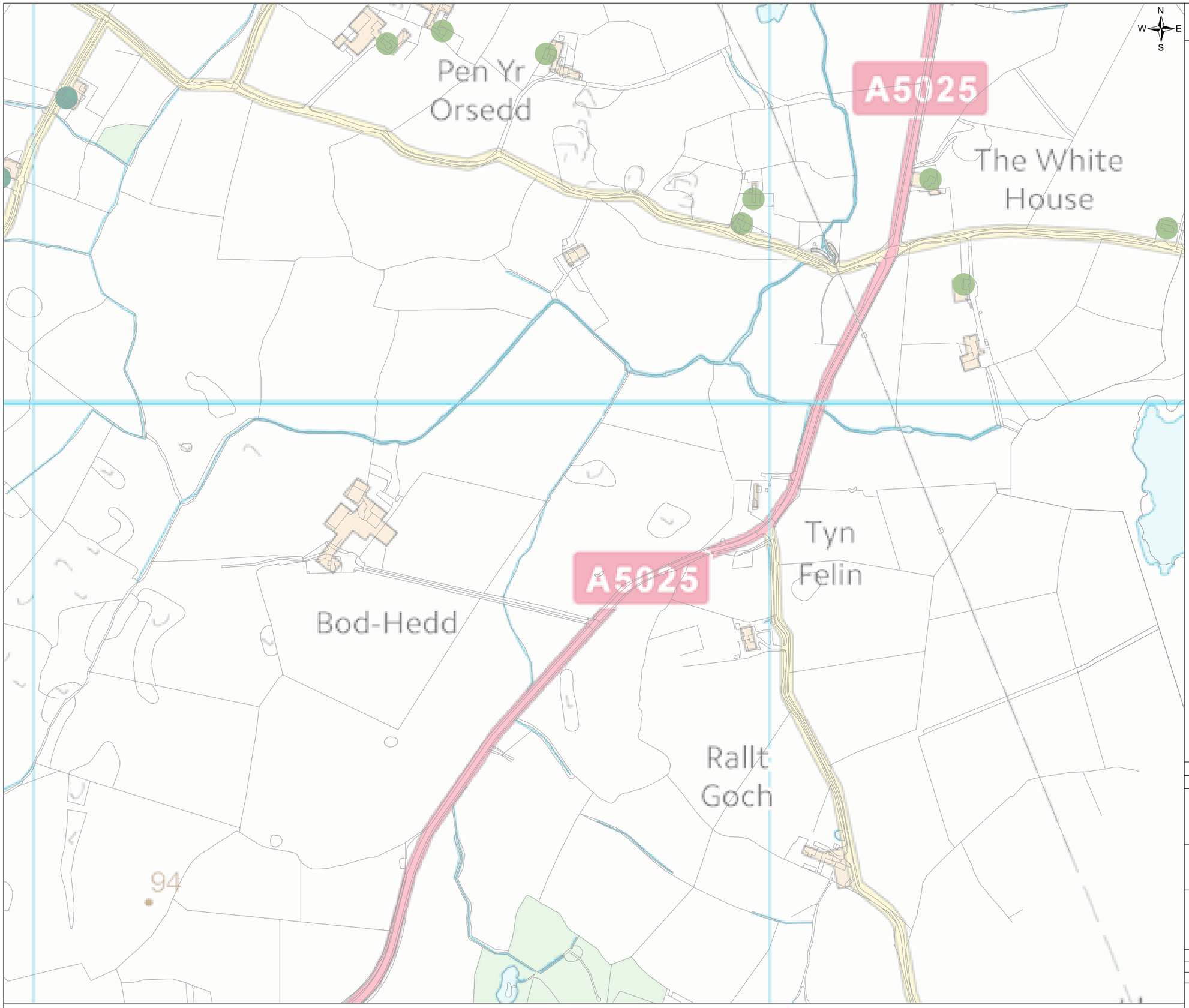
60PO80AS_NOISE_RfNMC_MONTHS19TO21_DAYTIME

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0 125 250 500 metres

FIGURE 7



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (DAYTIME)
SHEET 12 OF 17

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Client No.		

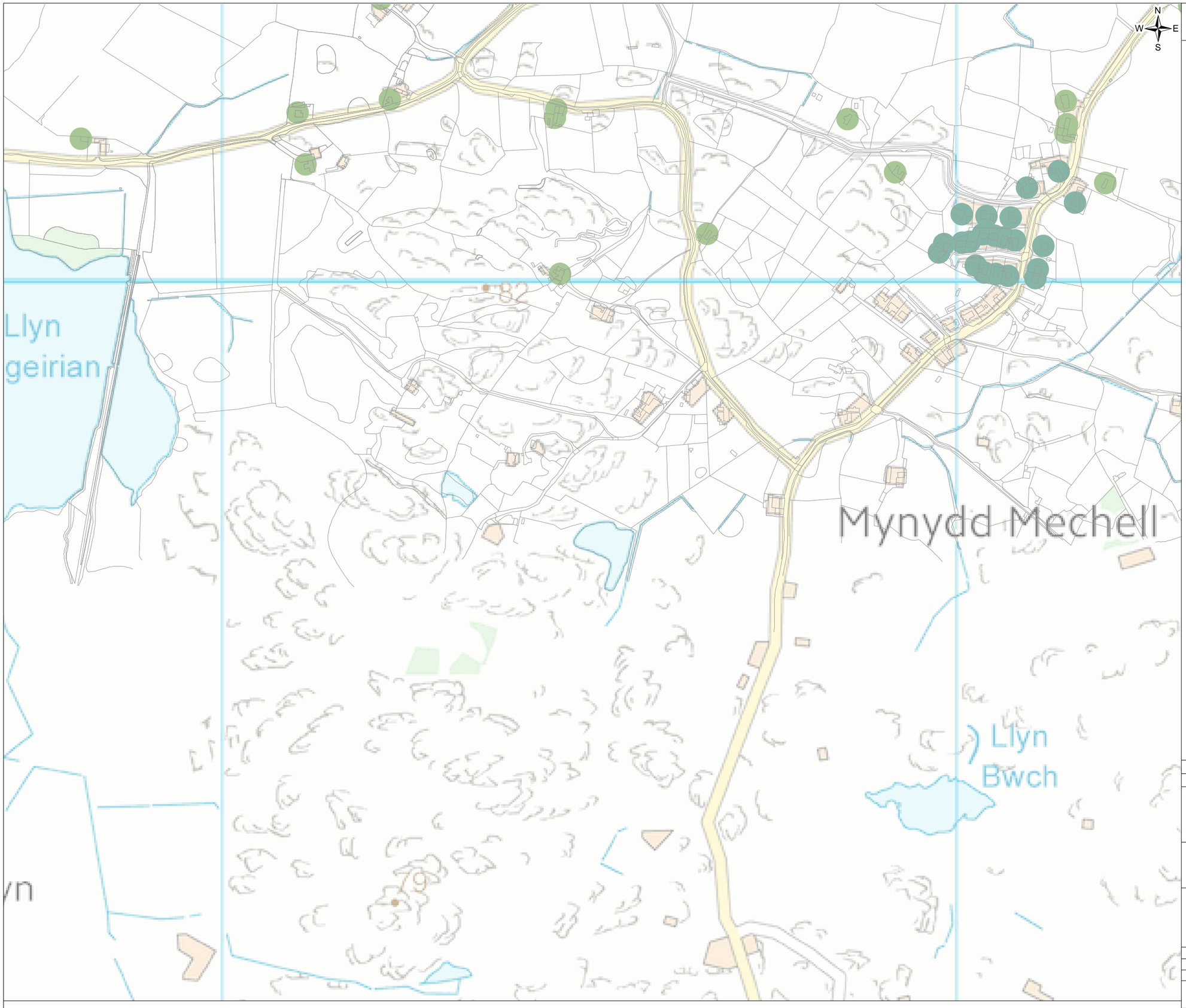
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0 125 250 500 metres

FIGURE 7



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (DAYTIME)
SHEET 13 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS19TO21_DAYTIME

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0 125 250 500 metres

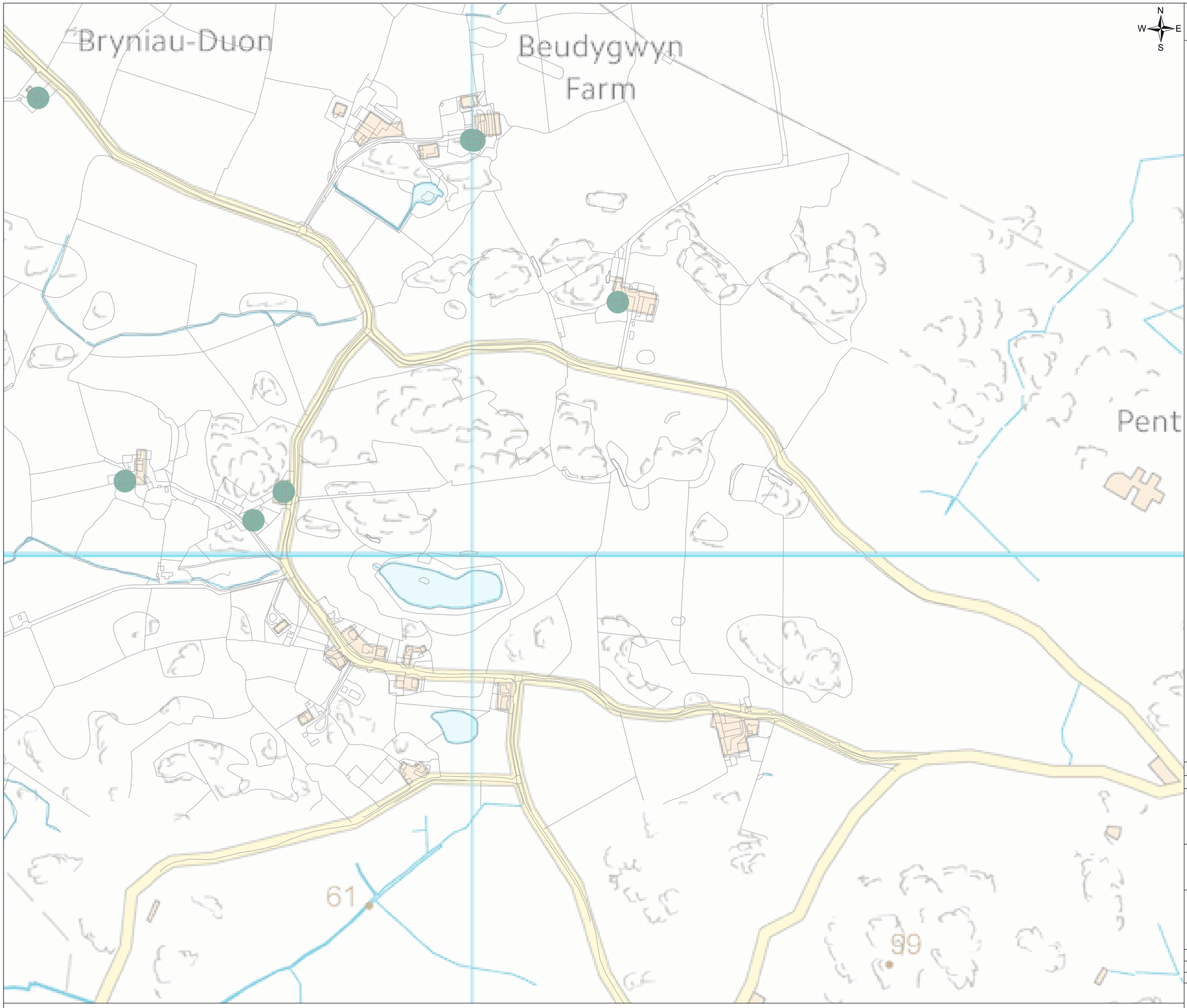


FIGURE 7

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (DAYTIME)
SHEET 14 OF 17

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Client No.		

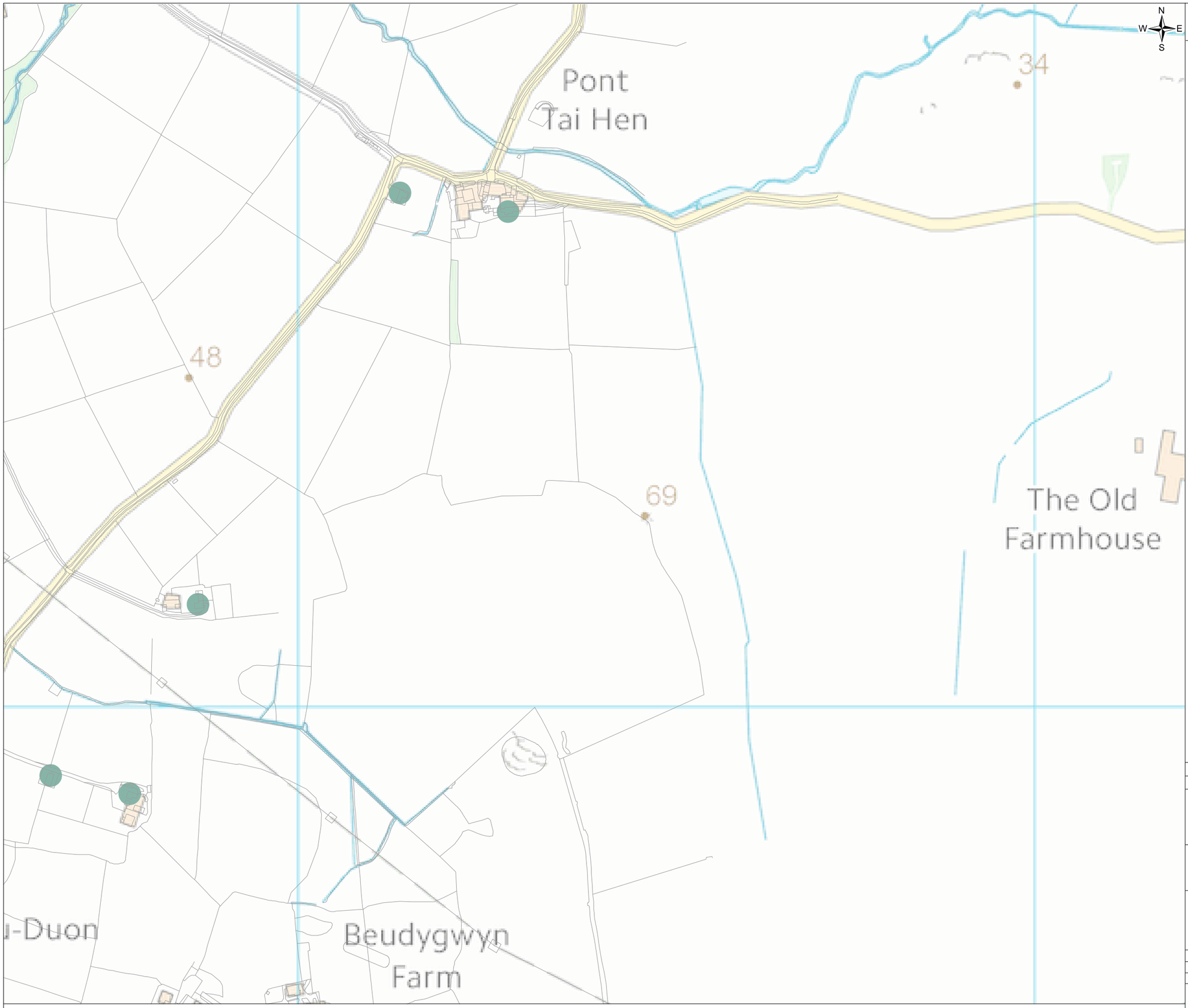
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS19TO21_DAYTIME

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0 125 250 500 metres

FIGURE 7



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 19 TO 21 (DAYTIME)
SHEET 15 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS19TO21_DAYTIME

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0 125 250 500 metres

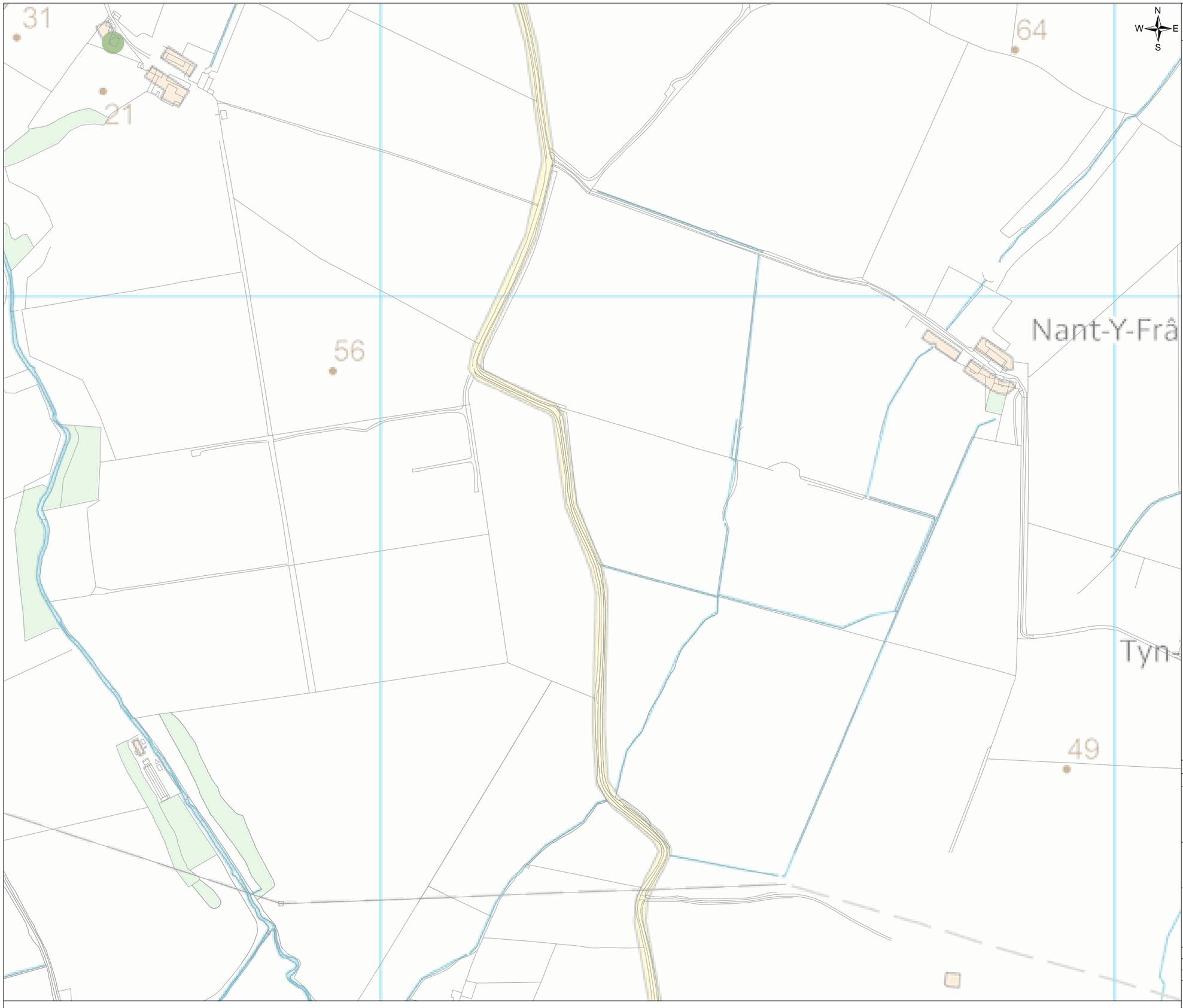


FIGURE 7

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (DAYTIME)
SHEET 16 OF 17

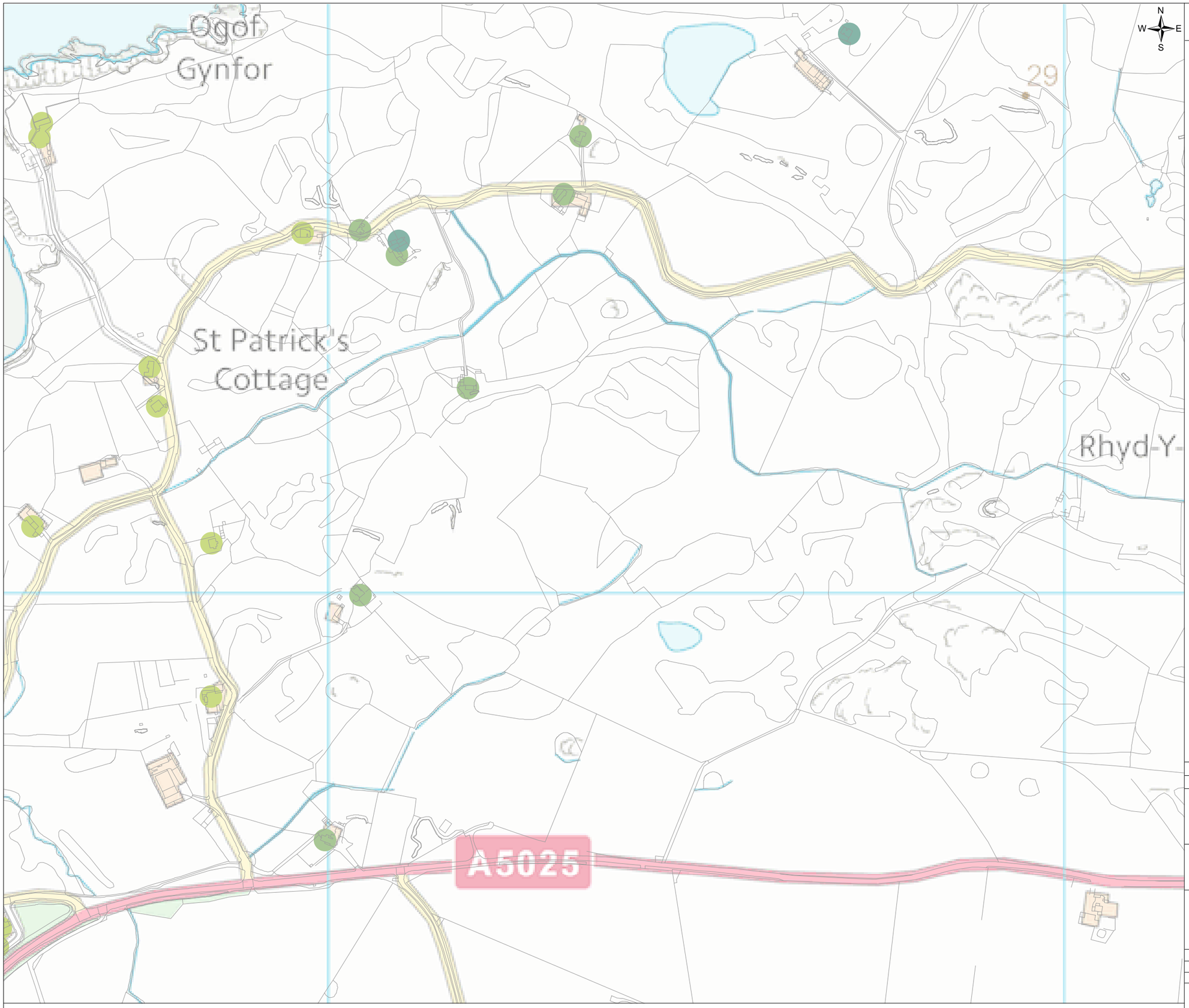
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Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS19TO21_DAYTIME

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FIGURE 7



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (DAYTIME)
SHEET 17 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

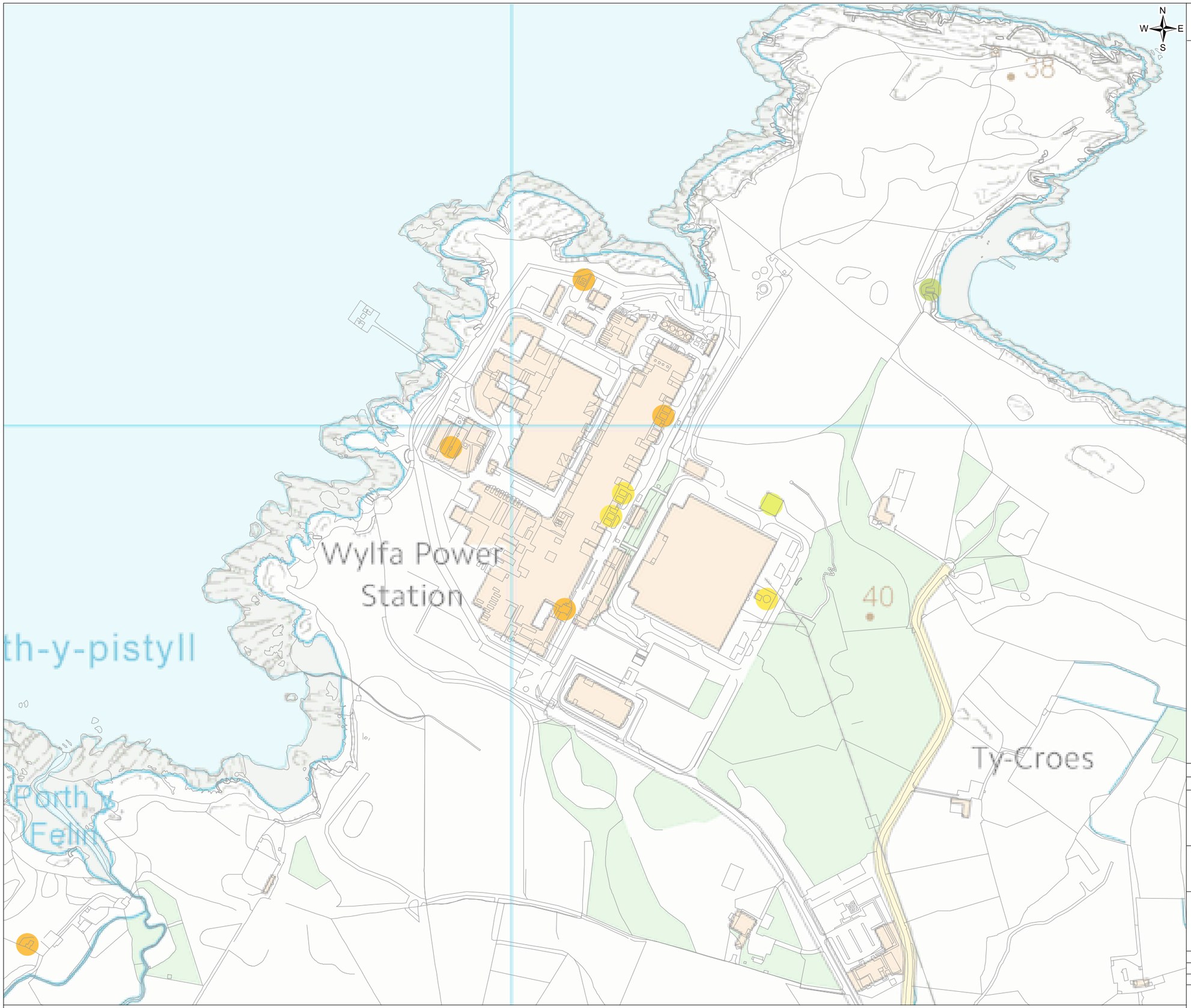
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS19TO21_DAYTIME

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0 125 250 500 metres

FIGURE 8



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (EVENING)
SHEET 1 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS19TO21_EVENING

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0 125 250 500 metres

FIGURE 8



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 19 TO 21 (EVENING)
SHEET 2 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

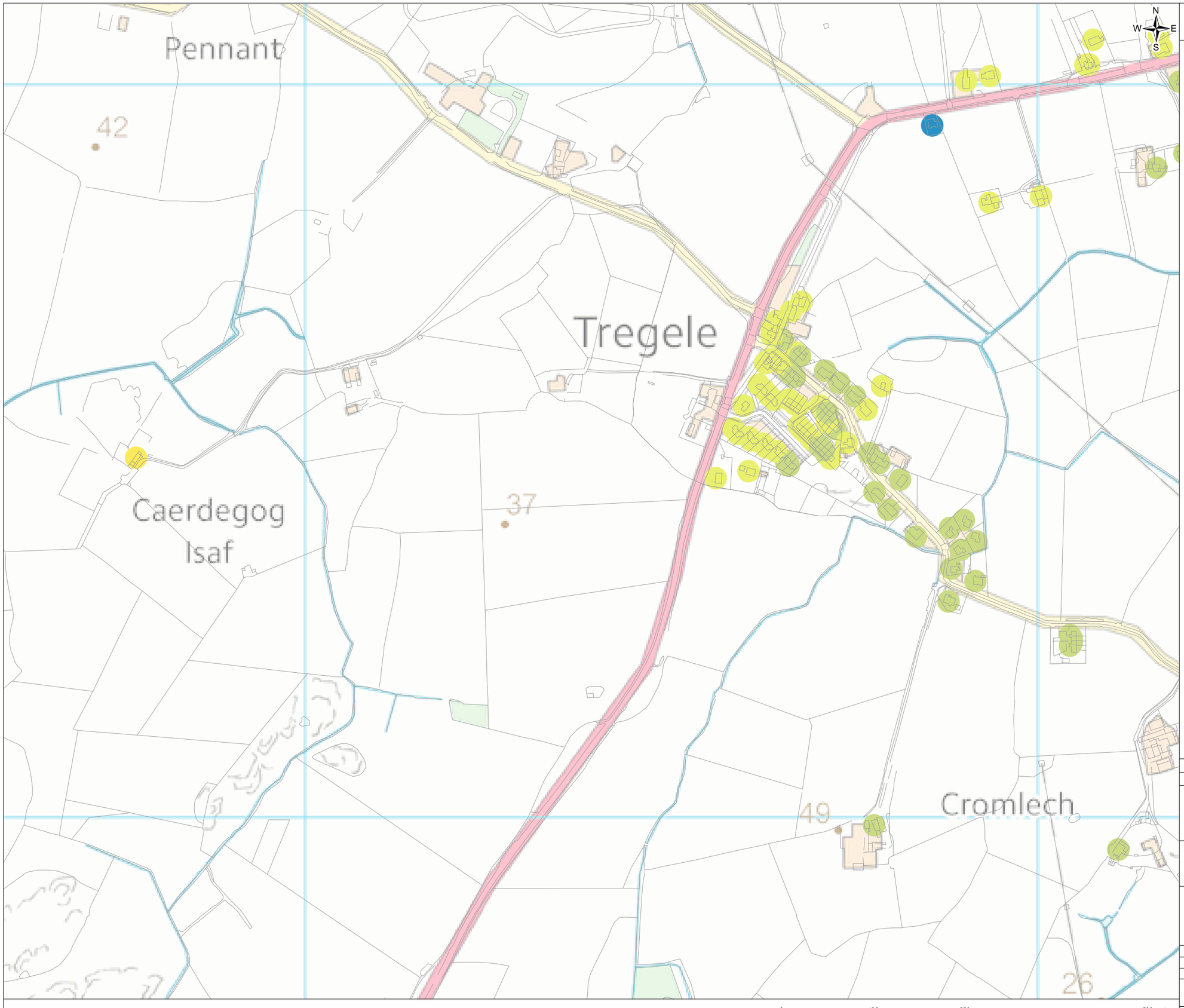
60PO80AS_NOISE_RfNMC_MONTHS19TO21_EVENING

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0 125 250 500 metres

FIGURE 8



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (EVENING)
SHEET 3 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

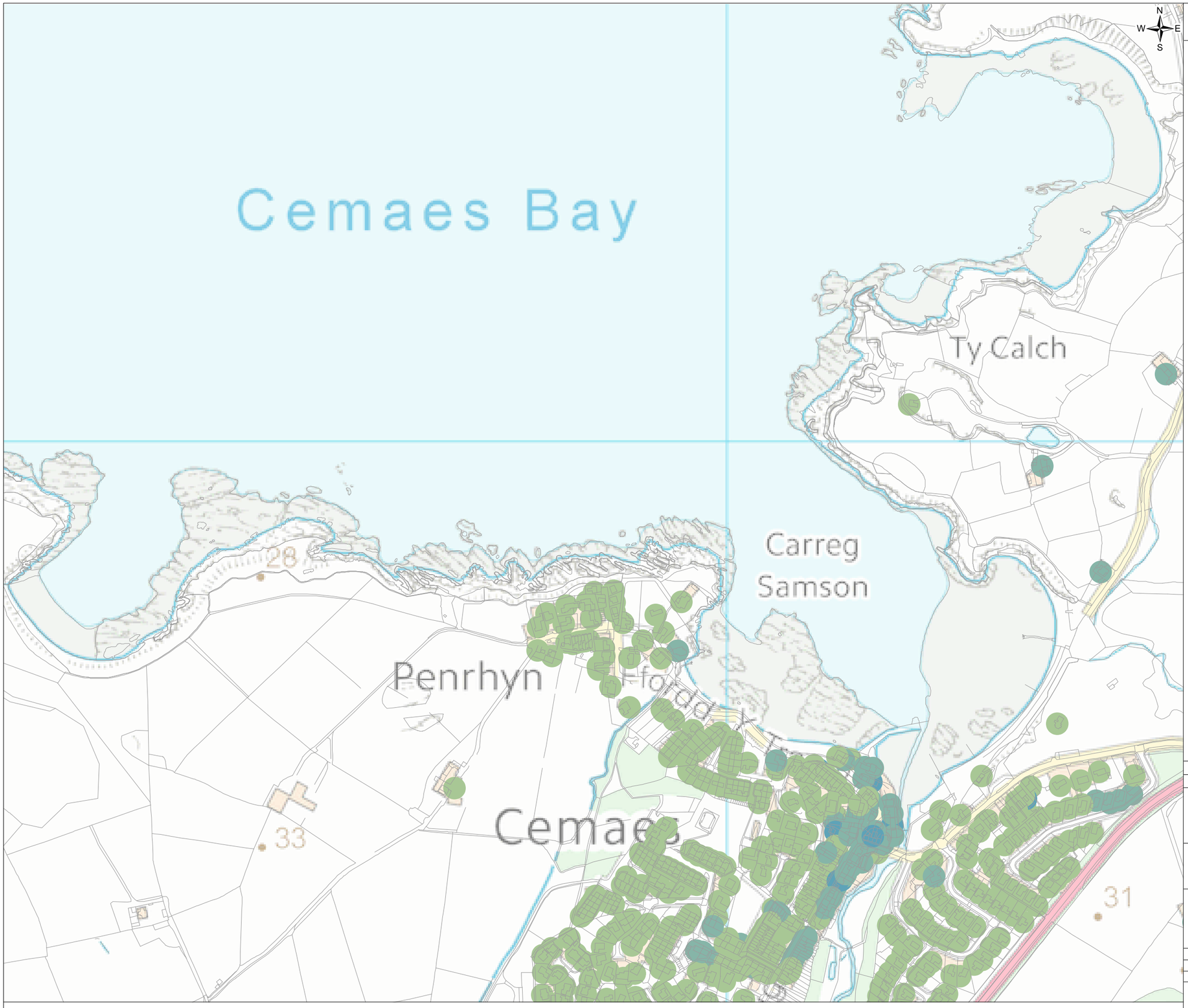
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS19TO21_EVENING

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0 125 250 500 metres

FIGURE 8



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (EVENING)
SHEET 4 OF 17

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Client No.		

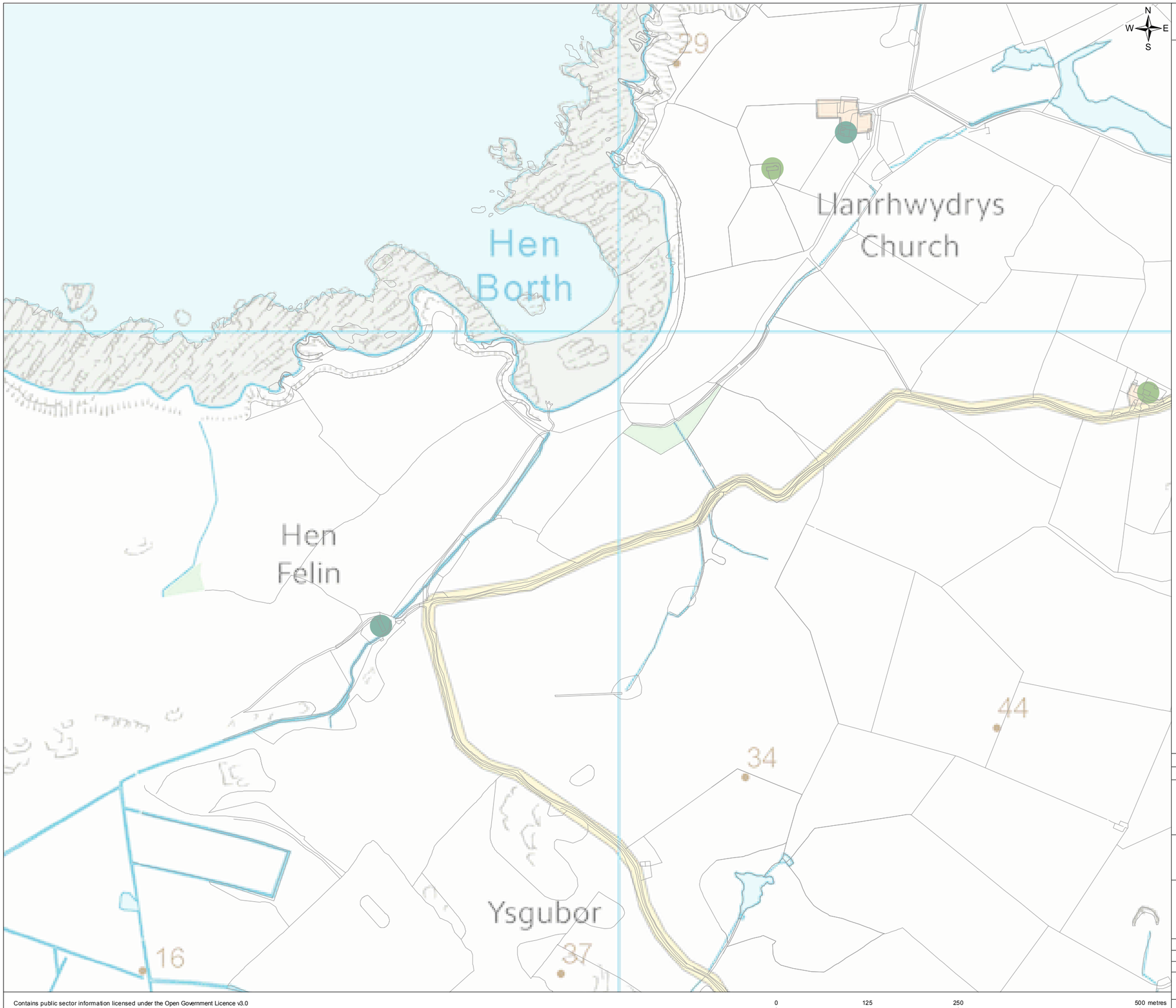
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS19TO21_EVENING

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0 125 250 500 metres

FIGURE 8



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (EVENING)
SHEET 5 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS19TO21_EVENING

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0 125 250 500 metres

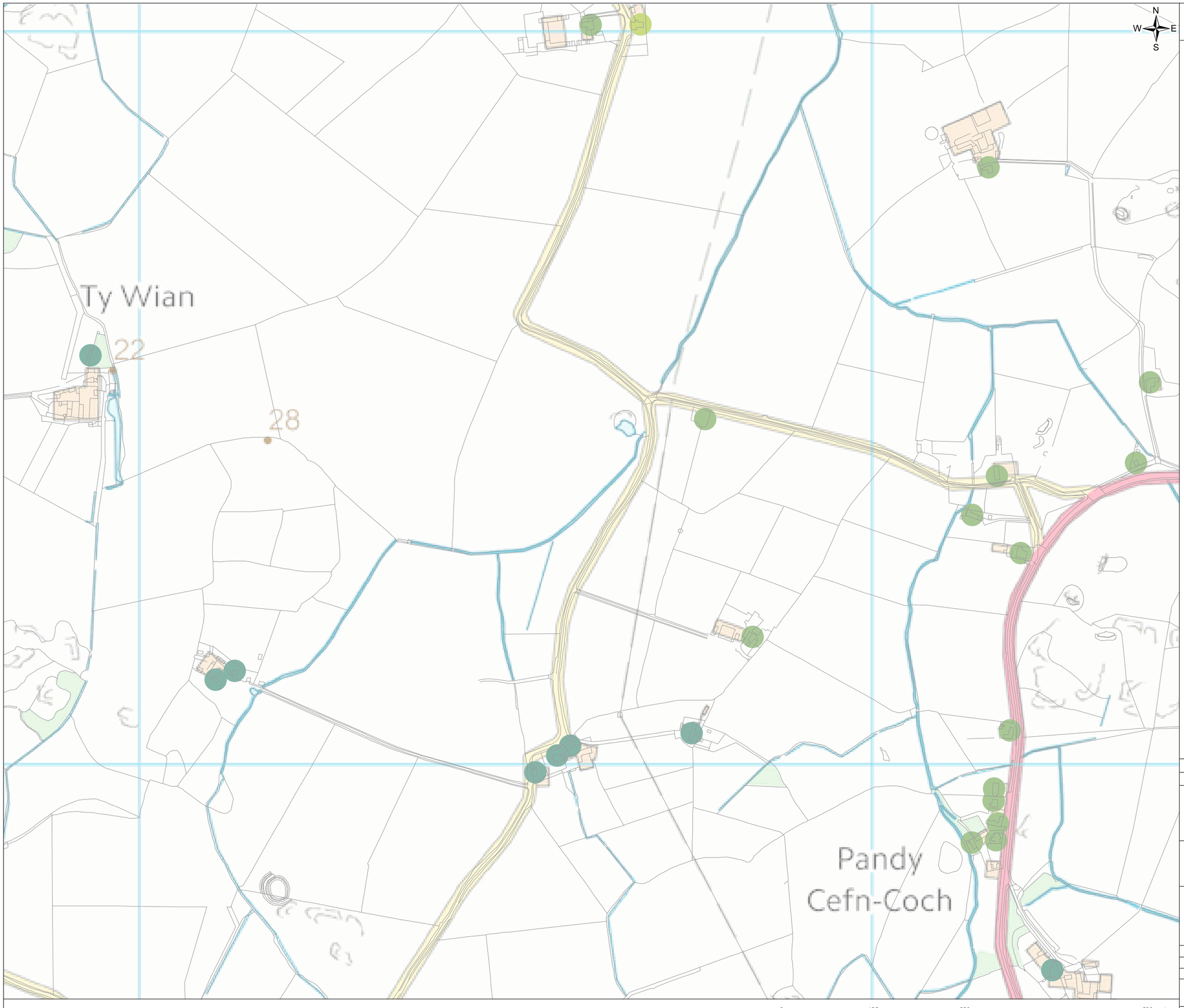


FIGURE 8

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (EVENING)
SHEET 6 OF 17

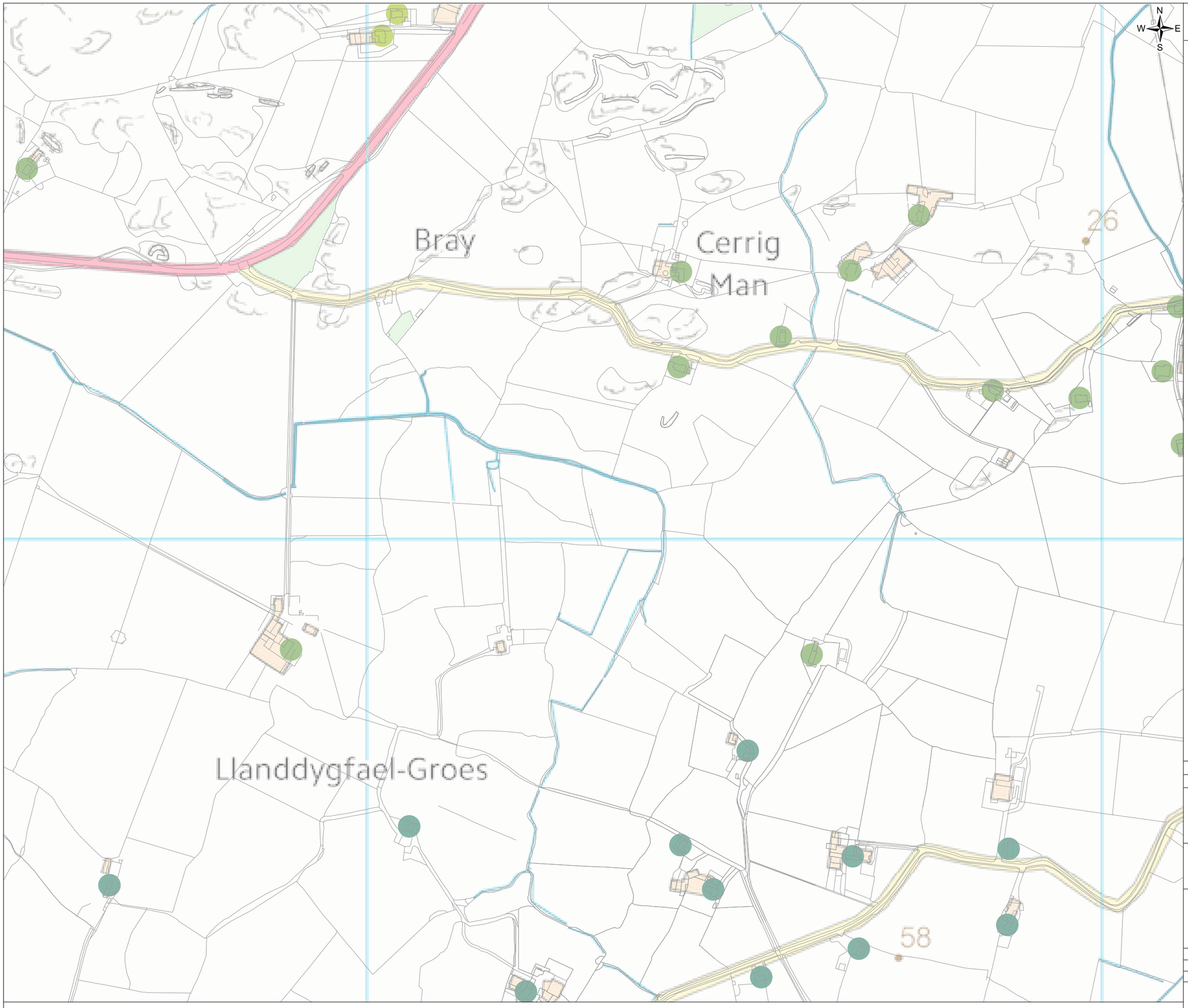
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Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS19TO21_EVENING

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FIGURE 8



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (EVENING)
SHEET 7 OF 17

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Client No.		

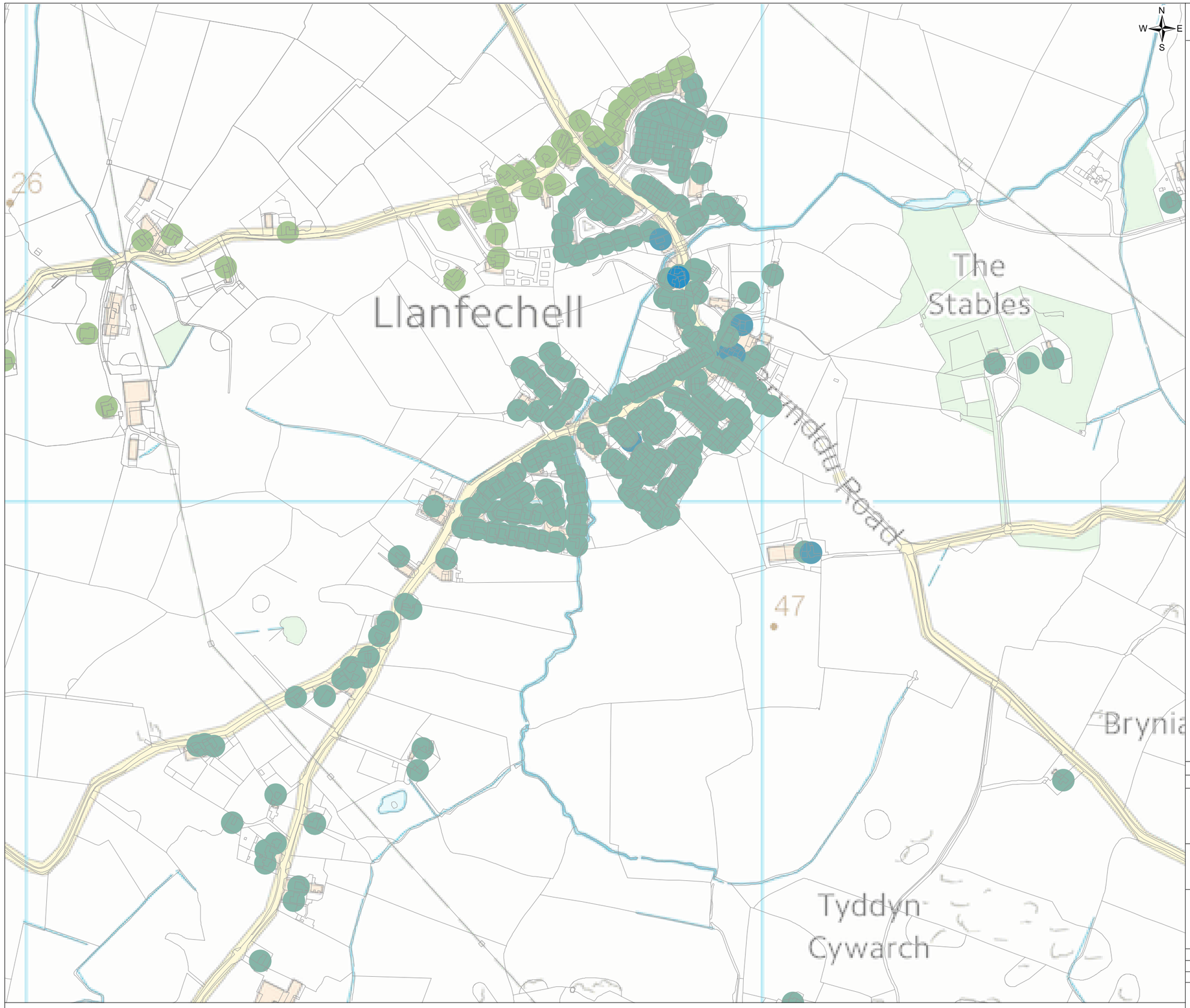
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS19TO21_EVENING

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0 125 250 500 metres

FIGURE 8



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (EVENING)
SHEET 8 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

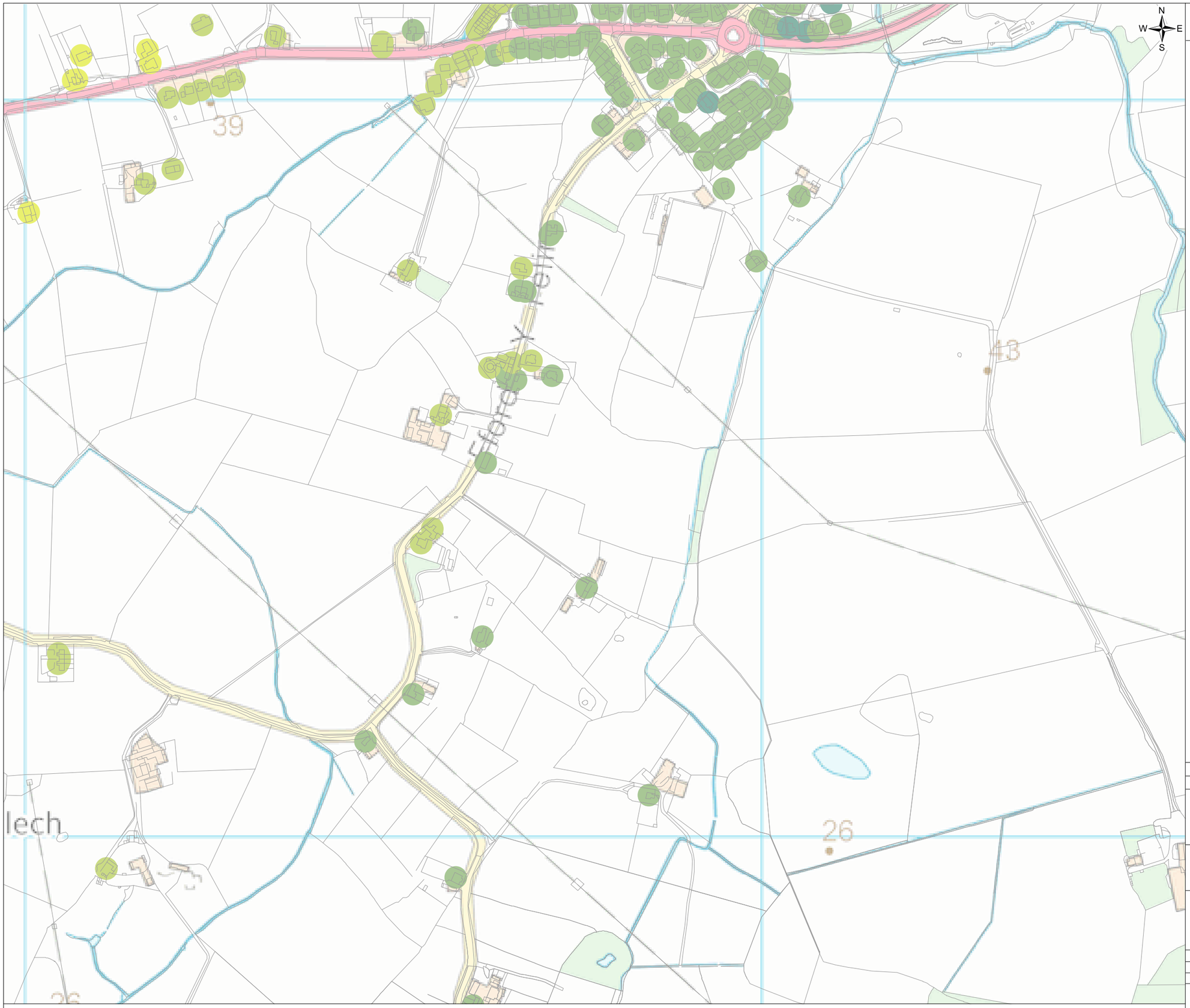
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0 125 250 500 metres

FIGURE 8



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (EVENING)
SHEET 9 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

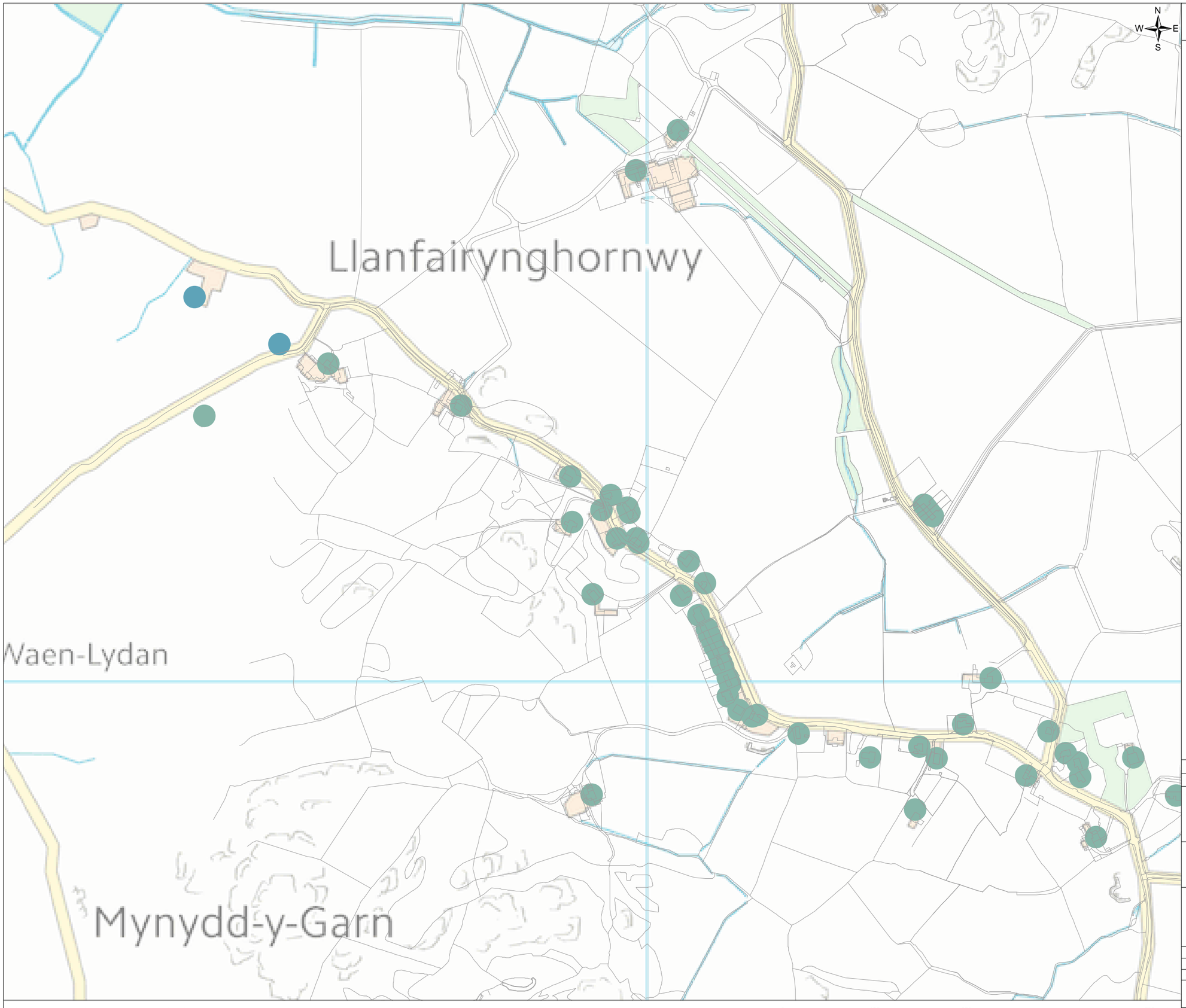
60PO80AS_NOISE_RfNMC_MONTHS19TO21_EVENING

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0 125 250 500 metres

FIGURE 8



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (EVENING)
SHEET 10 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS19TO21_EVENING

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0 125 250 500 metres

FIGURE 8

Aelwyd Uchaf

Plas-Y-Nant

Rhŷd-Y-Bedd

108

98

92

88

84

N
W E
S

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (EVENING)
SHEET 11 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

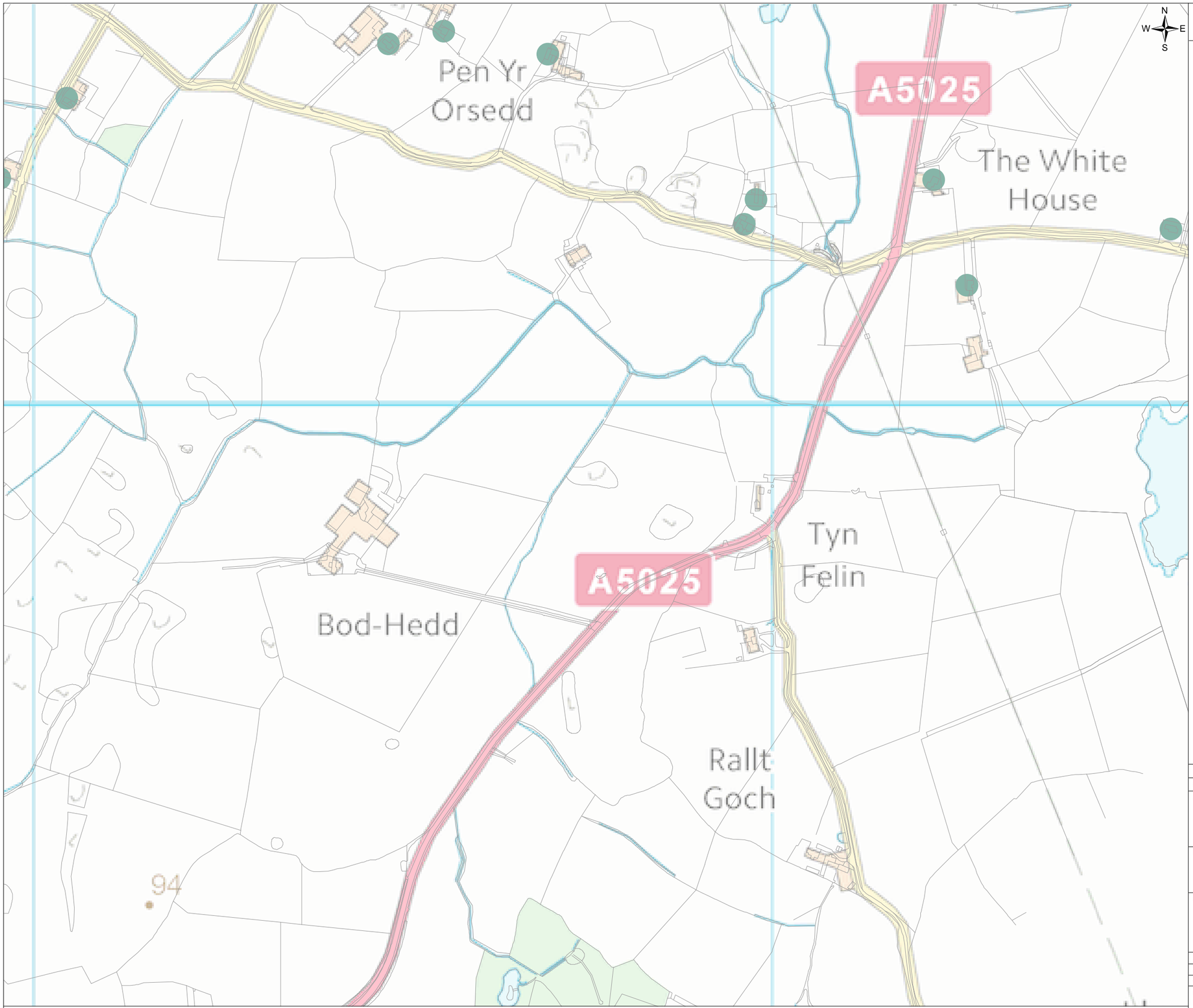
60PO80AS_NOISE_RfNMC_MONTHS19TO21_EVENING

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0 125 250 500 metres

FIGURE 8



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (EVENING)
SHEET 12 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

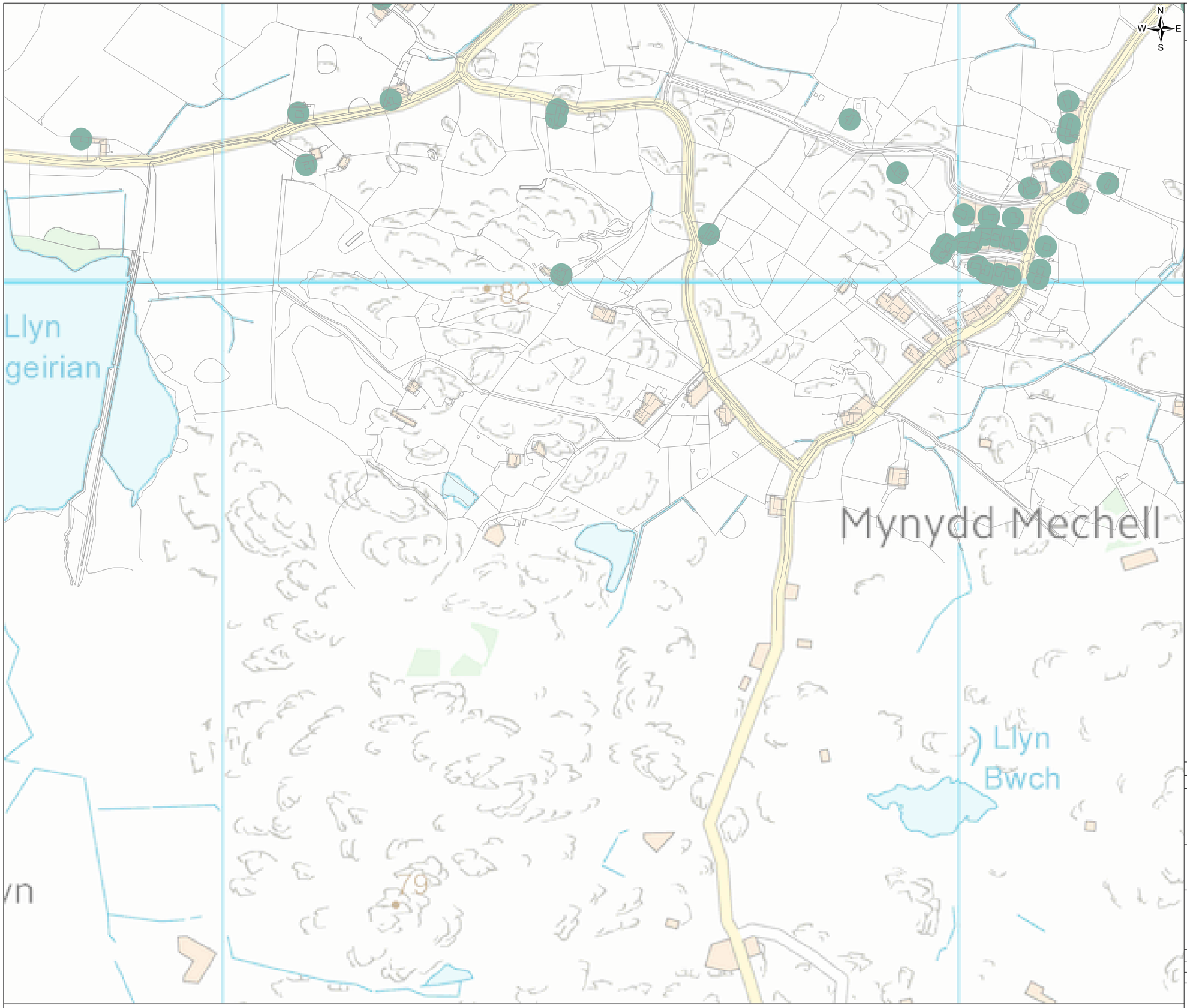
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS19TO21_EVENING

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0 125 250 500 metres

FIGURE 8



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (EVENING)
SHEET 13 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS19TO21_EVENING

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0 125 250 500 metres

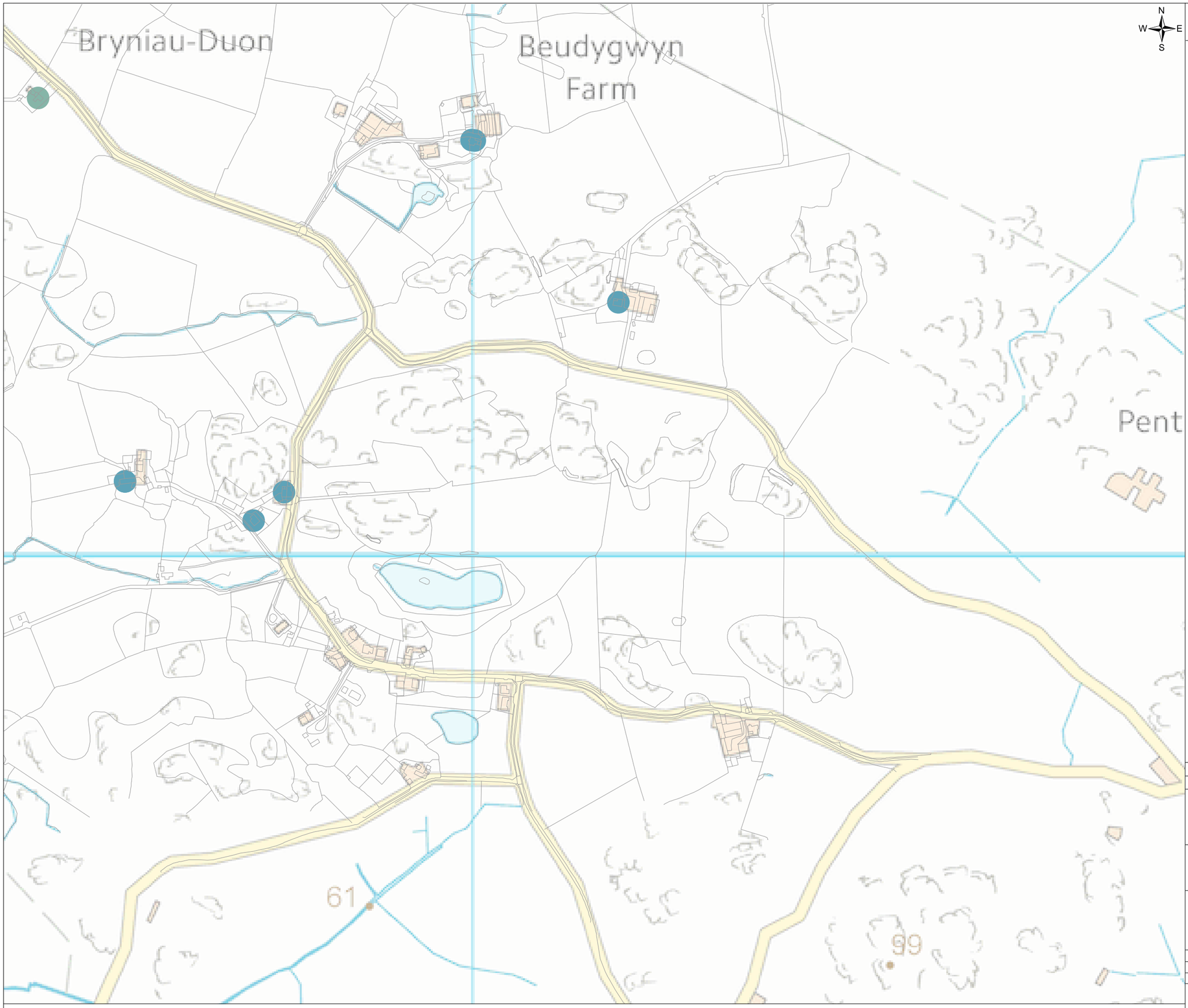


FIGURE 8

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (EVENING)
SHEET 14 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

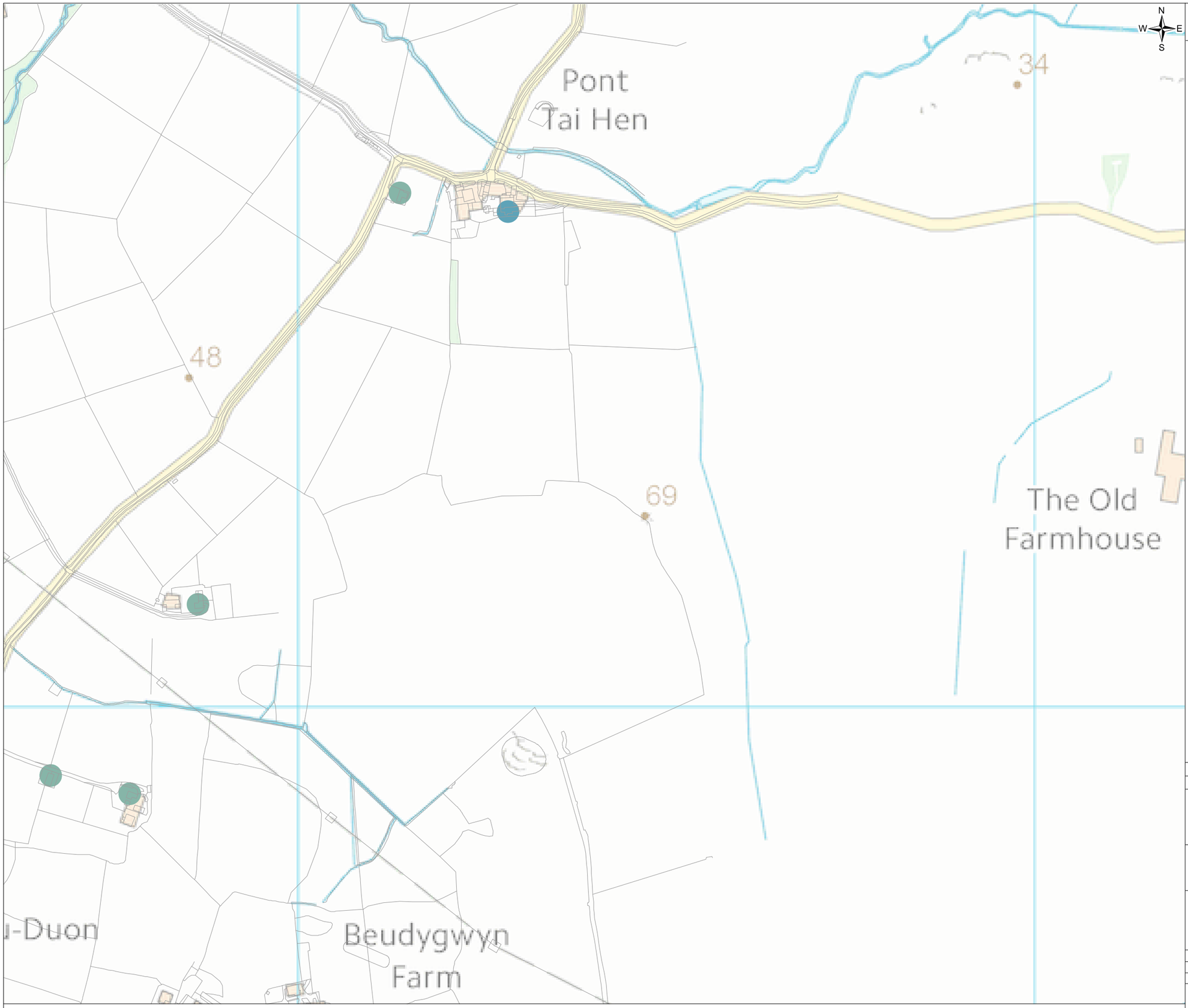
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0 125 250 500 metres

FIGURE 8



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 19 TO 21 (EVENING)
SHEET 15 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

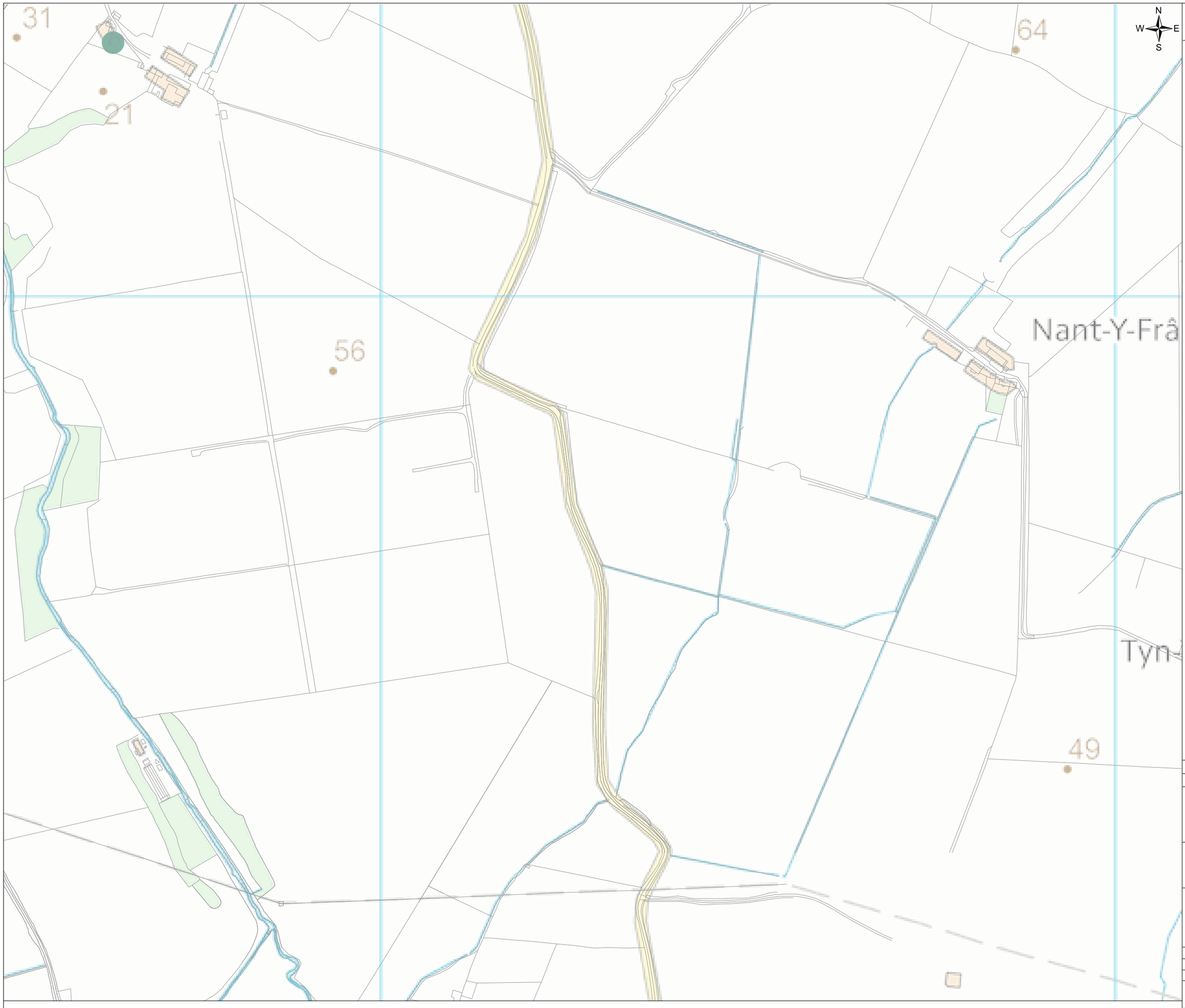
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0 125 250 500 metres

FIGURE 8



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (EVENING)
SHEET 16 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

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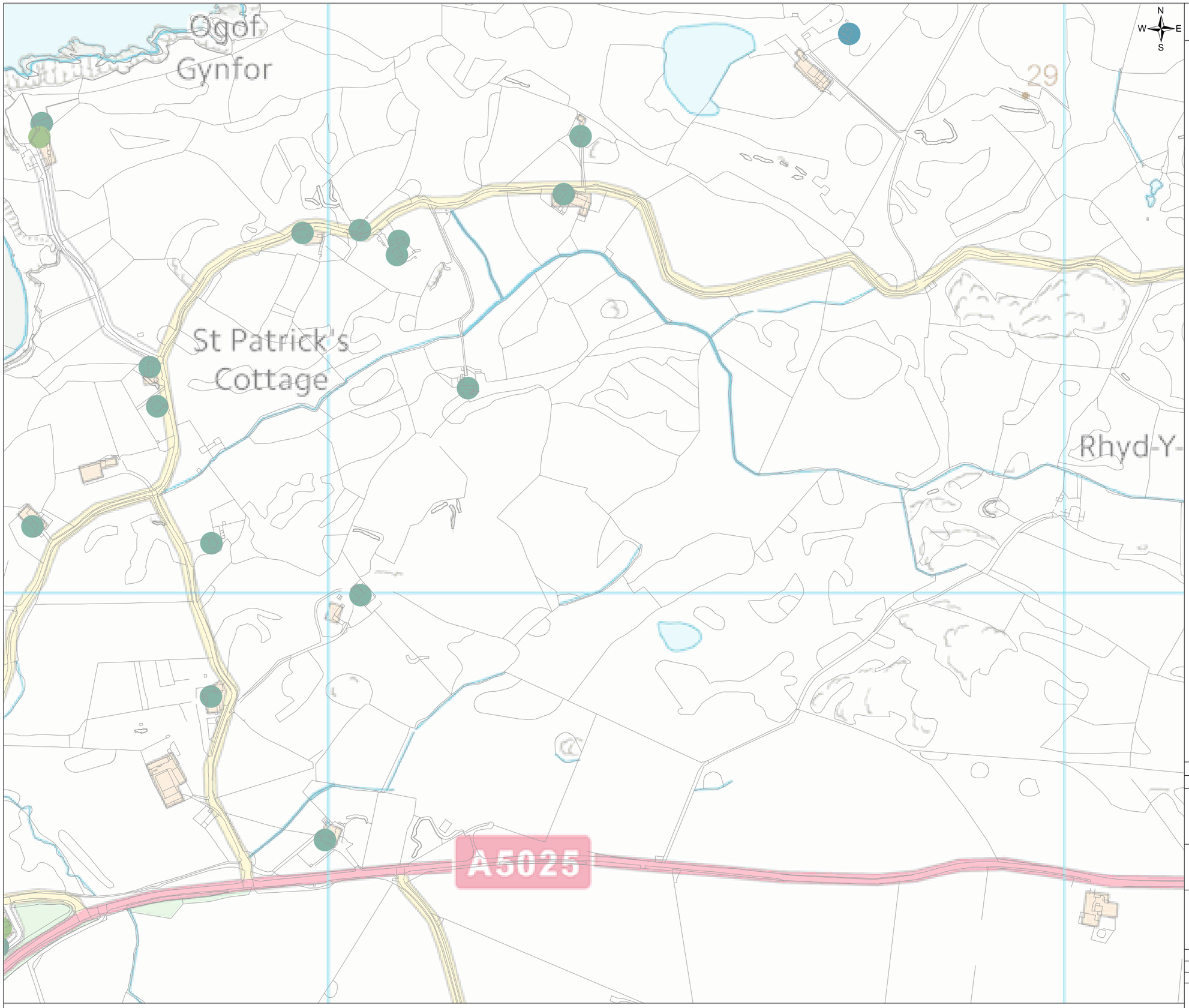


FIGURE 8

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 19 TO 21 (EVENING)
SHEET 17 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

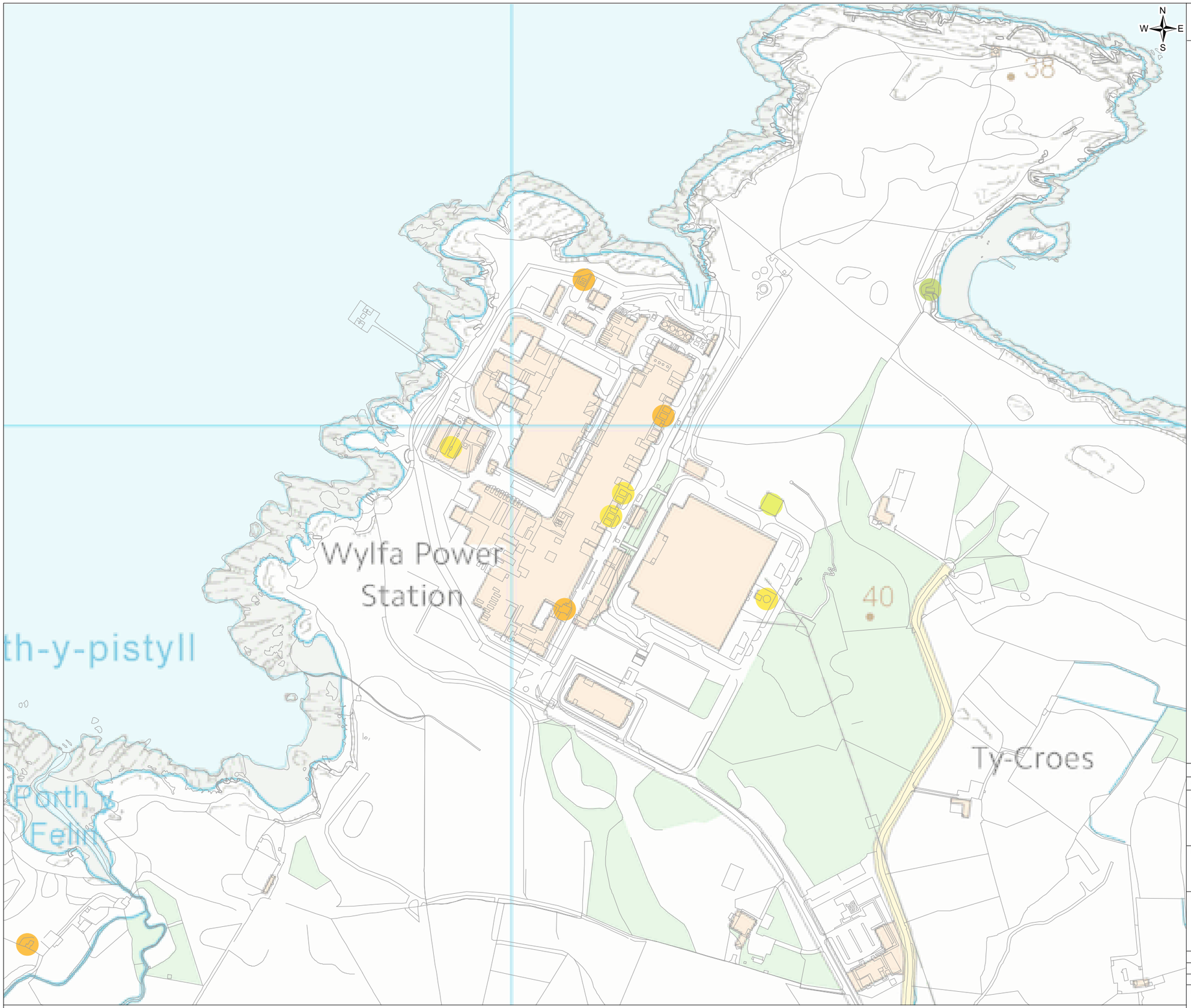
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0 125 250 500 metres

FIGURE 9



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (NIGHT-TIME)
SHEET 1 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS19TO21_NIGHTTIME

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0 125 250 500 metres

FIGURE 9

Esgair Gemlyn

Cemlyn

Capel

Porth Felin

N
W E
S

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 19 TO 21 (NIGHT-TIME)
SHEET 2 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS19TO21_NIGHTTIME

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0 125 250 500 metres

FIGURE 9



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (NIGHT-TIME)
SHEET 3 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

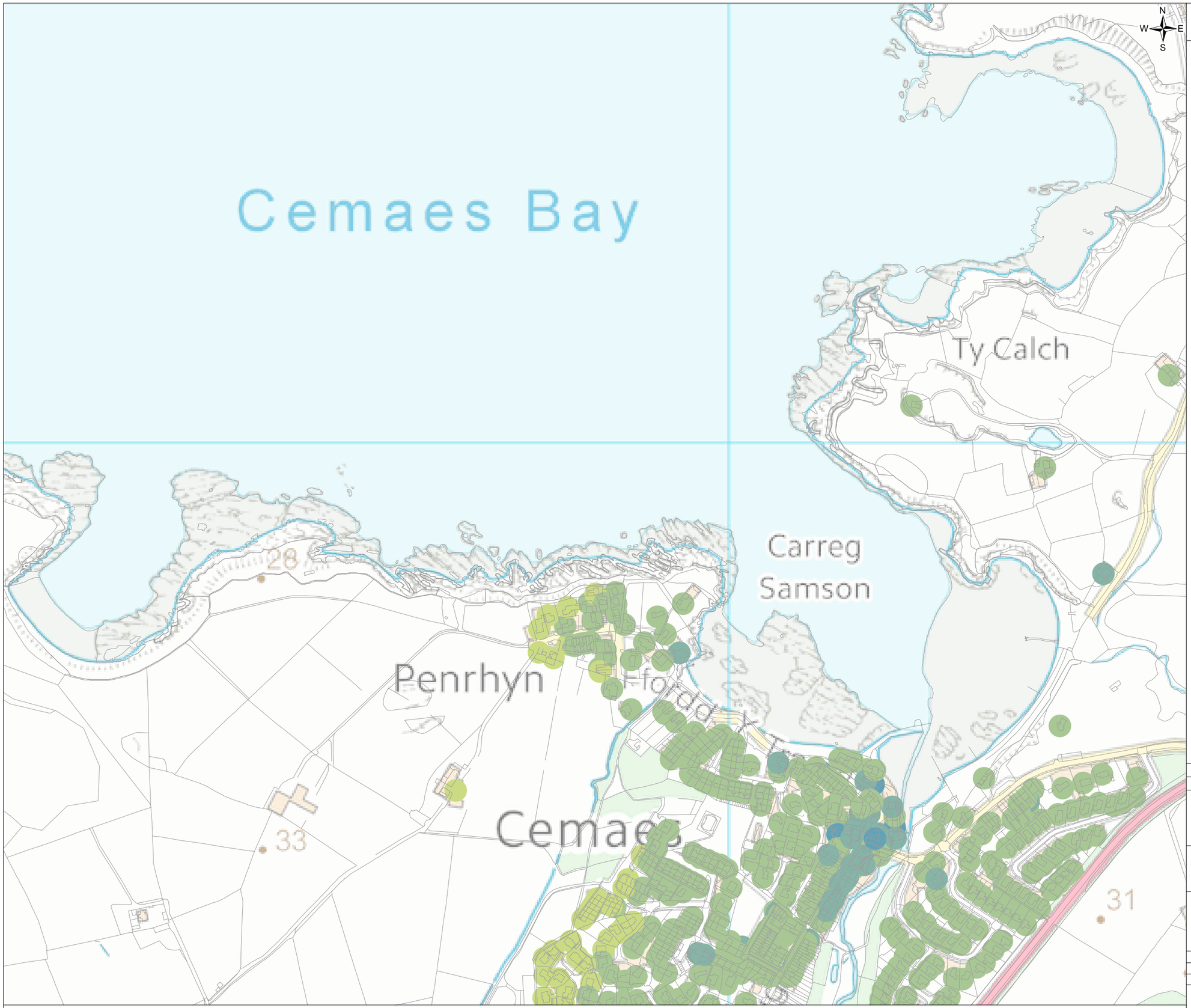
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS19TO21_NIGHTTIME

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0 125 250 500 metres

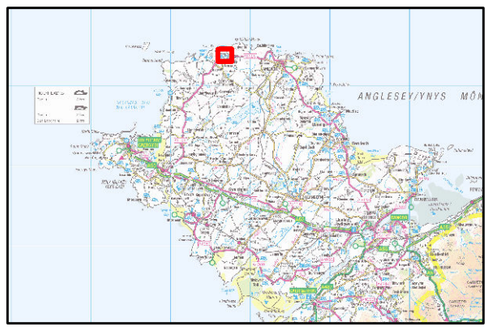
FIGURE 9



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (NIGHT-TIME)
SHEET 4 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS19TO21_NIGHTTIME

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0 125 250 500 metres

FIGURE 9



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (NIGHT-TIME)
SHEET 5 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS19TO21_NIGHTTIME

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0 125 250 500 metres

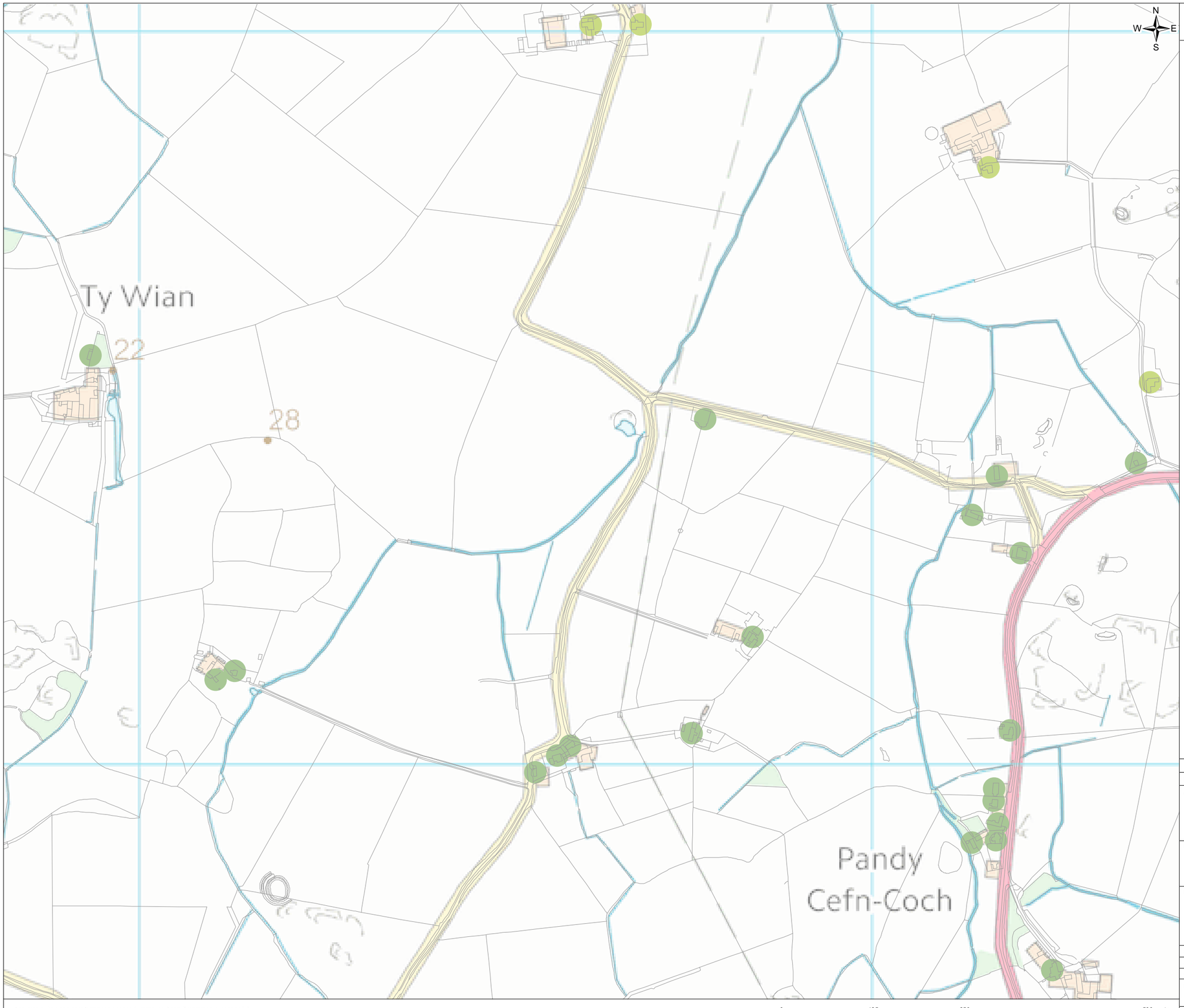


FIGURE 9

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (NIGHT-TIME)
SHEET 6 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

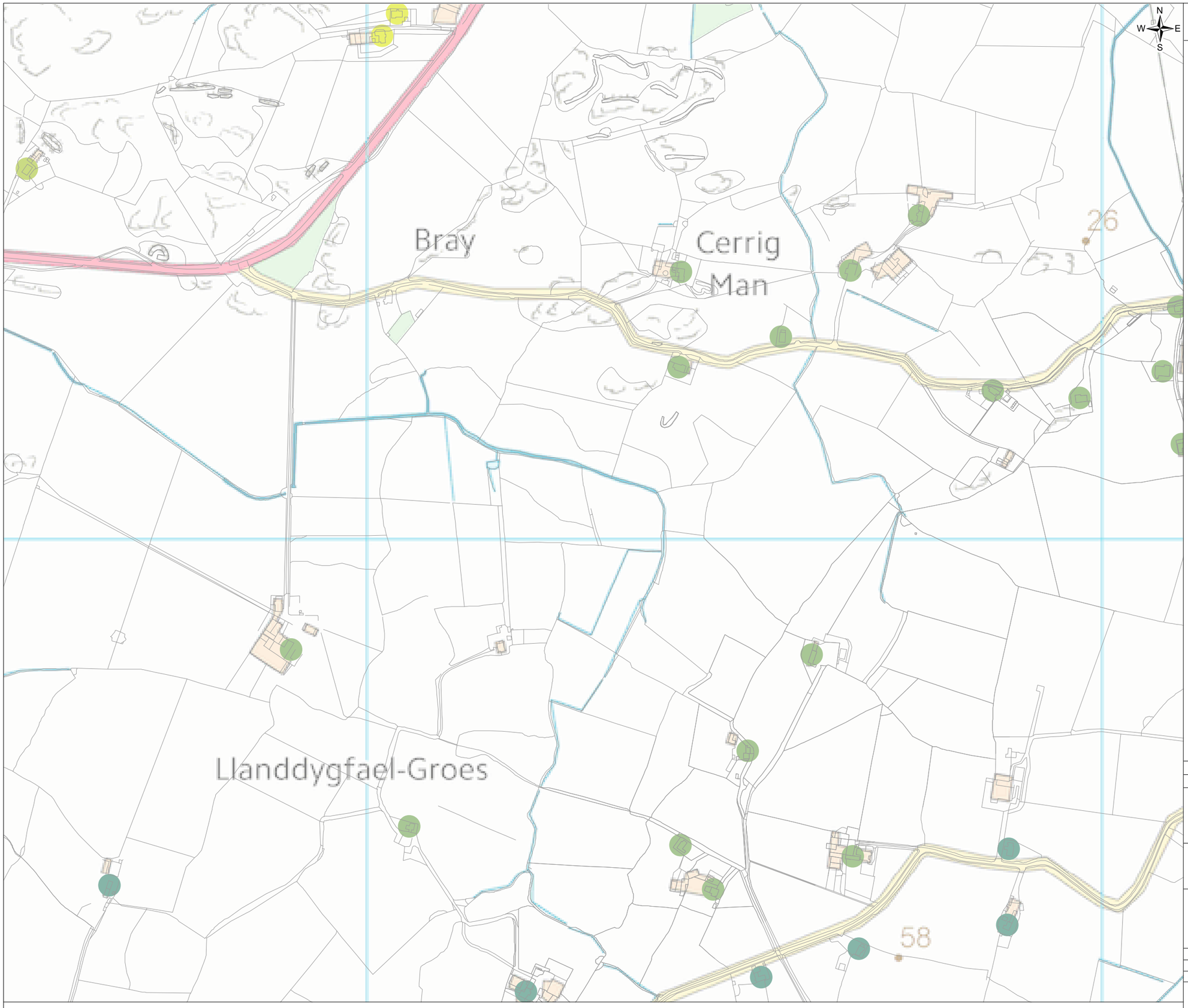
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS19TO21_NIGHTTIME

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0 125 250 500 metres

FIGURE 9



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (NIGHT-TIME)
SHEET 7 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

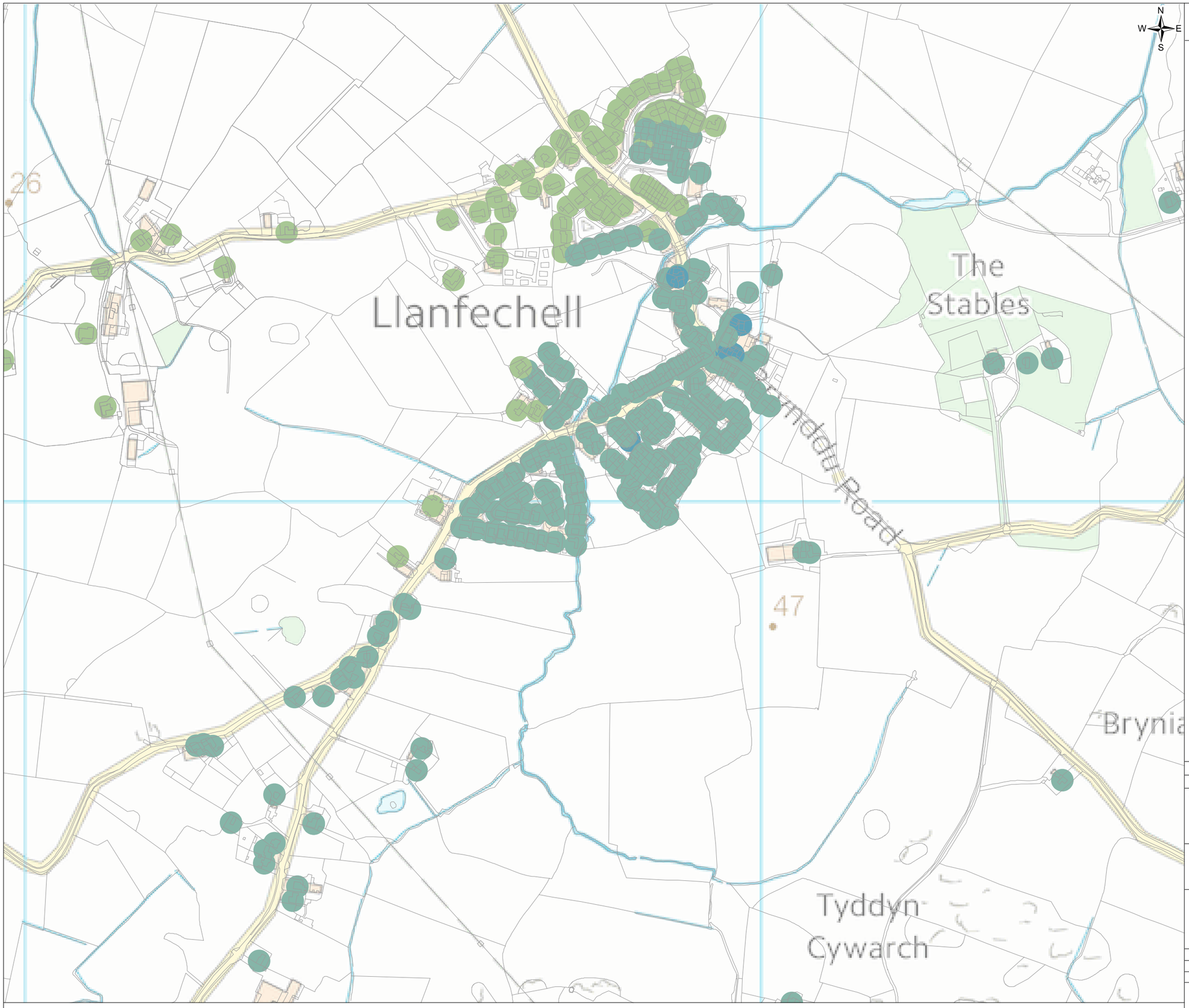
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS19TO21_NIGHTTIME

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0 125 250 500 metres

FIGURE 9



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (NIGHT-TIME)
SHEET 8 OF 17

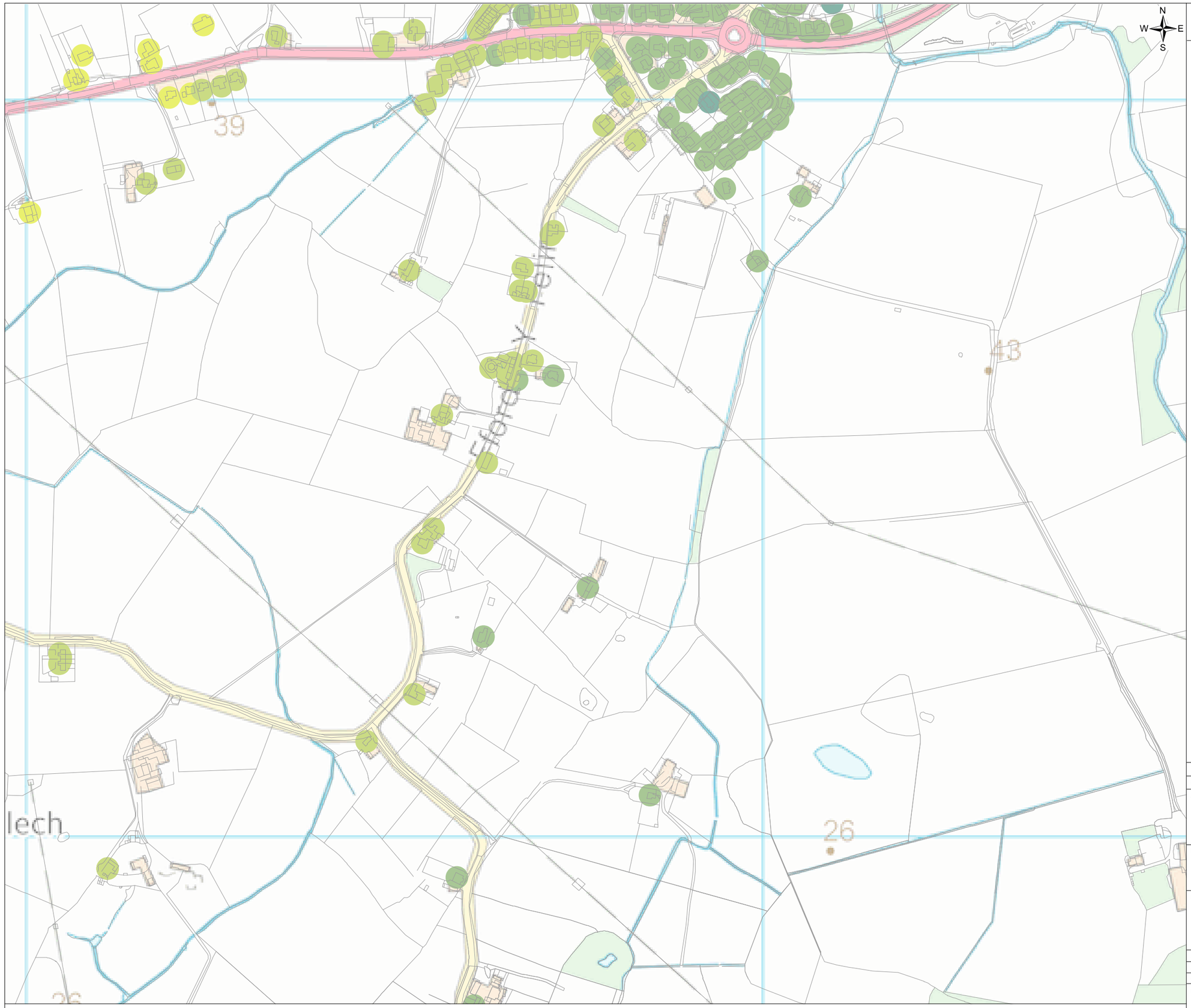
Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS19TO21_NIGHTTIME

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FIGURE 9



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (NIGHT-TIME)
SHEET 9 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS19TO21_NIGHTTIME

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0 125 250 500 metres

FIGURE 9

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (NIGHT-TIME)
SHEET 10 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

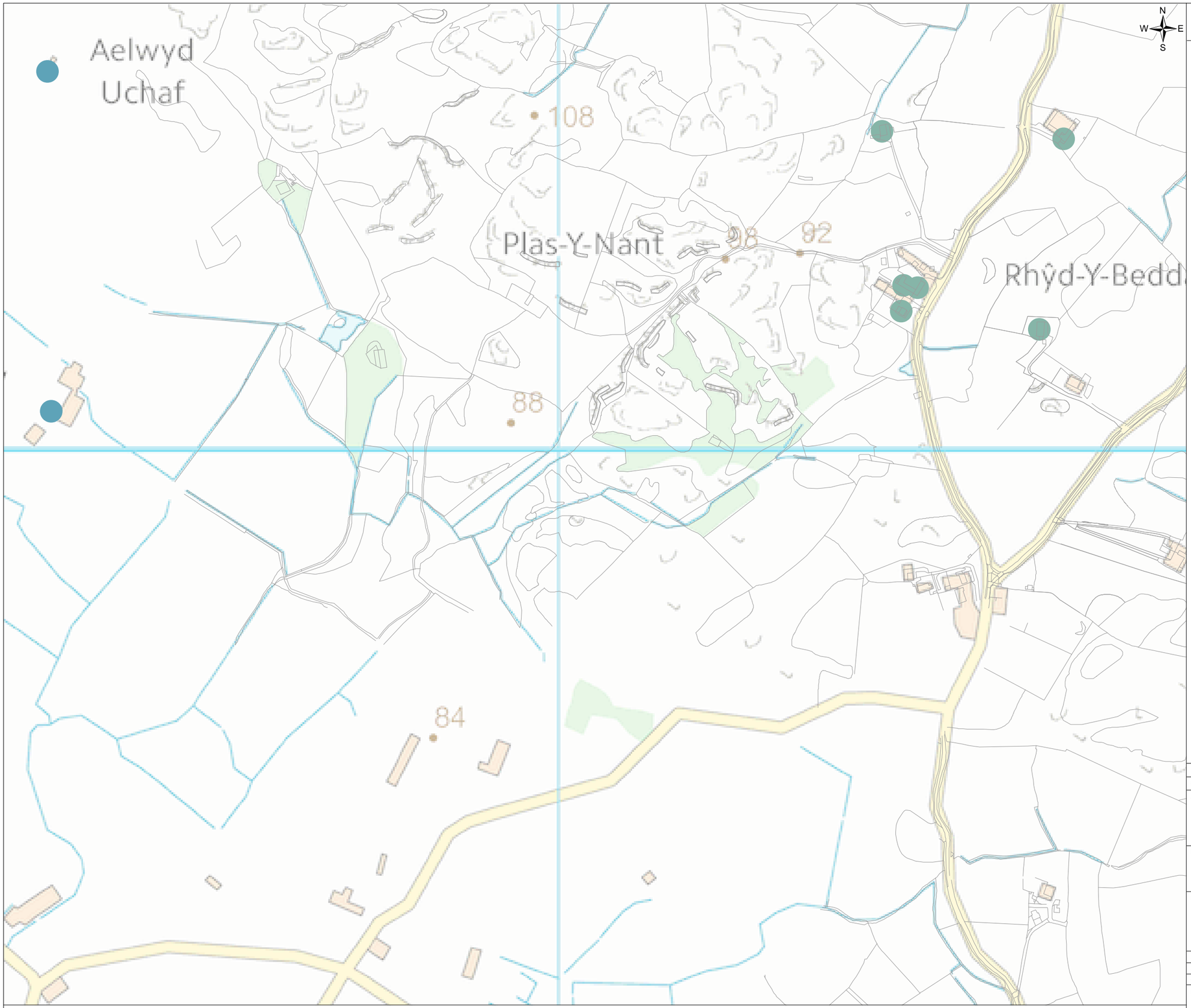
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0 125 250 500 metres

FIGURE 9



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 19 TO 21 (NIGHT-TIME)
SHEET 11 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

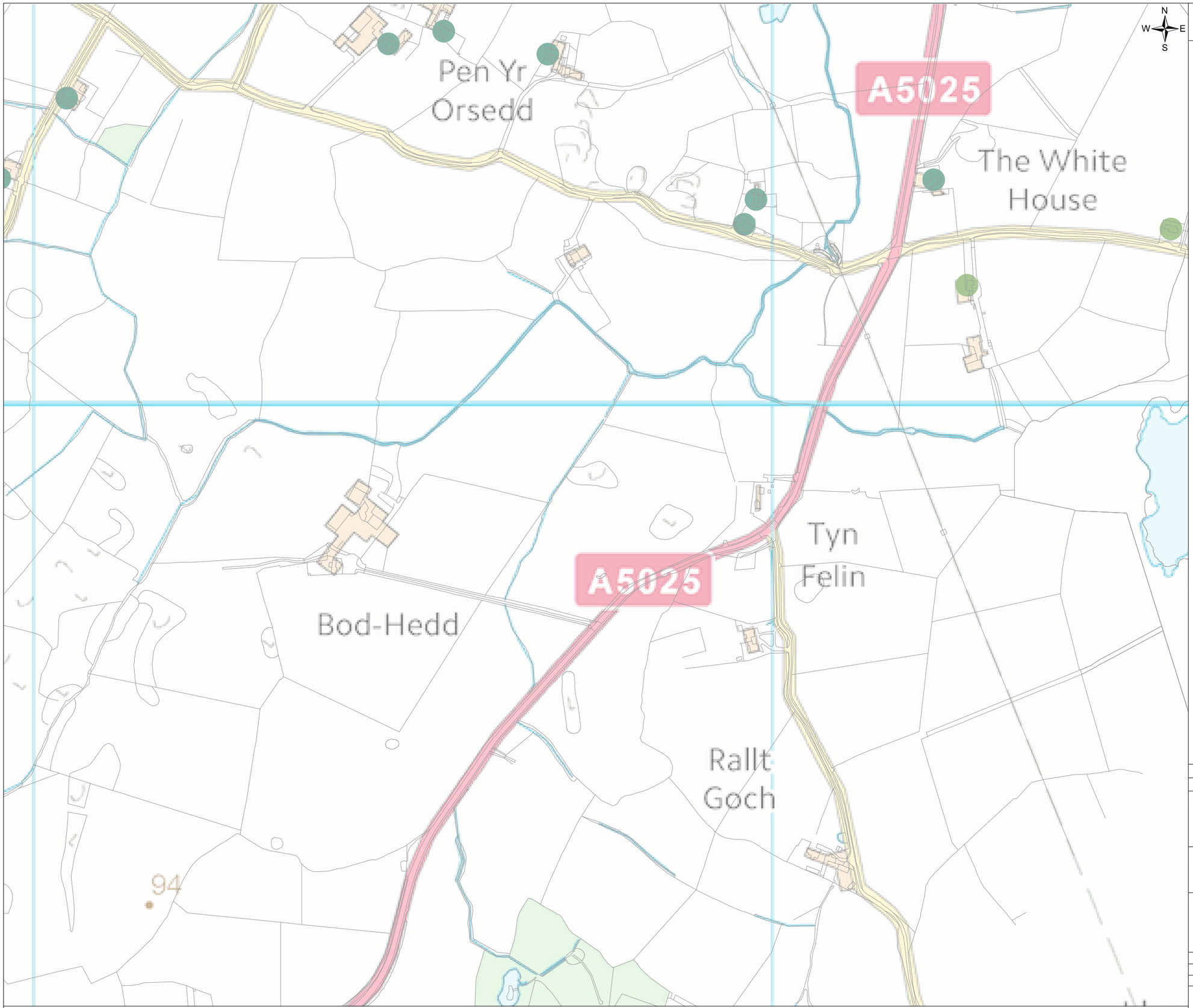
60PO80AS_NOISE_RfNMC_MONTHS19TO21_NIGHTTIME

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0 125 250 500 metres

FIGURE 9



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (NIGHT-TIME)
SHEET 12 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

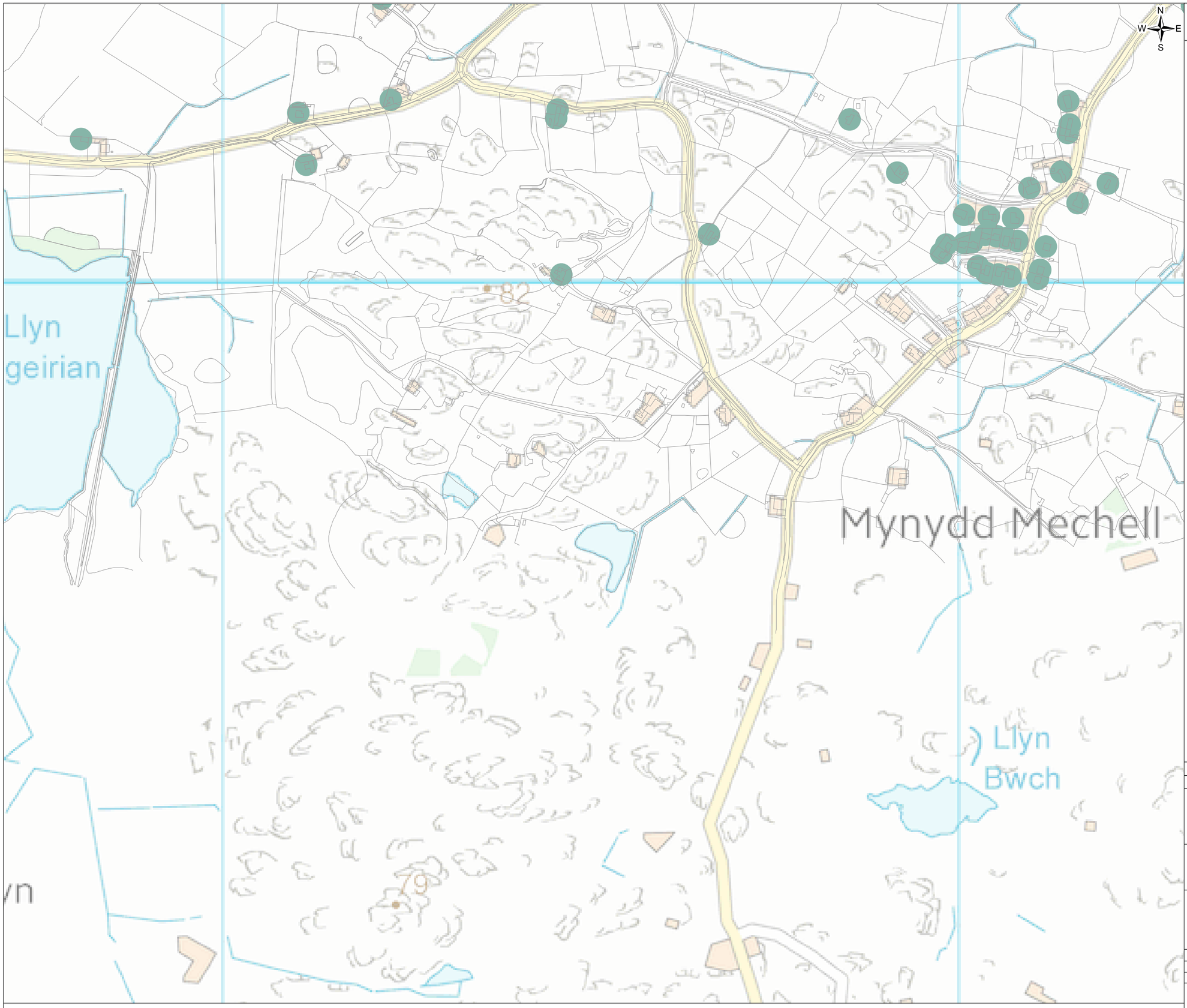
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS19TO21_NIGHTTIME

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0 125 250 500 metres

FIGURE 9



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (NIGHT-TIME)
SHEET 13 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS19TO21_NIGHTTIME

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0 125 250 500 metres

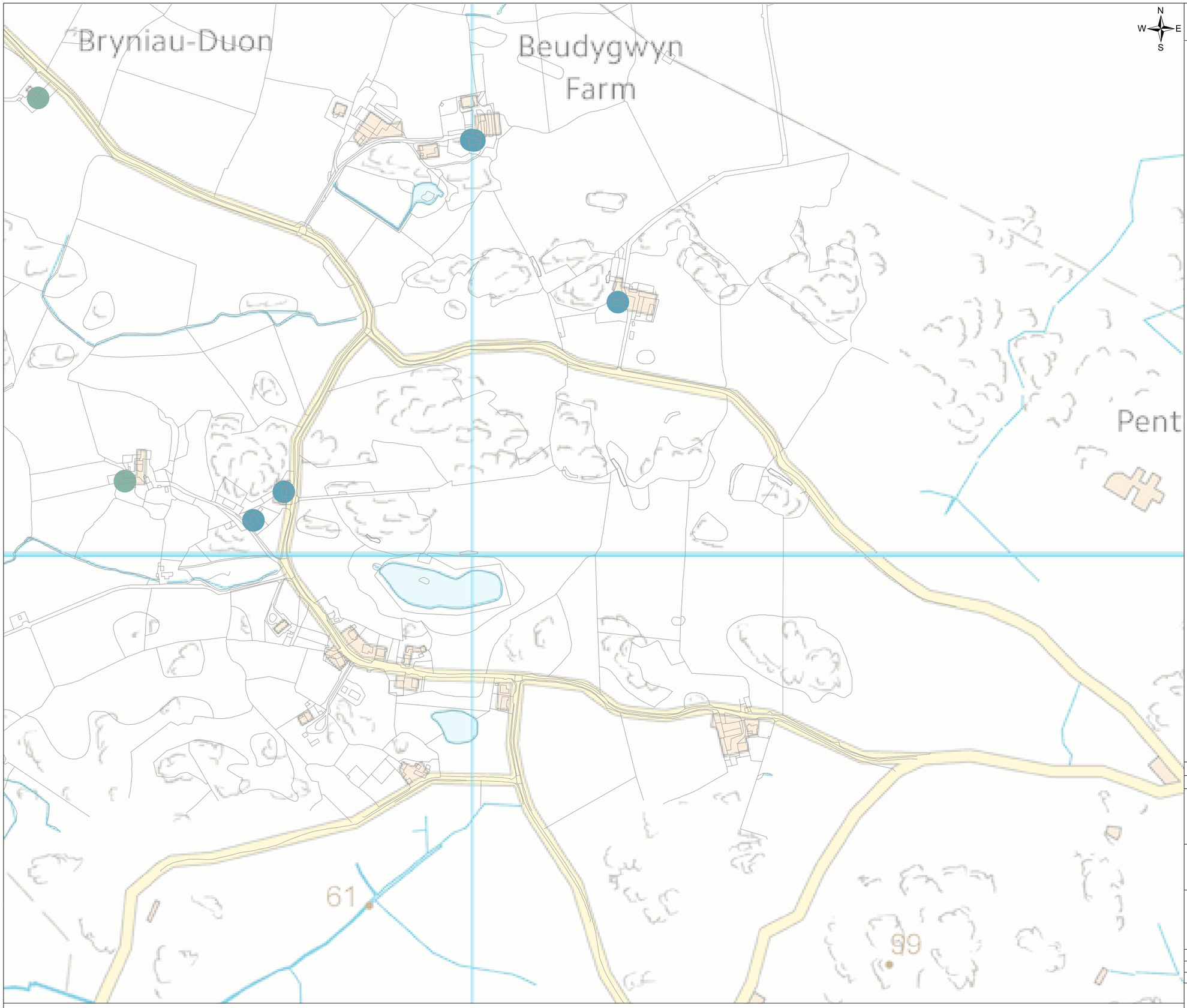


FIGURE 9

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (NIGHT-TIME)
SHEET 14 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

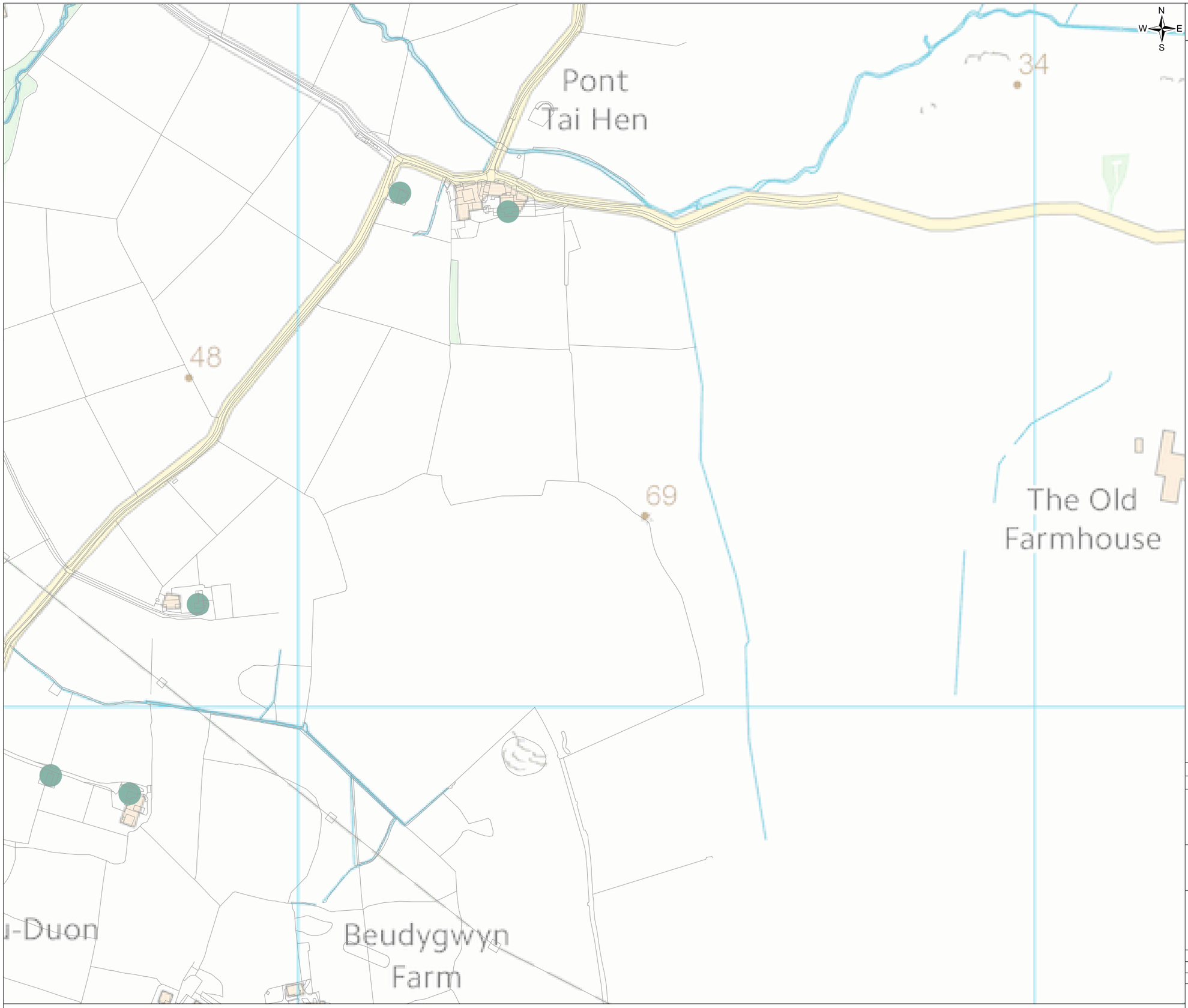
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS19TO21_NIGHTTIME

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0 125 250 500 metres

FIGURE 9



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 19 TO 21 (NIGHT-TIME)
SHEET 15 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

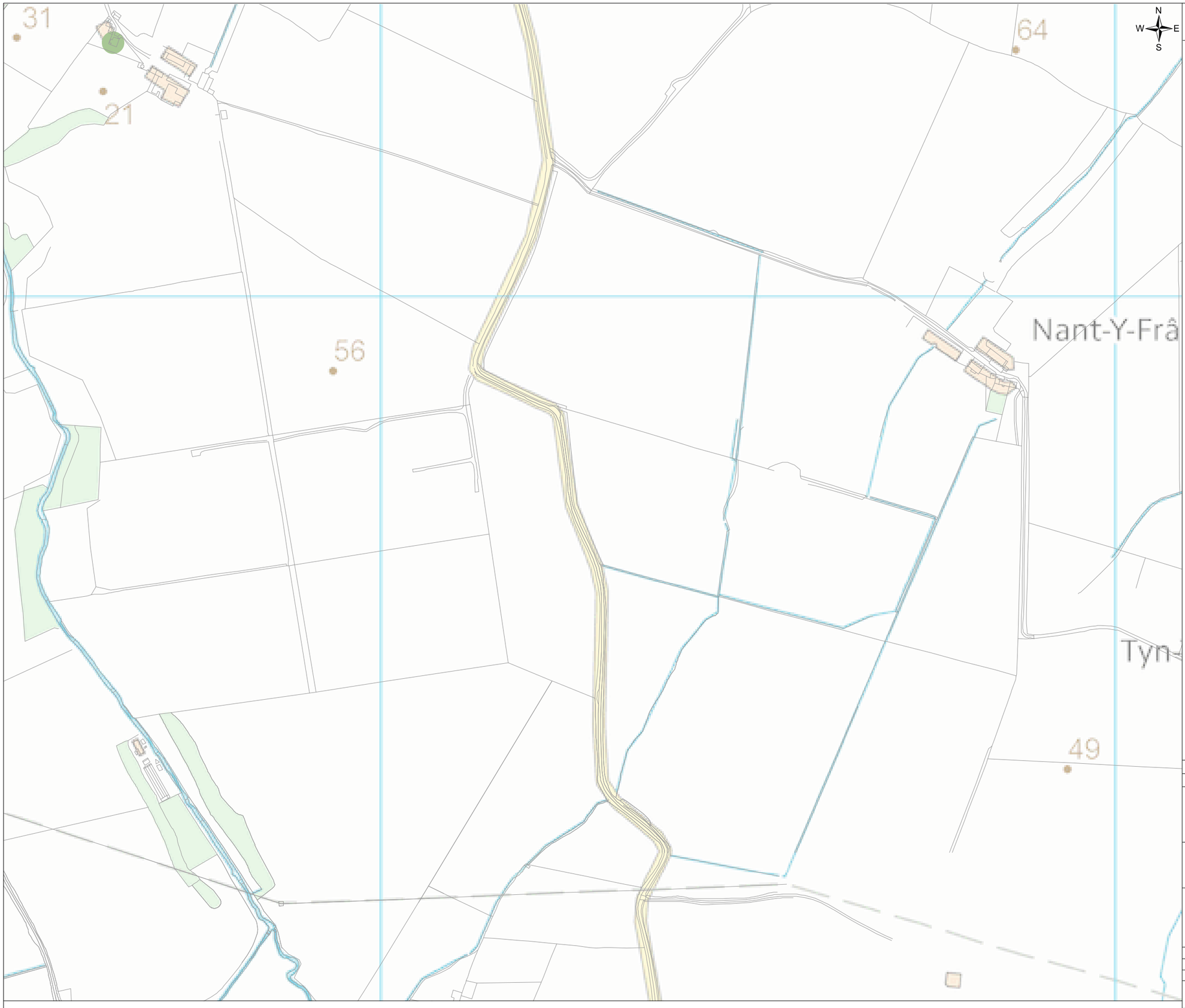
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0 125 250 500 metres

FIGURE 9



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 19 TO 21 (NIGHT-TIME)
SHEET 16 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS19TO21_NIGHTTIME

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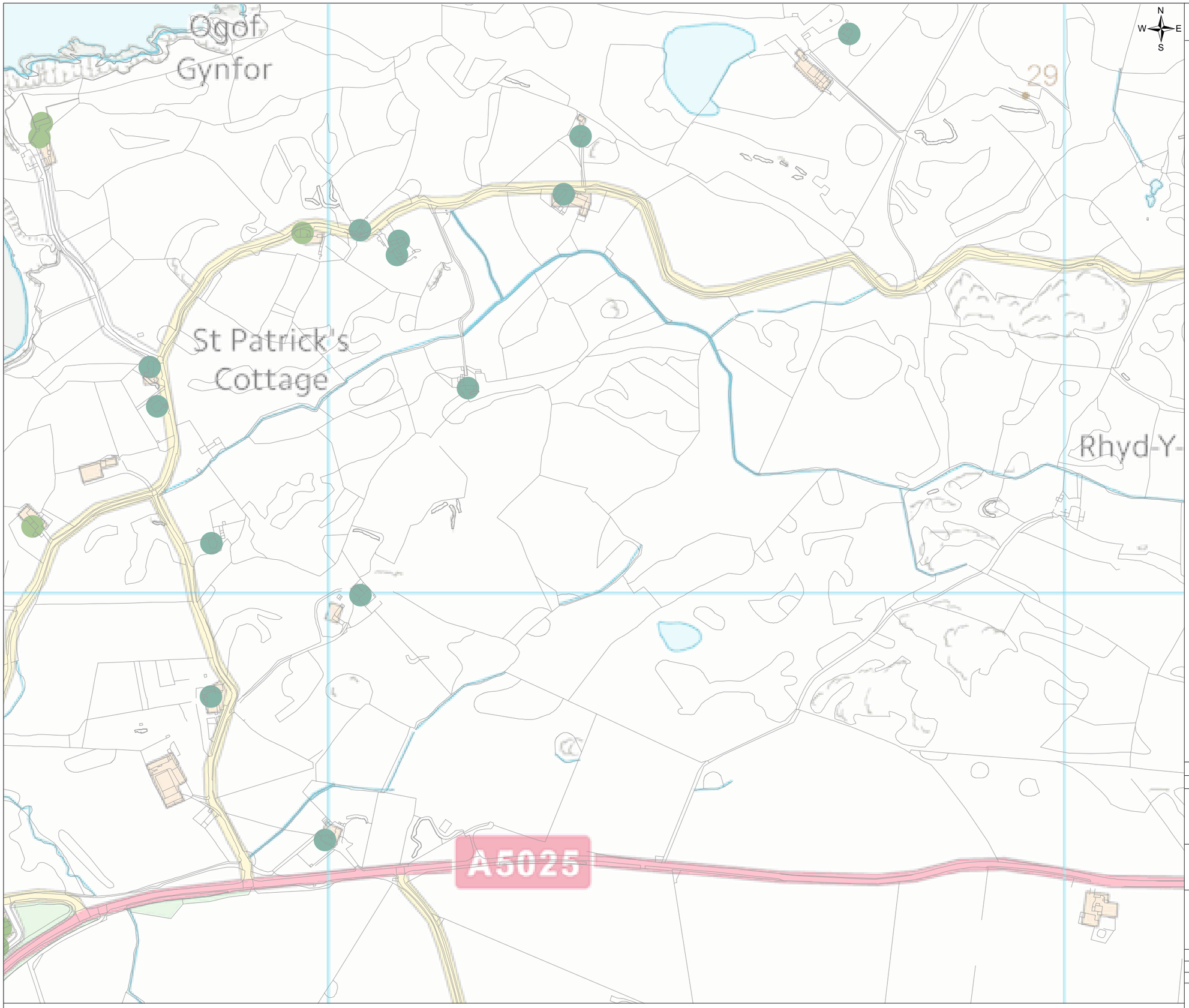


FIGURE 9

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 19 TO 21 (NIGHT-TIME)
SHEET 17 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

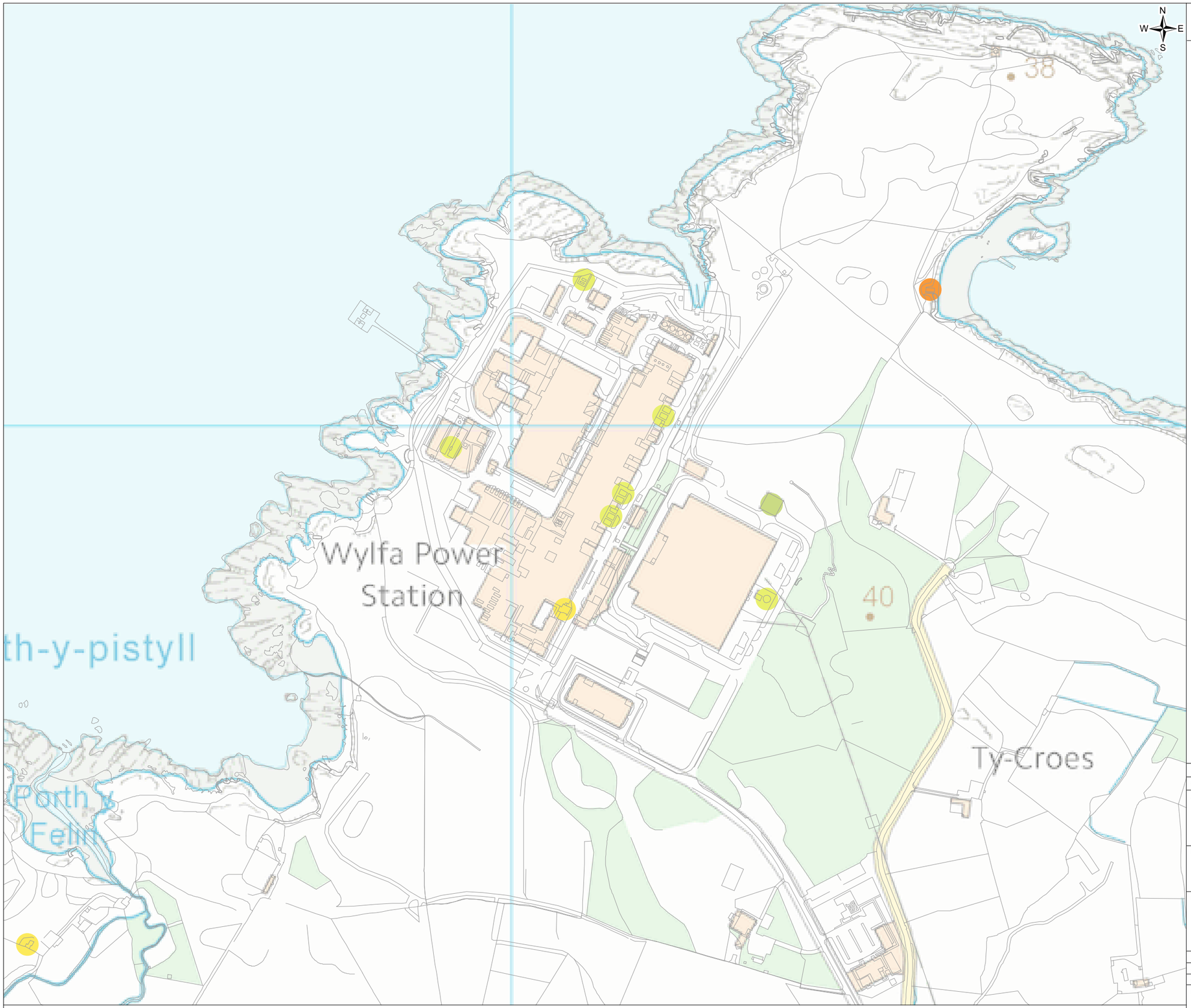
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0 125 250 500 metres

FIGURE 10



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (DAYTIME)
SHEET 1 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS31TO33_DAYTIME

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0 125 250 500 metres

FIGURE 10

Esgair Gemlyn

Cemlyn

Capel

Porth Felin

14

39

N
W E
S

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 31 TO 33 (DAYTIME)
SHEET 2 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS31TO33_DAYTIME

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0 125 250 500 metres

FIGURE 10

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (DAYTIME)
SHEET 3 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

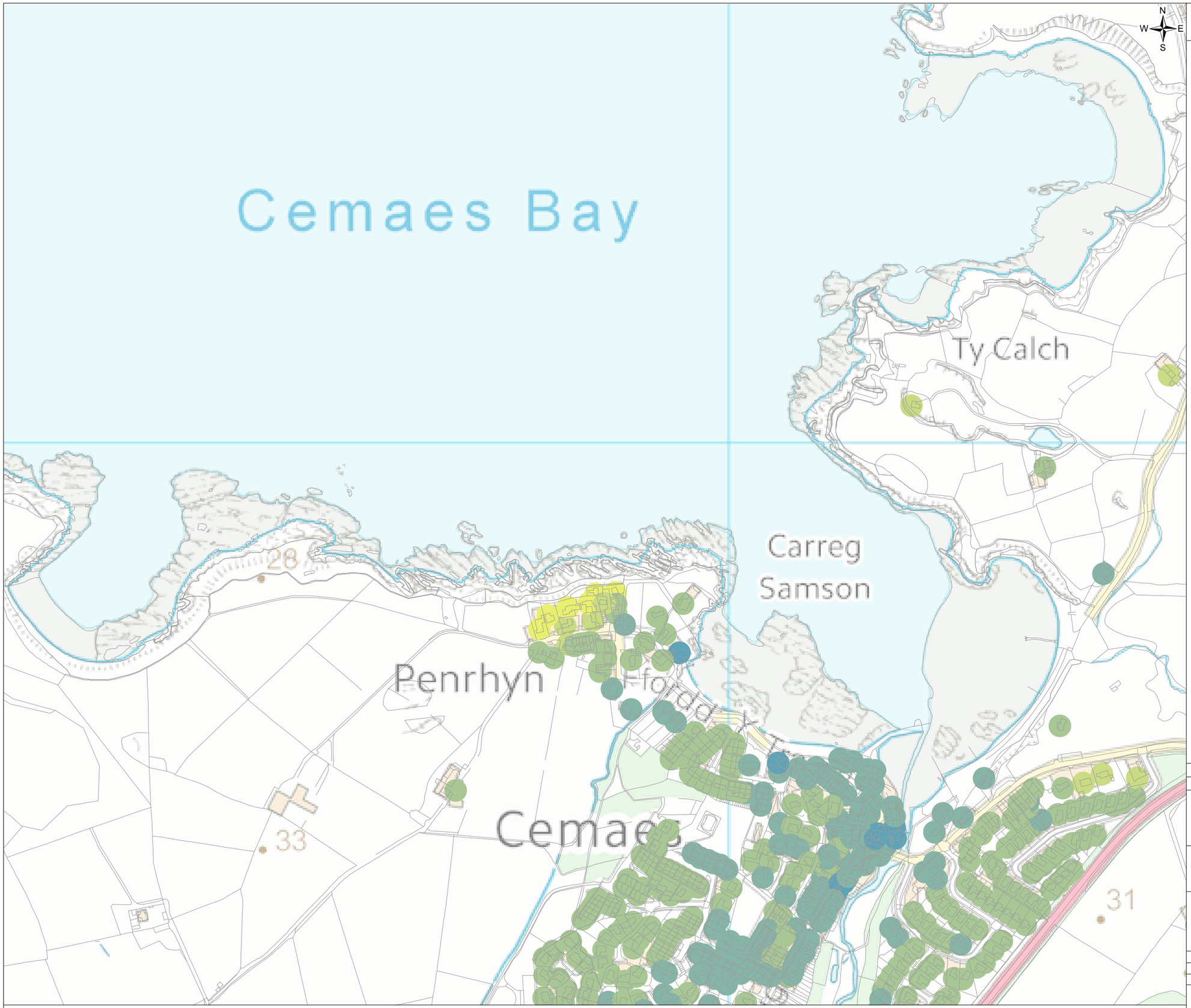
60PO80AS_NOISE_RfNMC_MONTHS31TO33_DAYTIME

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0 125 250 500 metres

FIGURE 10



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (DAYTIME)
SHEET 4 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

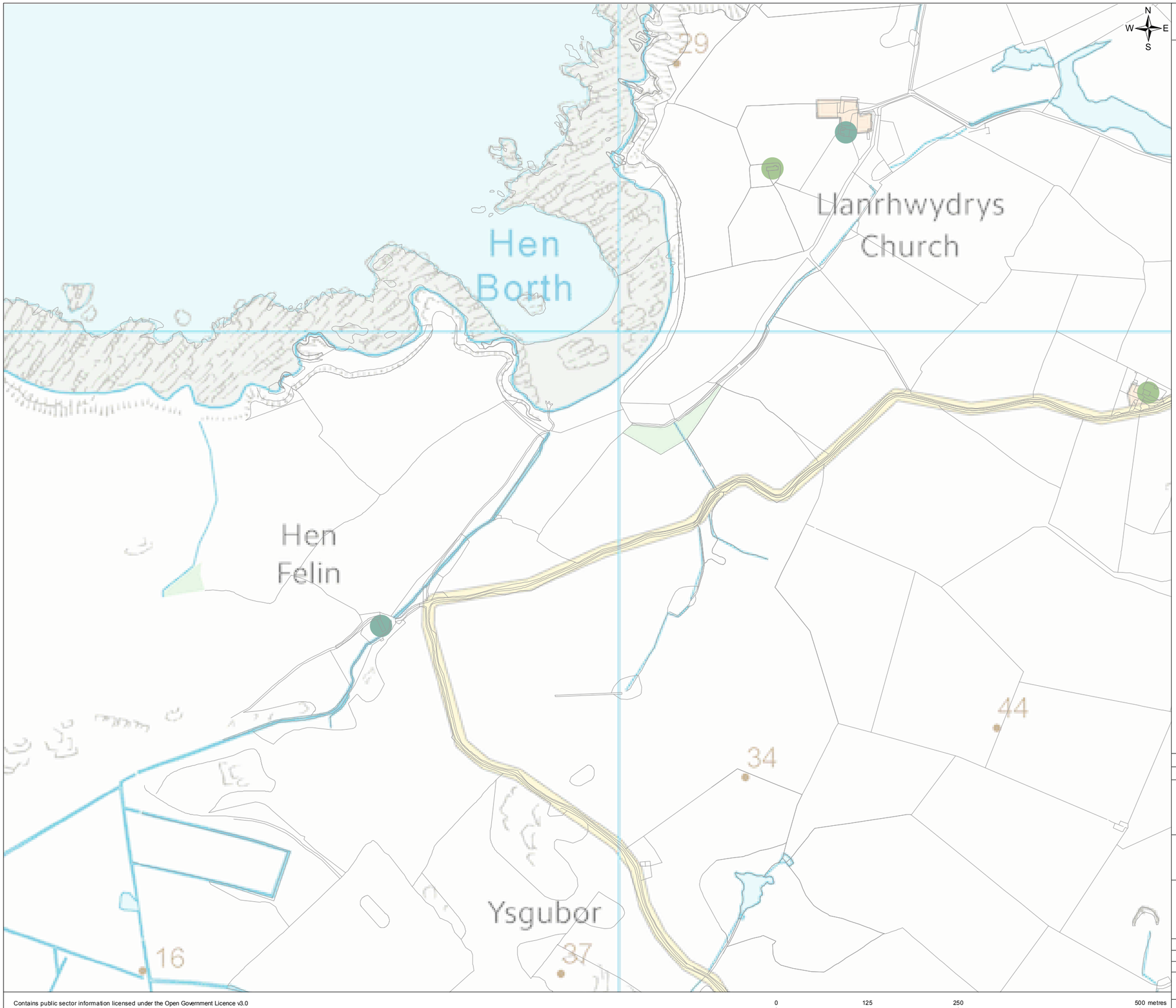
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS31TO33_DAYTIME

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0 125 250 500 metres

FIGURE 10



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (DAYTIME)
SHEET 5 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

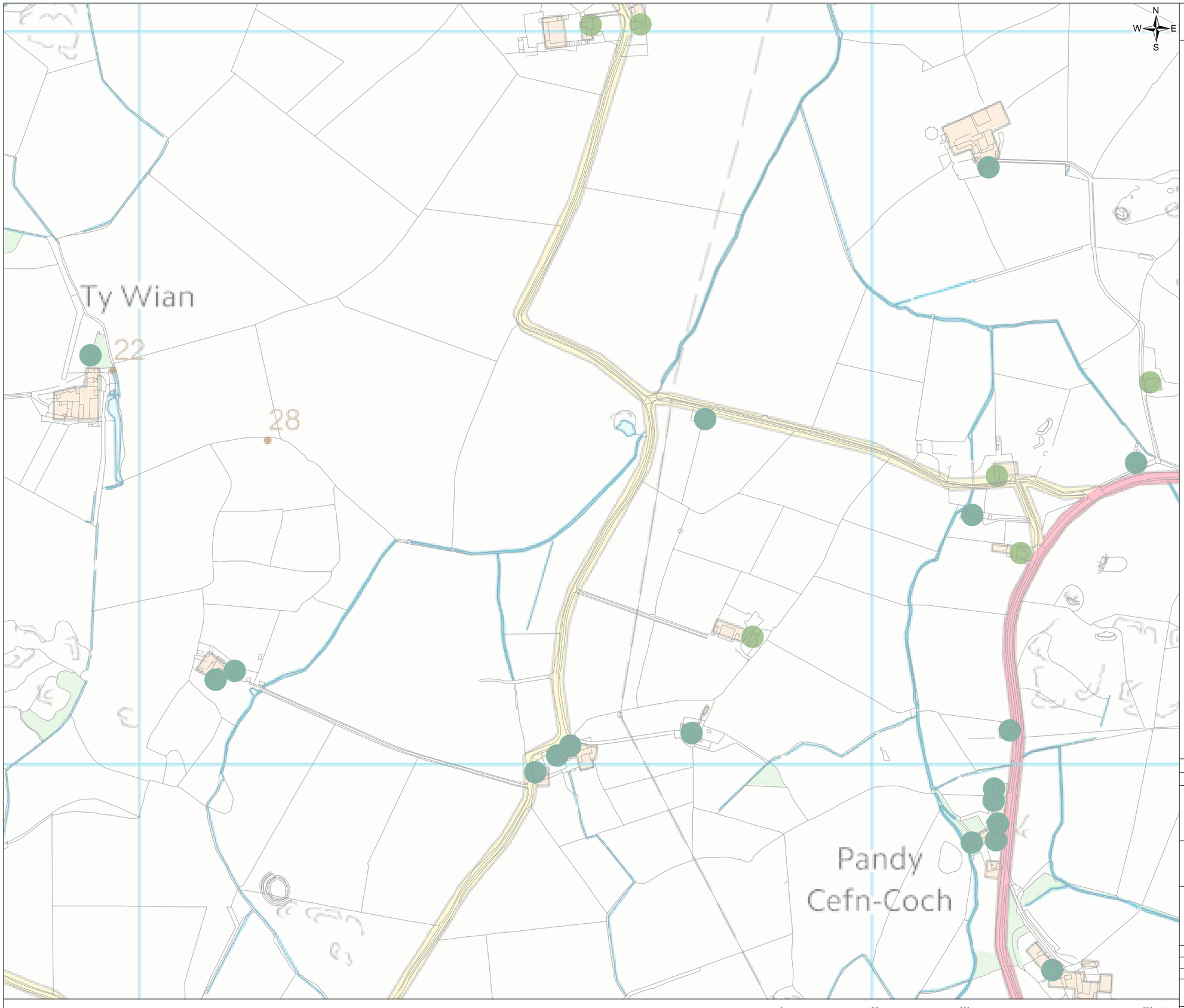
60PO80AS_NOISE_RfNMC_MONTHS31TO33_DAYTIME

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0 125 250 500 metres

FIGURE 10



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (DAYTIME)
SHEET 6 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

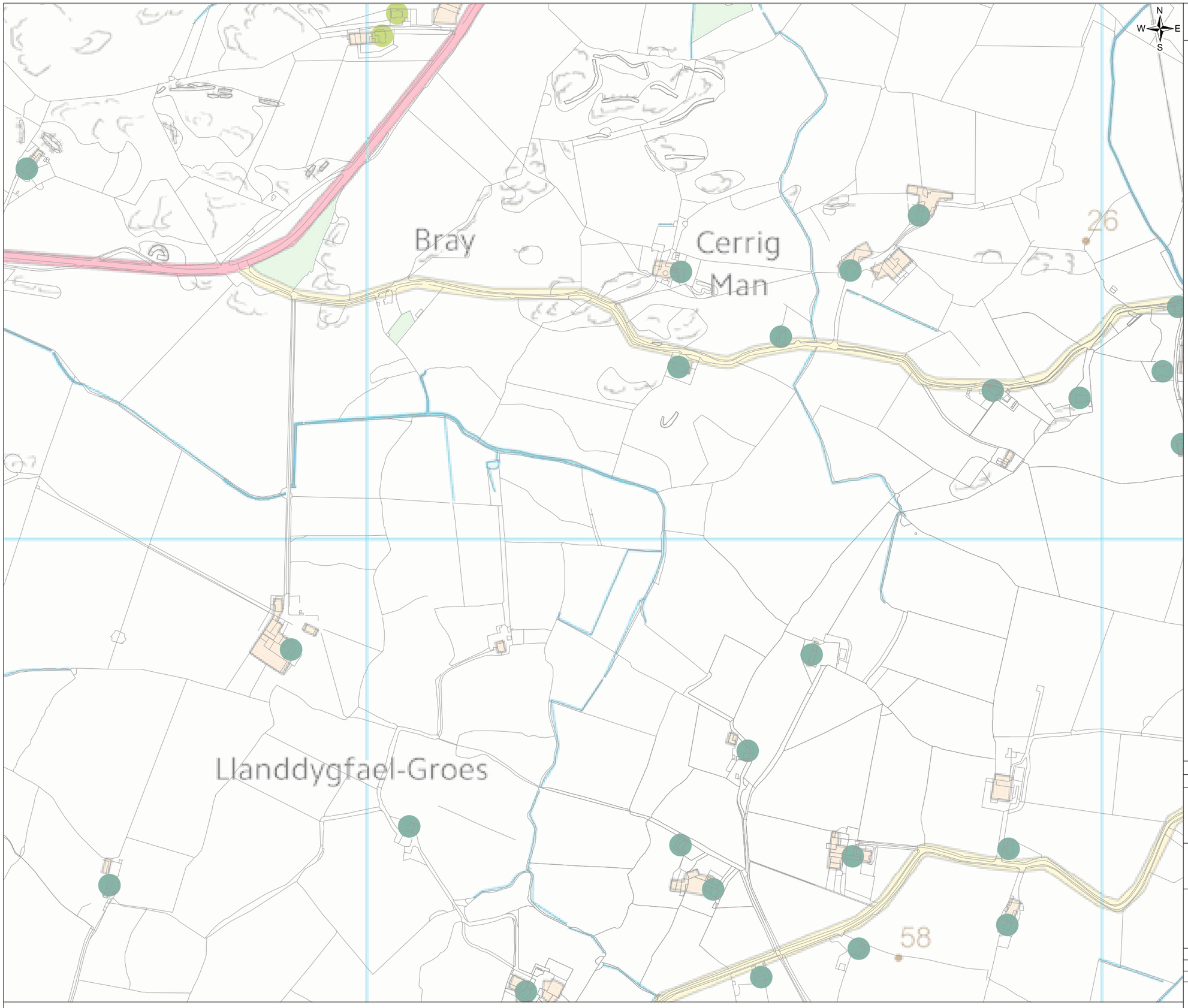
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS31TO33_DAYTIME

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0 125 250 500 metres

FIGURE 10



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (DAYTIME)
SHEET 7 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

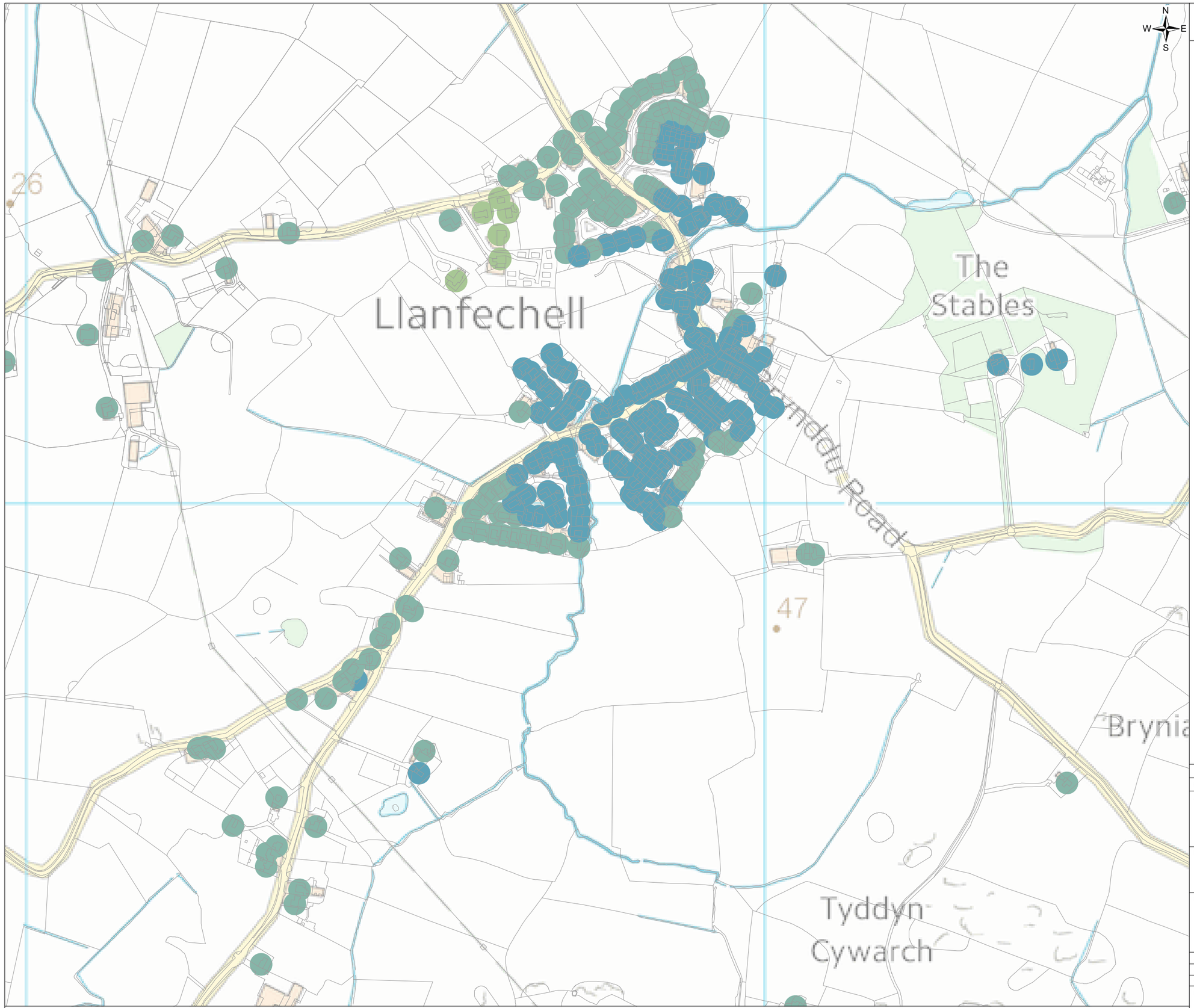
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS31TO33_DAYTIME

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0 125 250 500 metres

FIGURE 10



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (DAYTIME)
SHEET 8 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

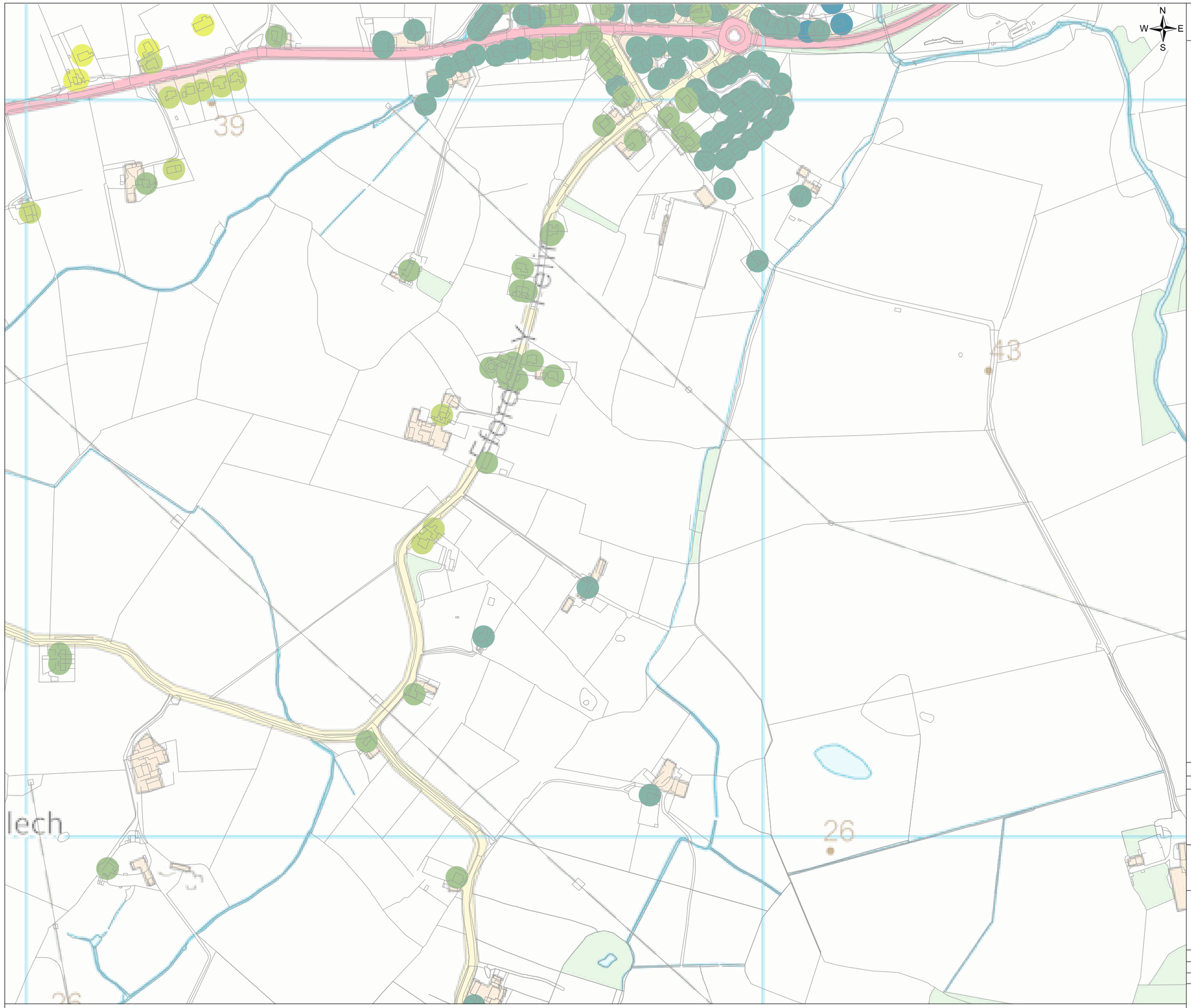
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0 125 250 500 metres

FIGURE 10



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (DAYTIME)
SHEET 9 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS31TO33_DAYTIME

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0 125 250 500 metres

FIGURE 10

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (DAYTIME)
SHEET 10 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS31TO33_DAYTIME

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0 125 250 500 metres

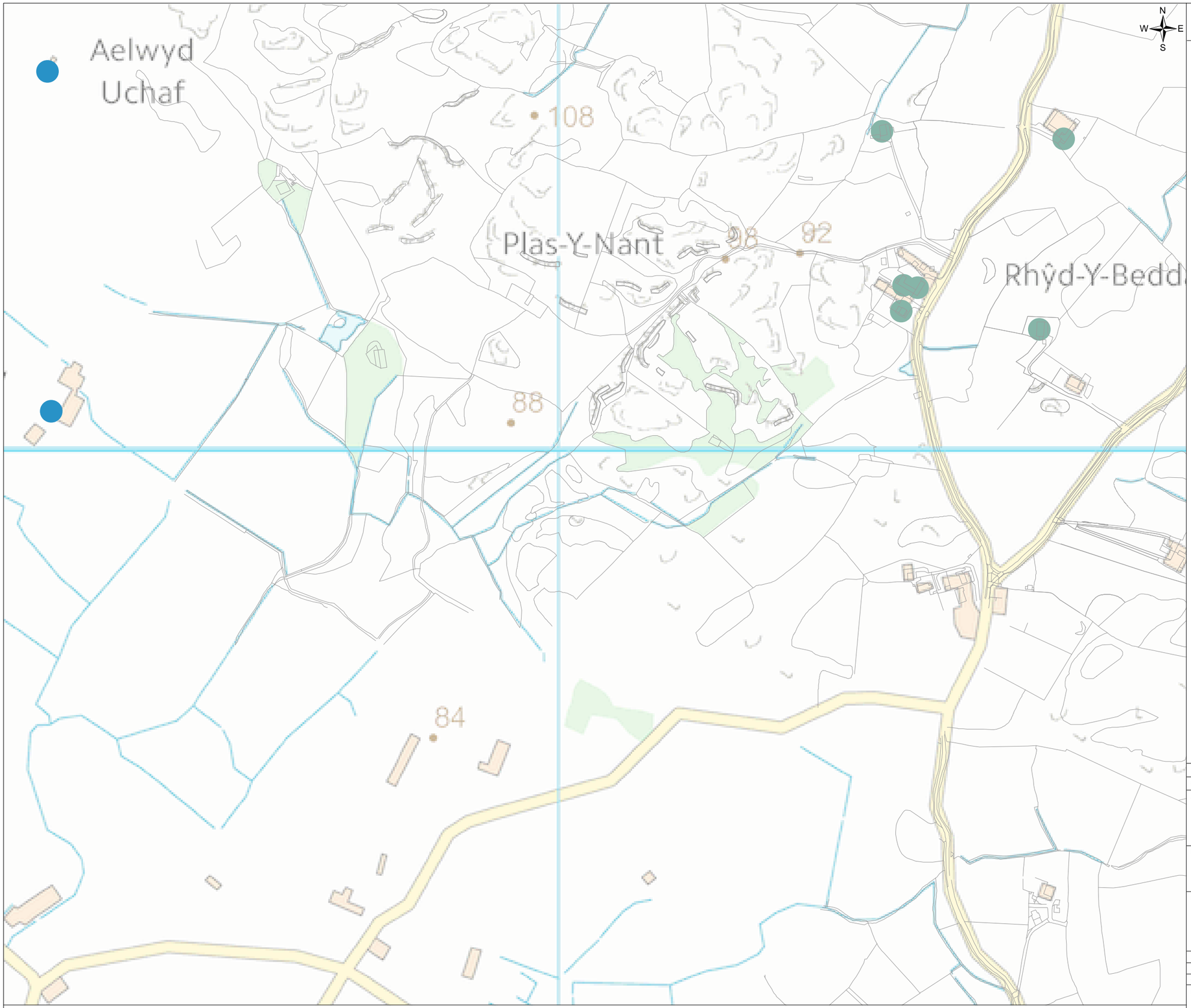


FIGURE 10

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (DAYTIME)
SHEET 11 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

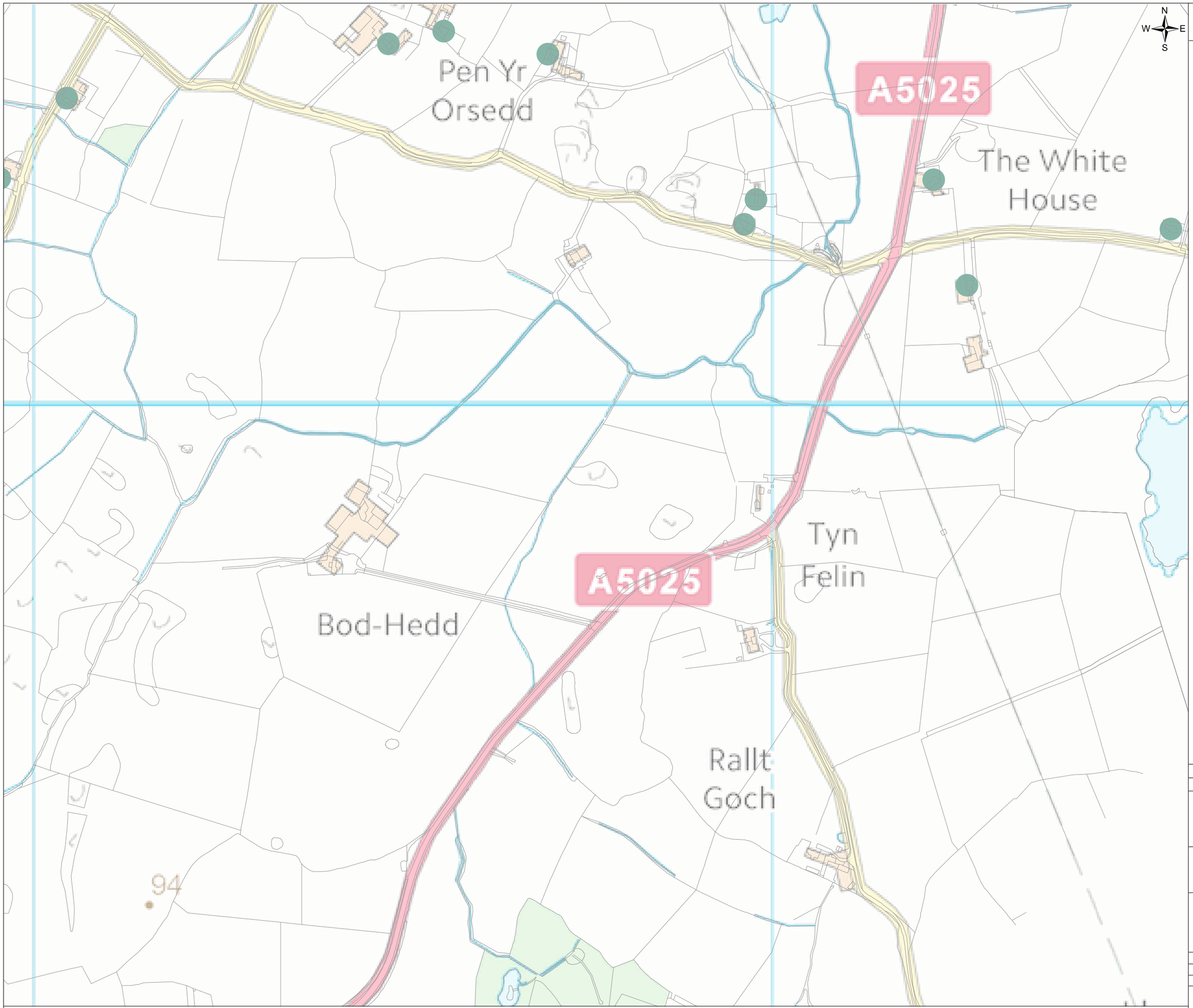
60PO80AS_NOISE_RfNMC_MONTHS31TO33_DAYTIME

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0 125 250 500 metres

FIGURE 10



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (DAYTIME)
SHEET 12 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

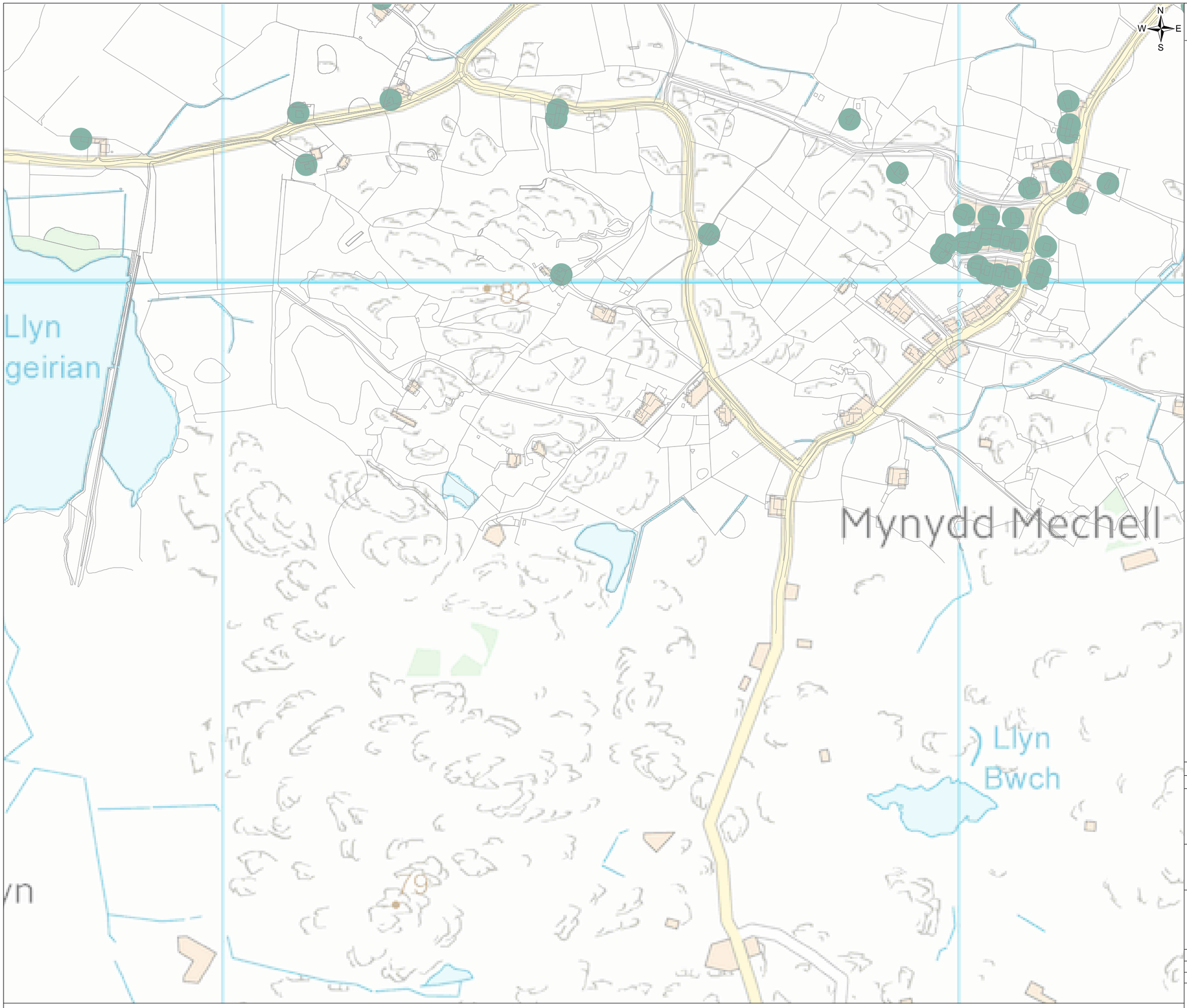
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS31TO33_DAYTIME

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0 125 250 500 metres

FIGURE 10



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (DAYTIME)
SHEET 13 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS31TO33_DAYTIME

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0 125 250 500 metres

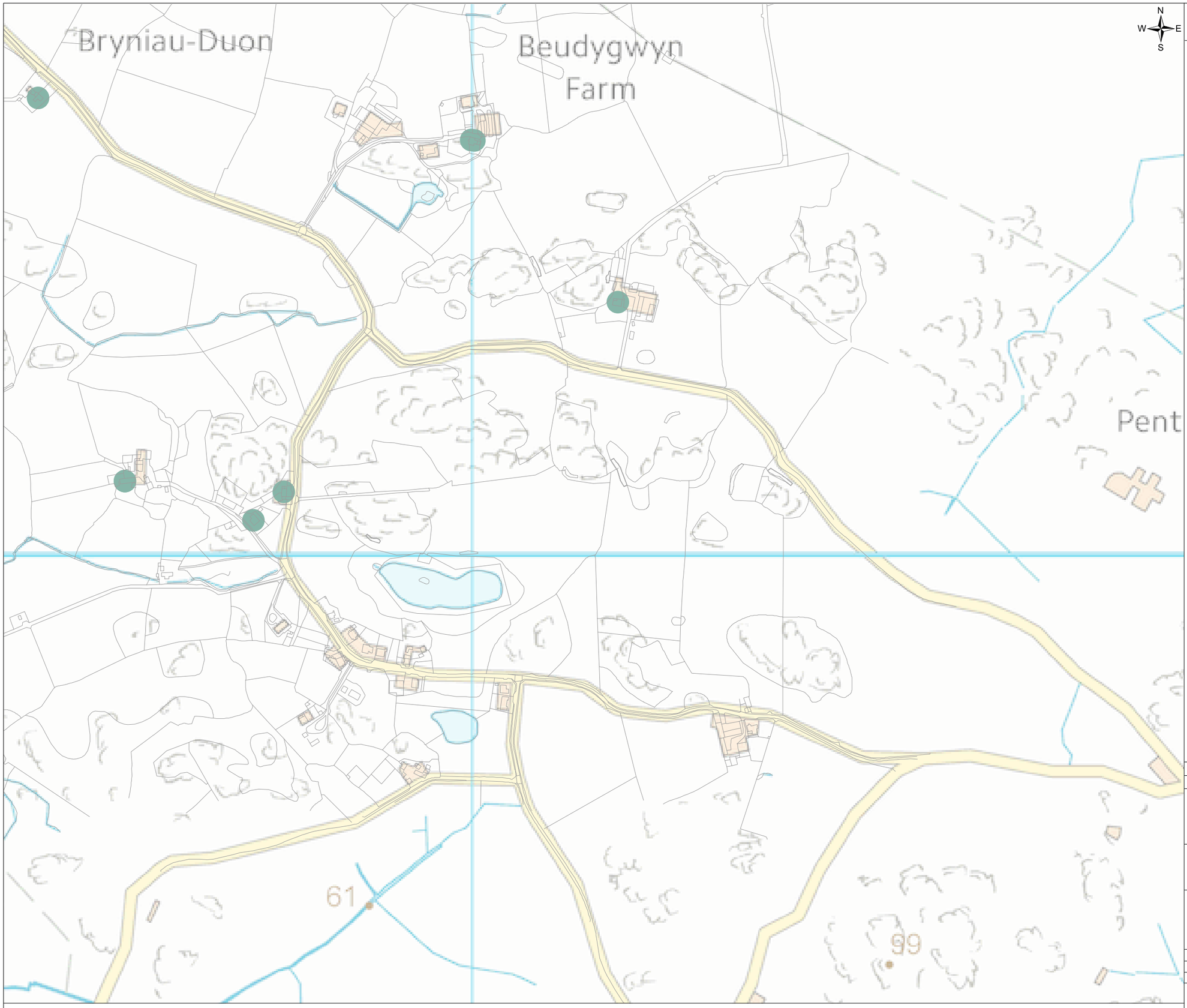


FIGURE 10

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (DAYTIME)
SHEET 14 OF 17

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Client No.		

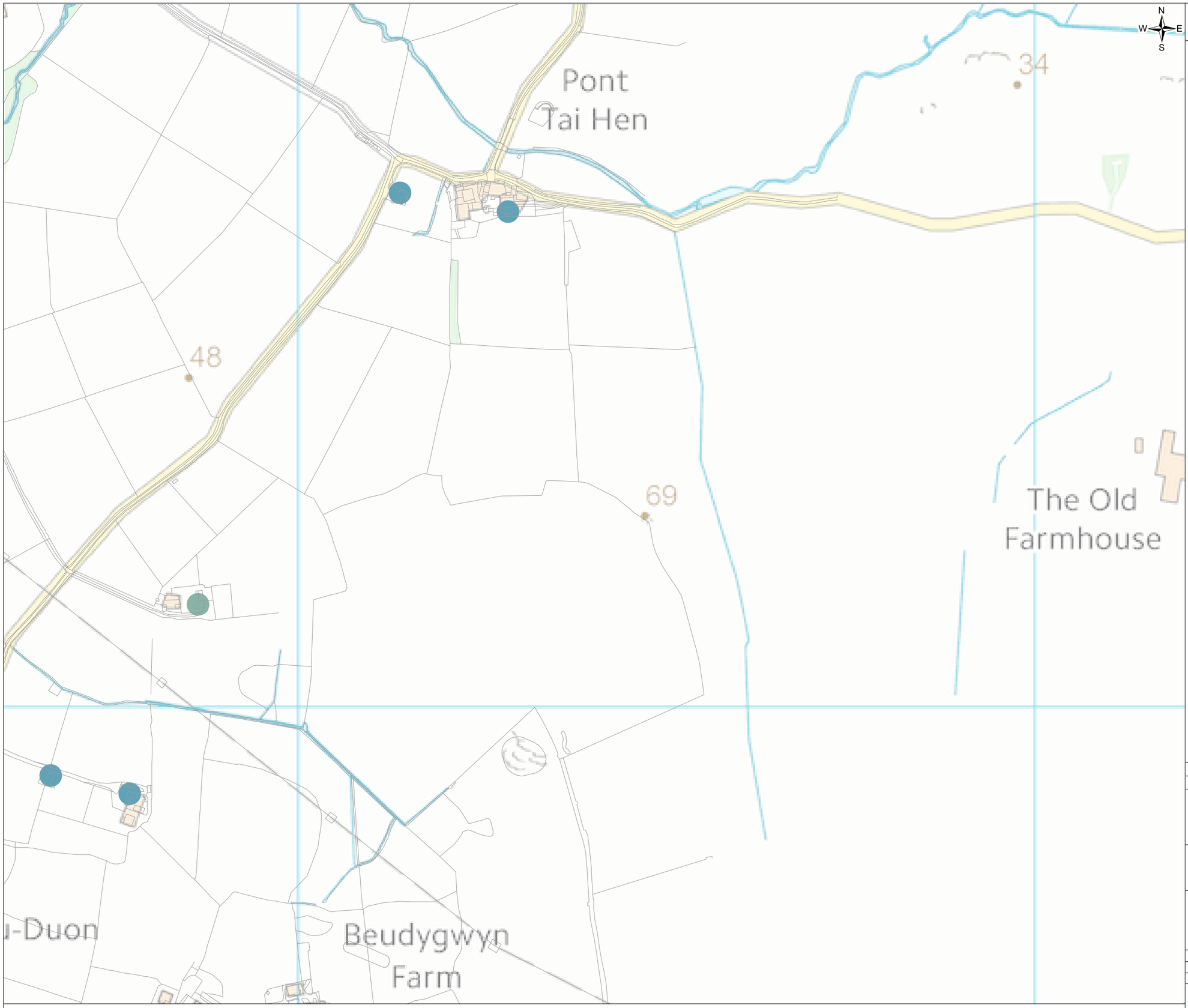
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS31TO33_DAYTIME

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0 125 250 500 metres

FIGURE 10



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 31 TO 33 (DAYTIME)
SHEET 15 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS31TO33_DAYTIME

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0 125 250 500 metres

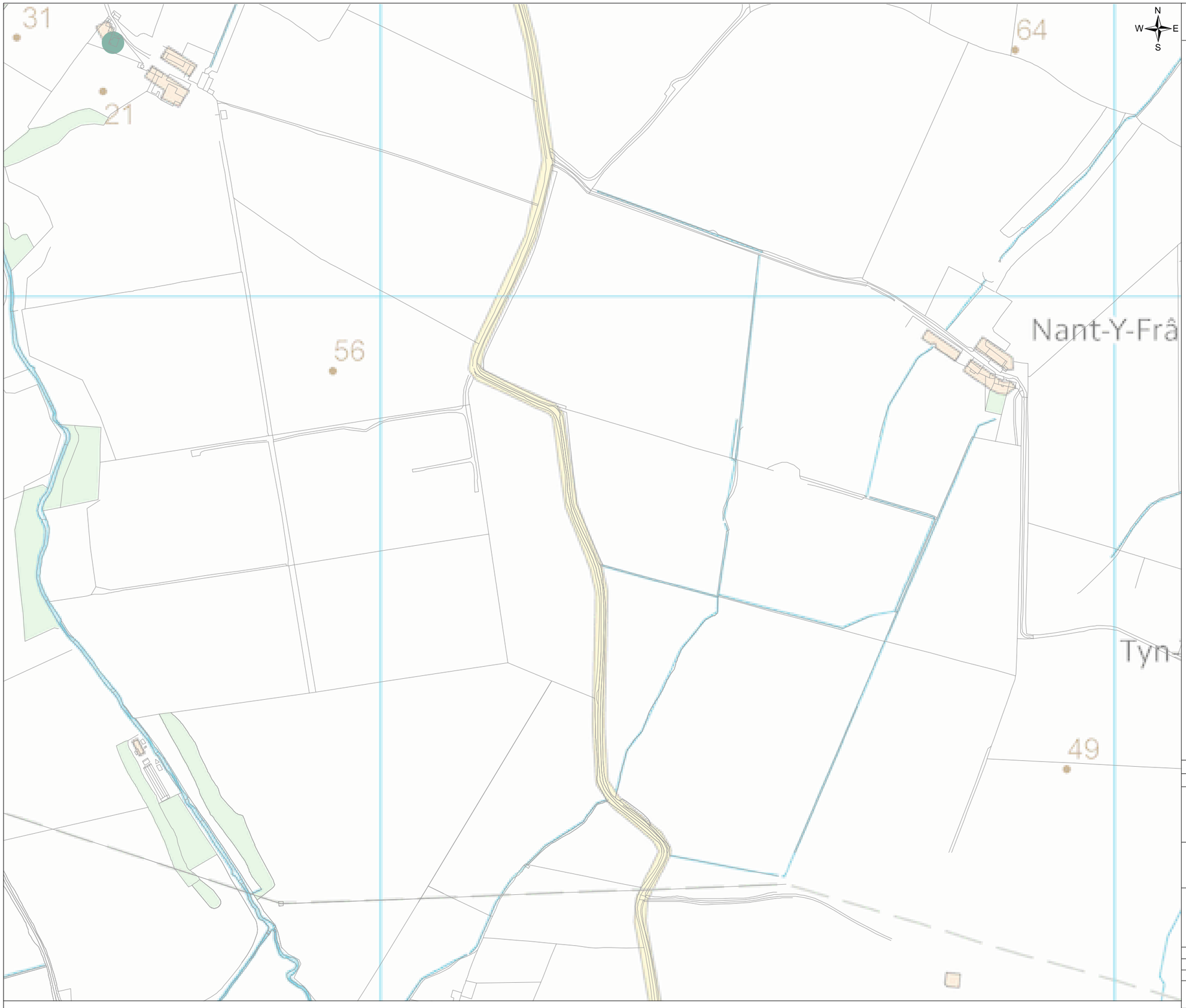


FIGURE 10

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (DAYTIME)
SHEET 16 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS31TO33_DAYTIME

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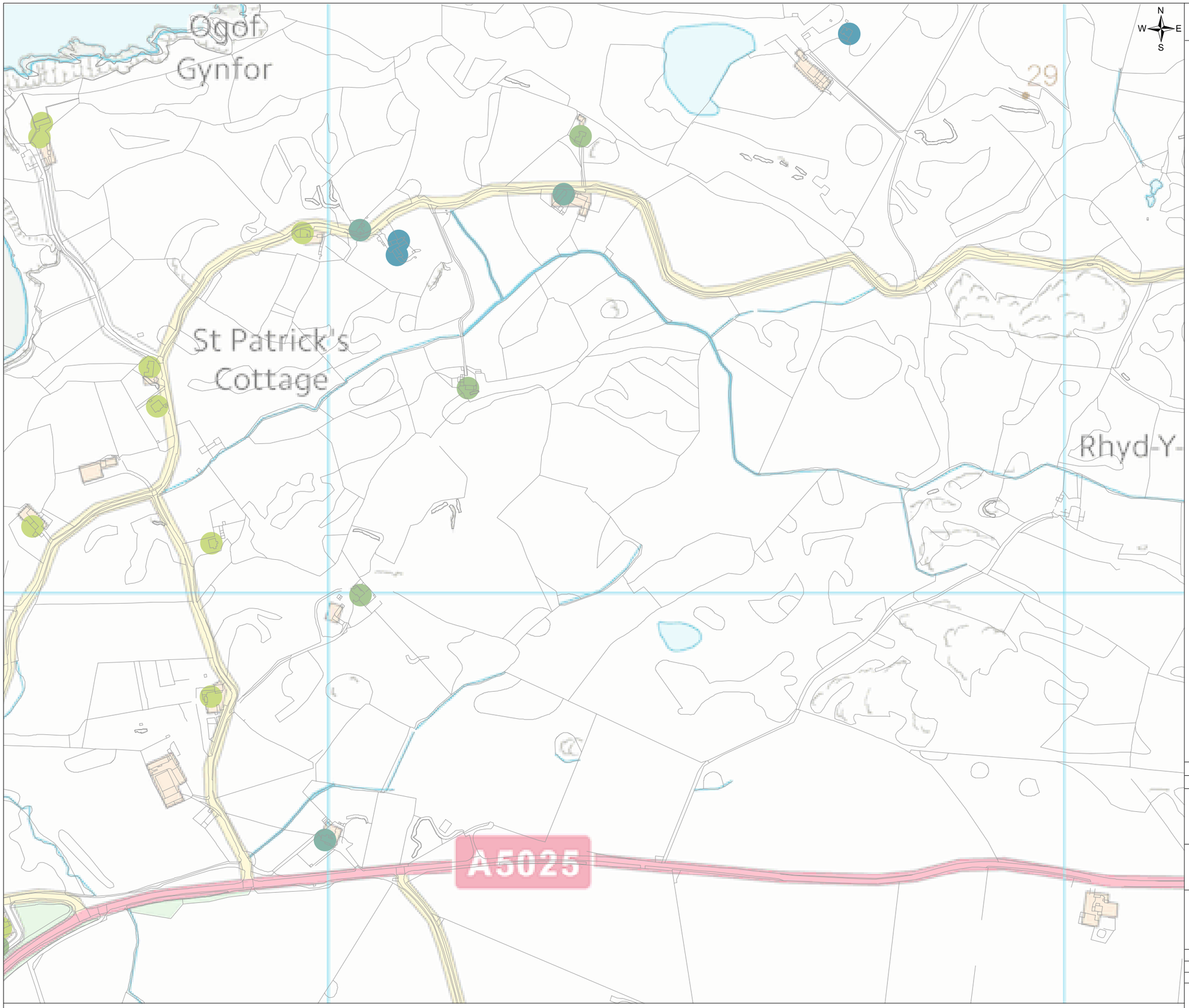


FIGURE 10

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

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ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 31 TO 33 (DAYTIME)
SHEET 17 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

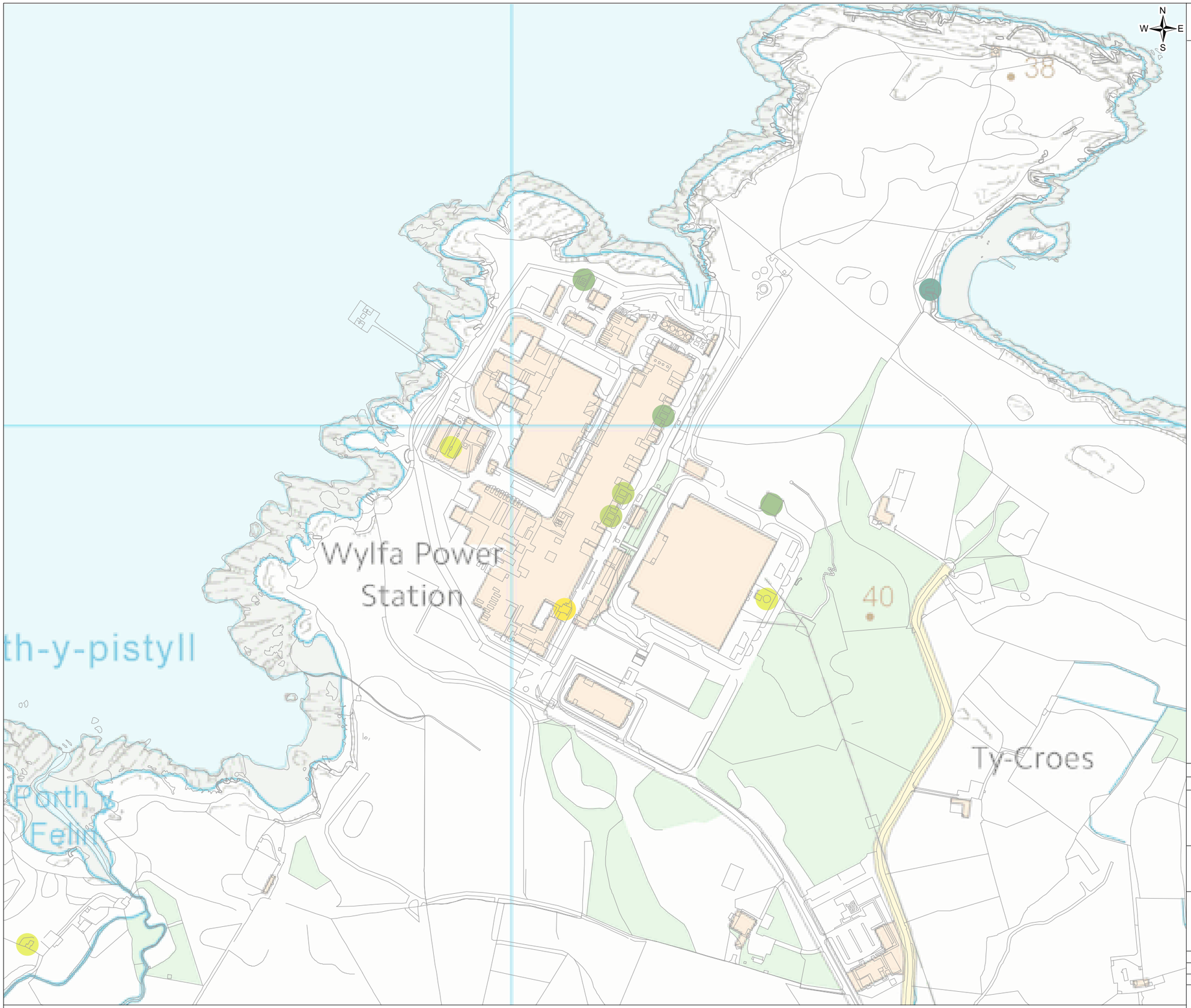
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0 125 250 500 metres

FIGURE 11



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (EVENING)

SHEET 1 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS31TO33_EVENING

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0 125 250 500 metres

FIGURE 11

Esgair Gemlyn

Cemlyn

Capel

Porth Felin

N W E S

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (EVENING)

SHEET 2 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

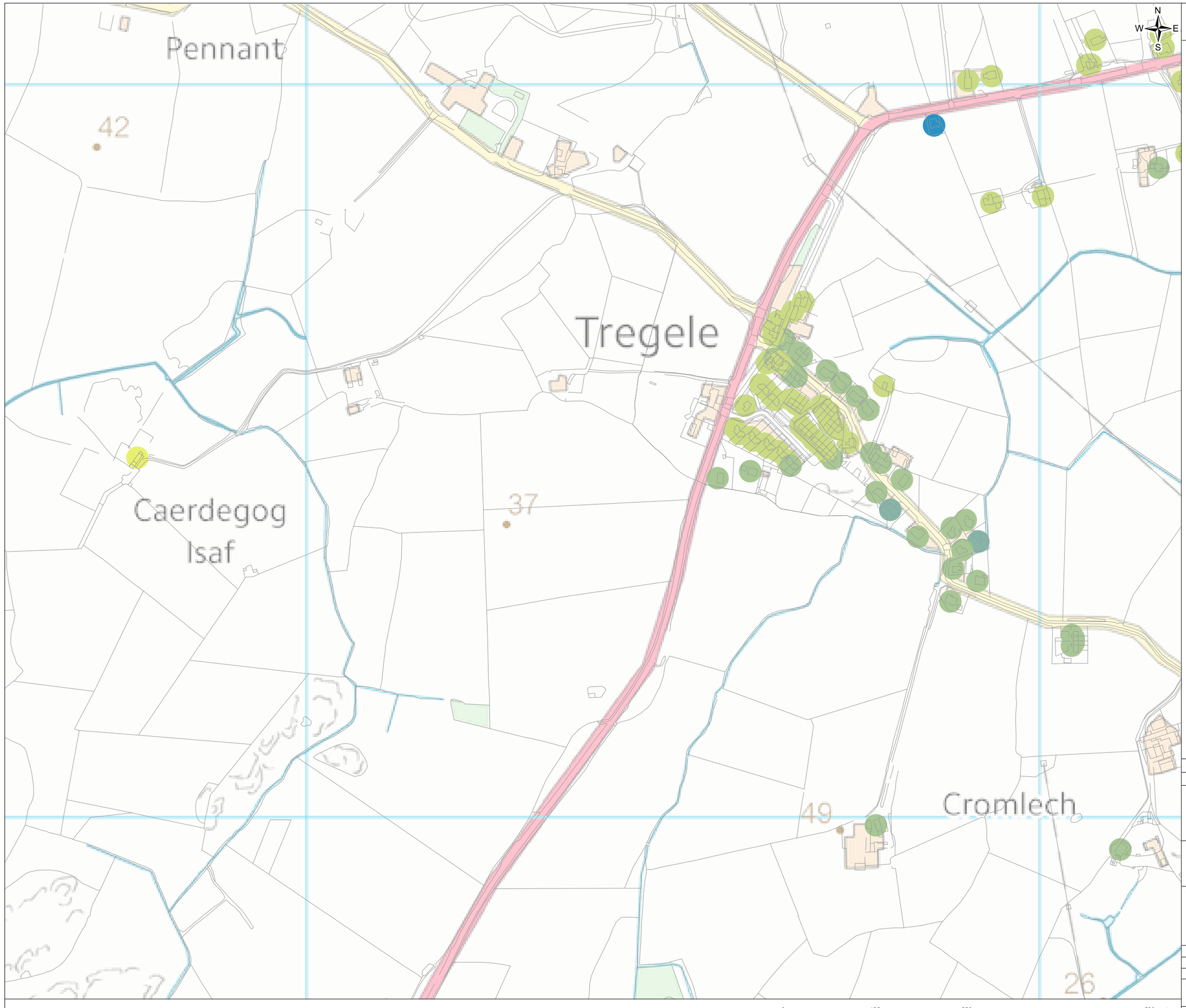
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS31TO33_EVENING

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0 125 250 500 metres

FIGURE 11



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (EVENING)

SHEET 3 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

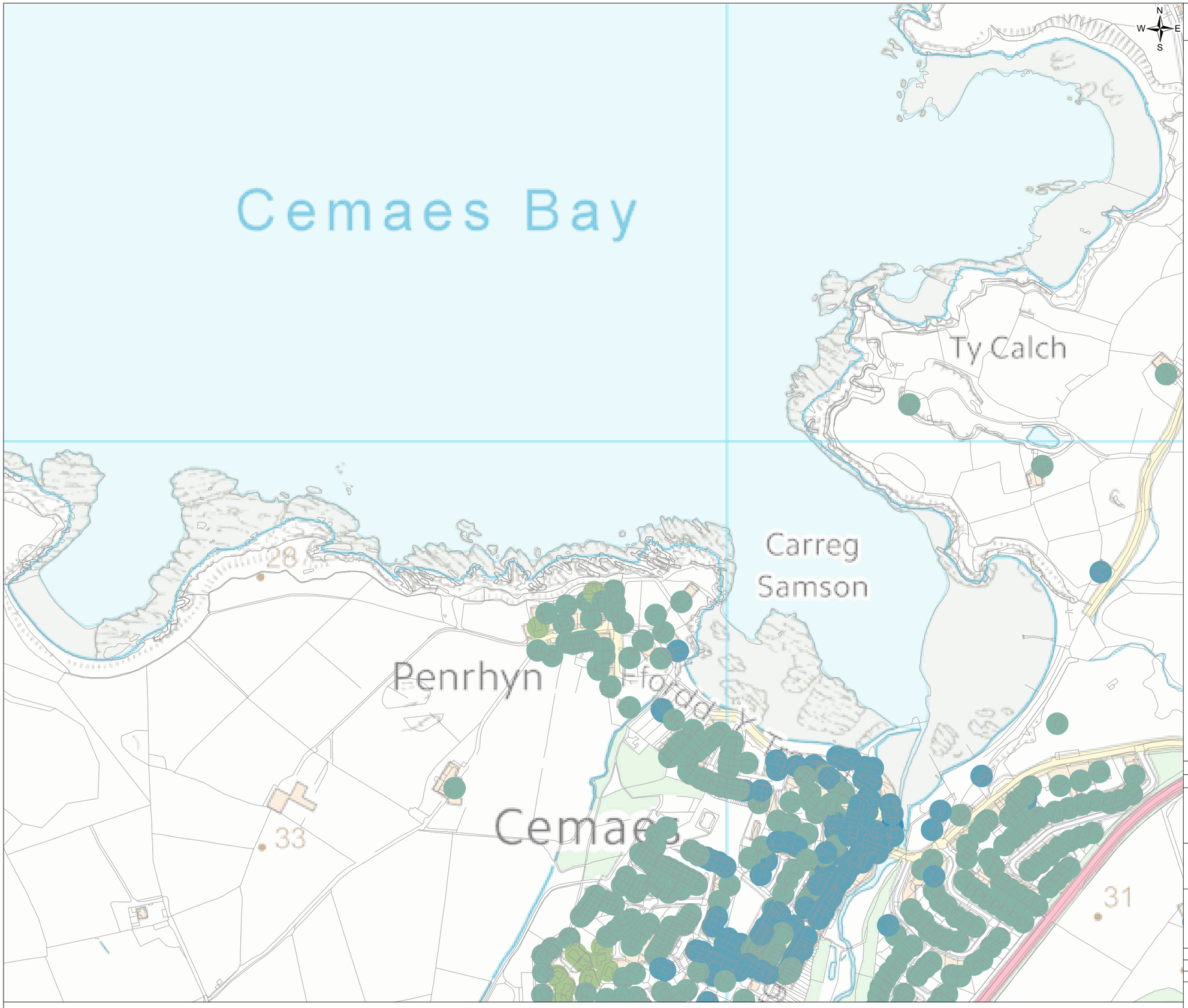
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS31TO33_EVENING

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0 125 250 500 metres

FIGURE 11



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (EVENING)
SHEET 4 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

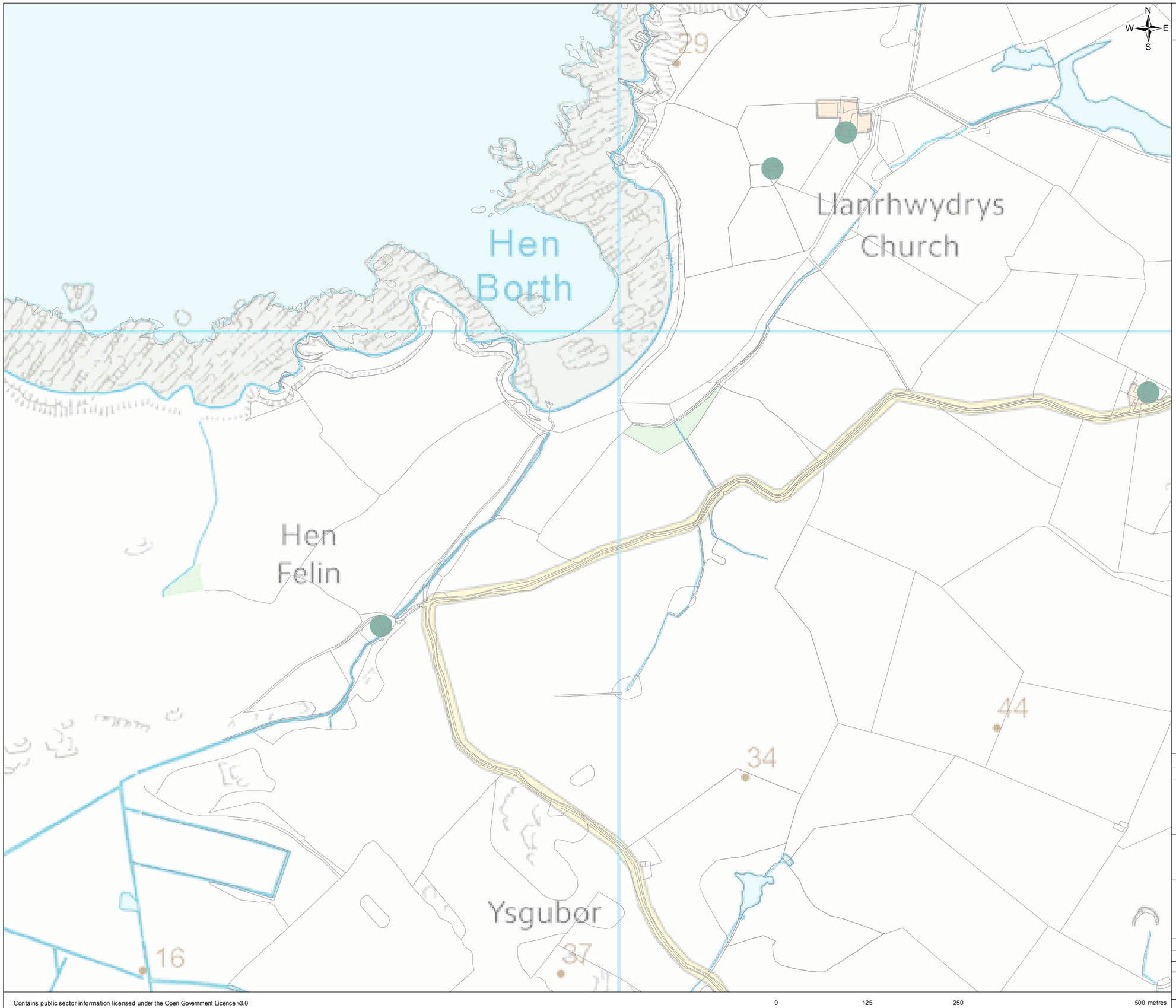
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS31TO33_EVENING

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0 125 250 500 metres

FIGURE 11



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (EVENING)

SHEET 5 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

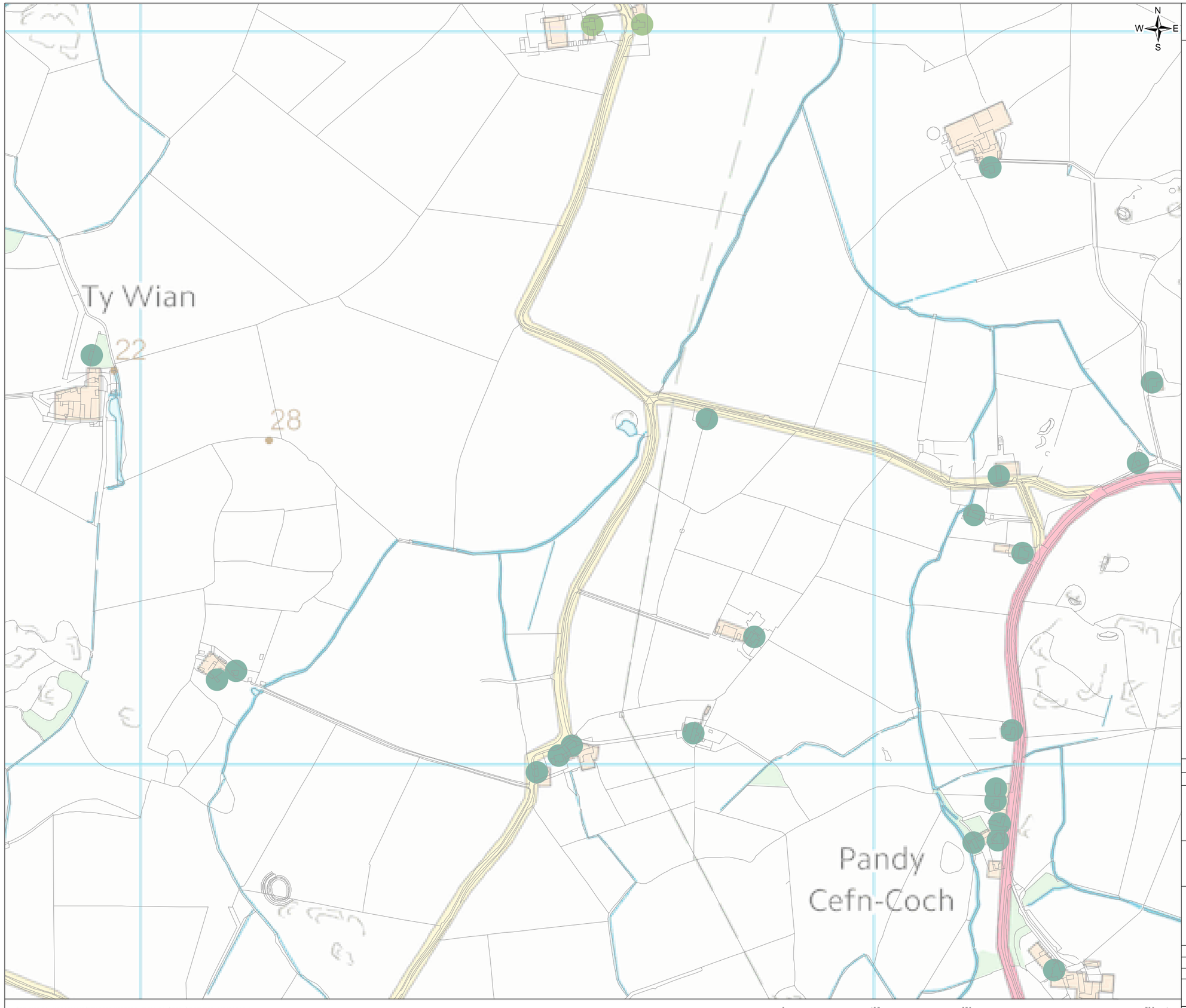
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS31TO33_EVENING

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0 125 250 500 metres

FIGURE 11



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (EVENING)

SHEET 6 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

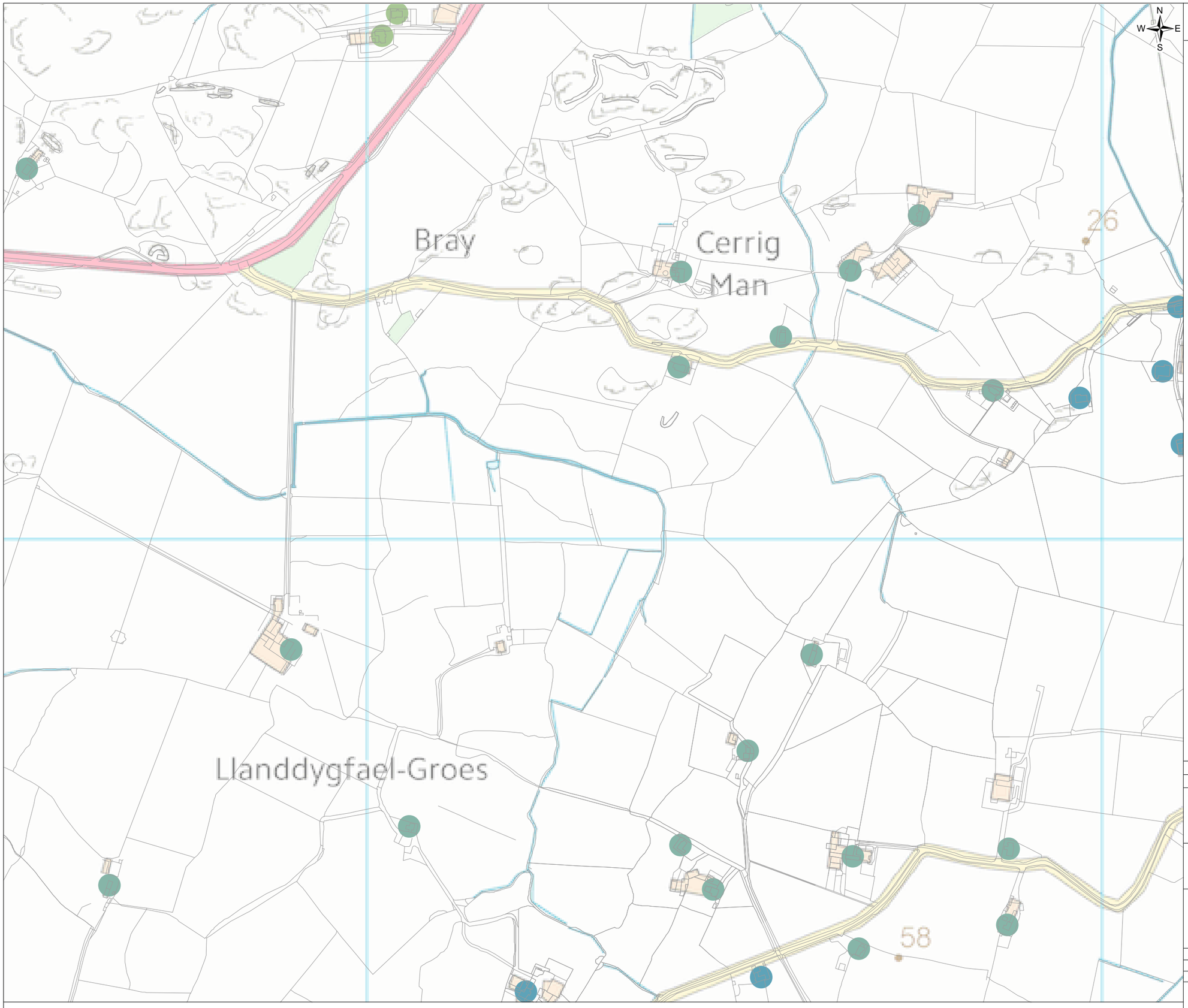
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS31TO33_EVENING

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0 125 250 500 metres

FIGURE 11



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (EVENING)

SHEET 7 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

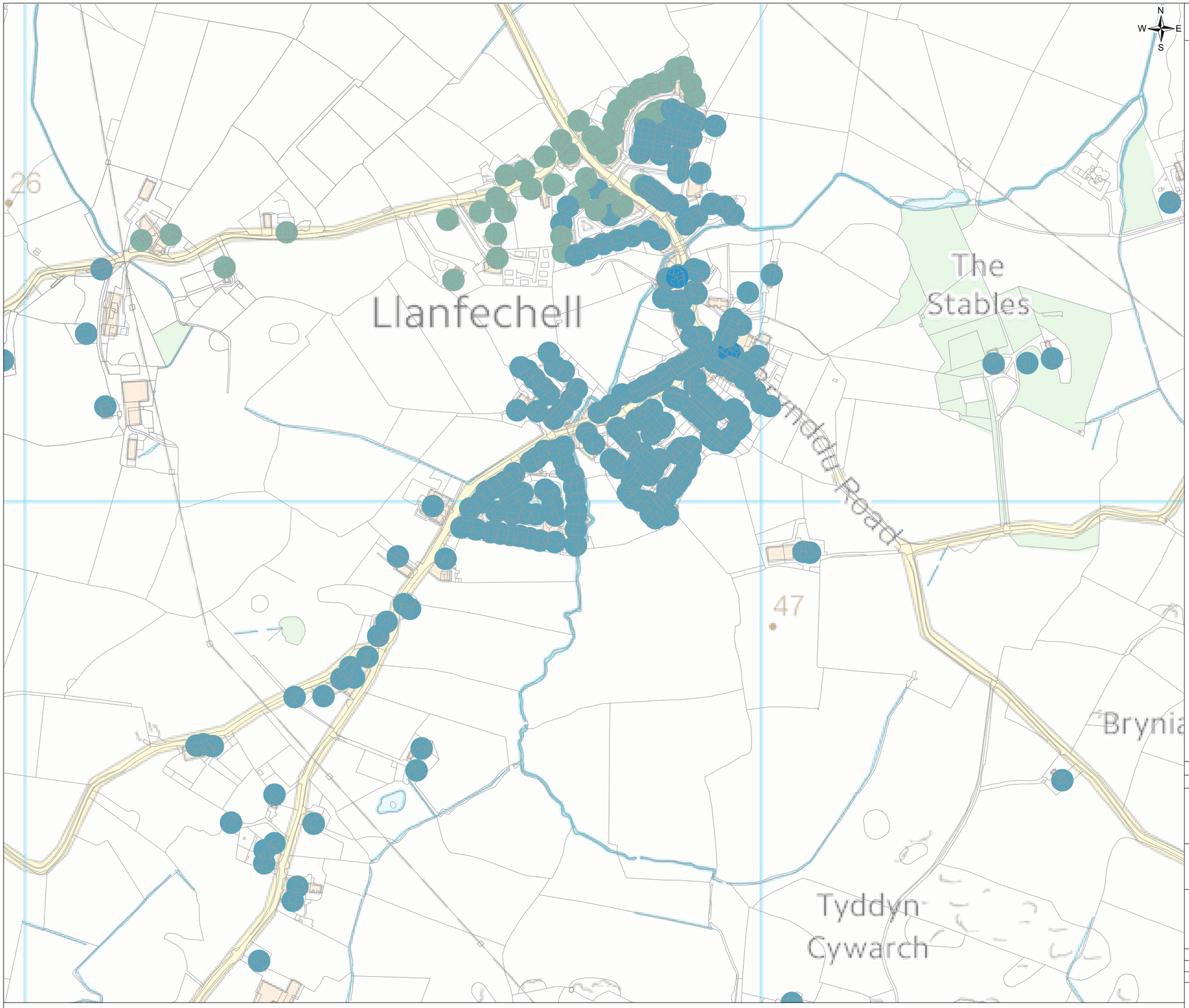
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0 125 250 500 metres

FIGURE 11



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (EVENING)

SHEET 8 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

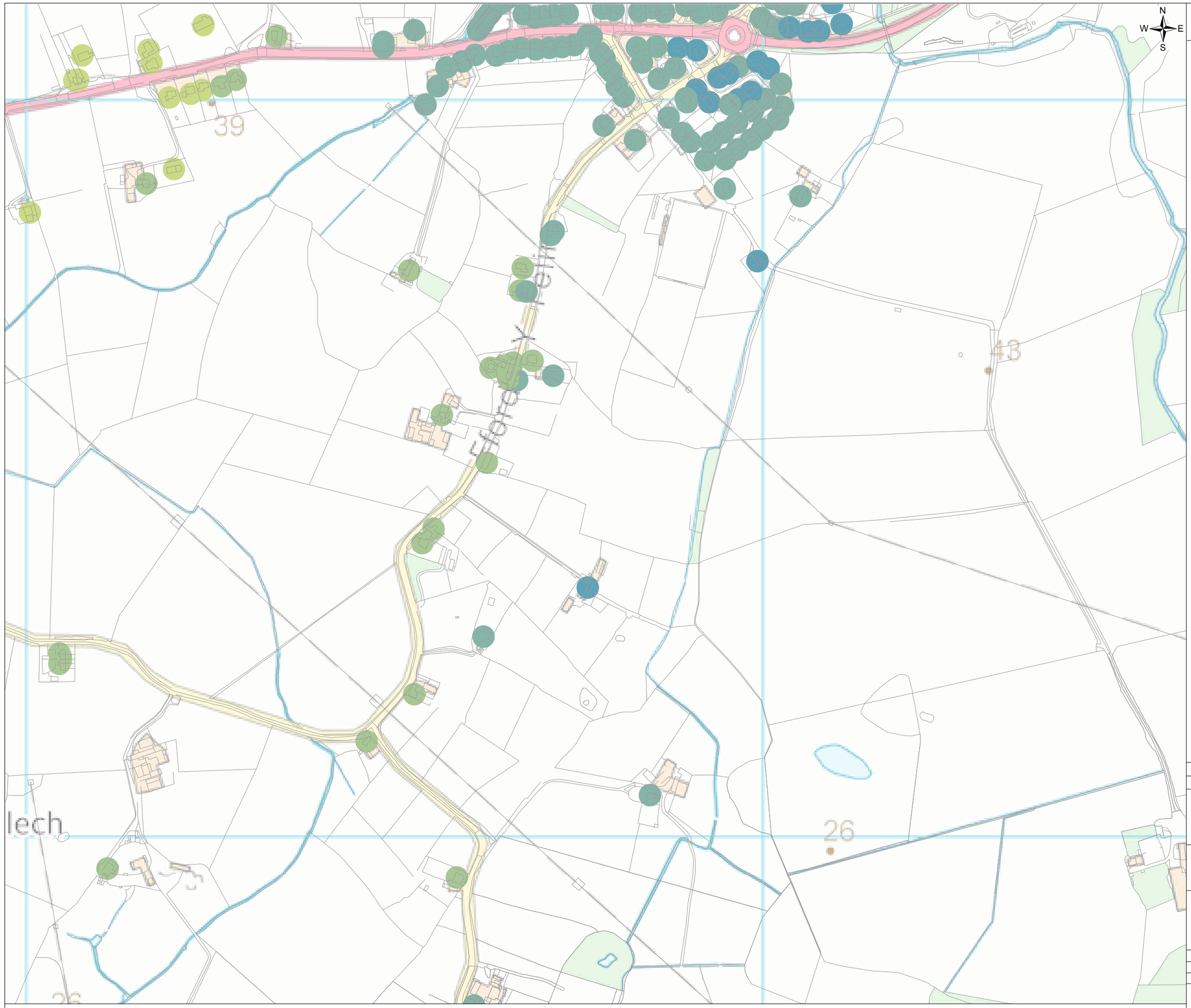
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS31TO33_EVENING

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0 125 250 500 metres

FIGURE 11



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 31 TO 33 (EVENING)

SHEET 9 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS31TO33_EVENING

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0 125 250 500 metres

FIGURE 11

Llanfairynghornwy

Waen-Lydan

Mynydd-y-Garn

N
W E
S

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (EVENING)

SHEET 10 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS31TO33_EVENING

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0 125 250 500 metres

FIGURE 11

Aelwyd Uchaf

Plas-Y-Nant

Rhŷd-Y-Bedd

108 98 92 88 84

N W E S

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (EVENING)

SHEET 11 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

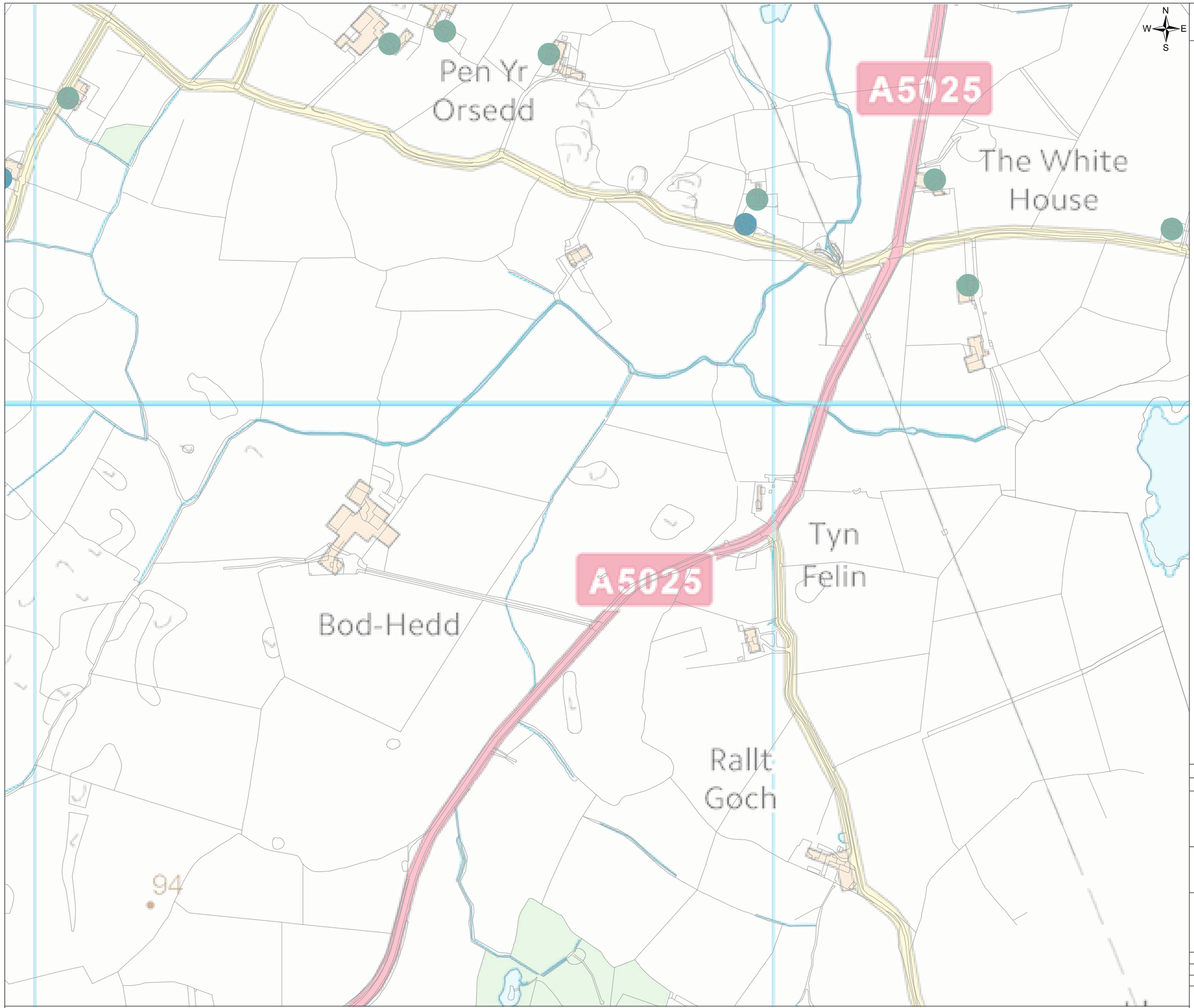
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS31TO33_EVENING

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0 125 250 500 metres

FIGURE 11



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (EVENING)

SHEET 12 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

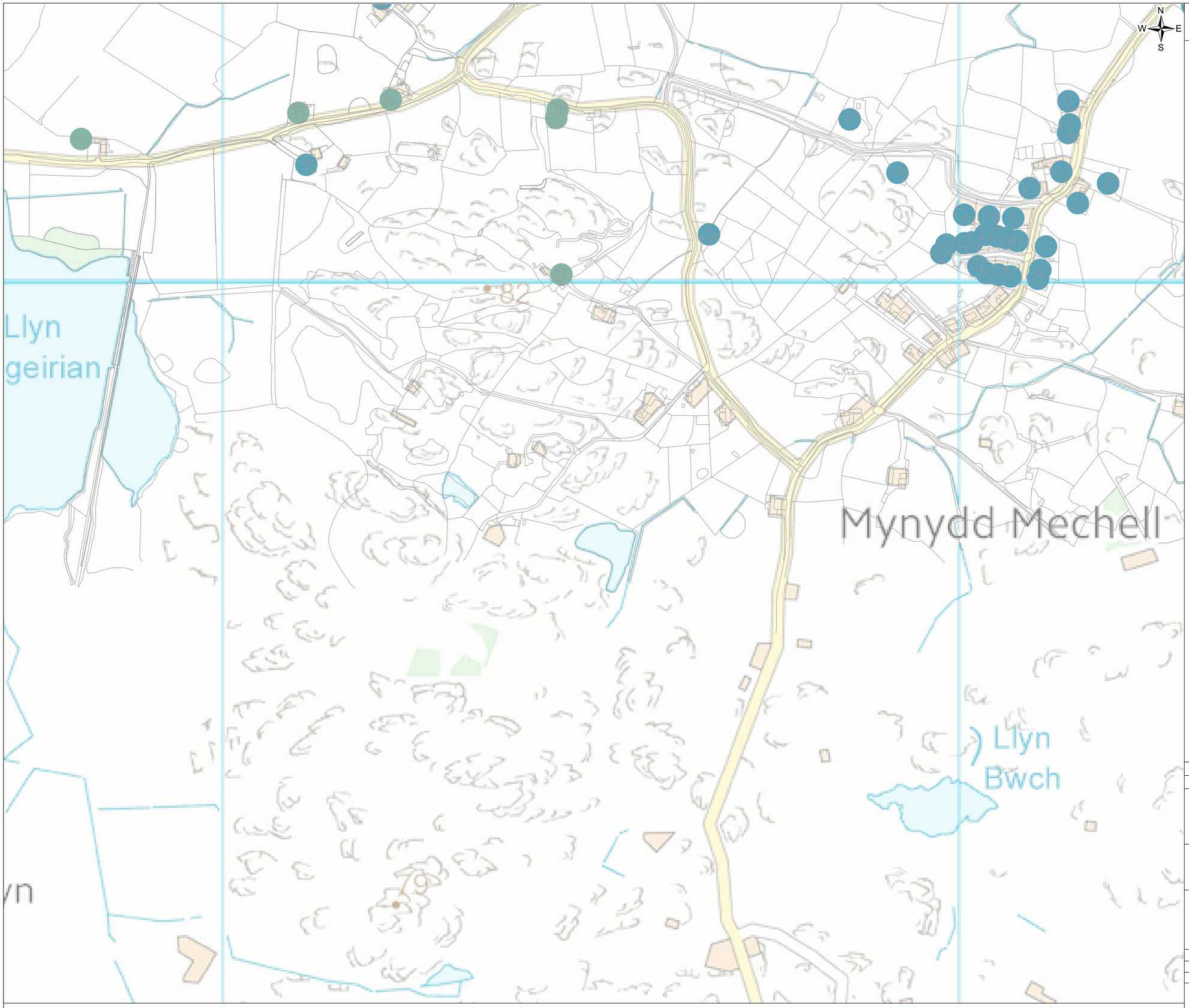
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS31TO33_EVENING

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0 125 250 500 metres

FIGURE 11



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (EVENING)

SHEET 13 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS31TO33_EVENING

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0 125 250 500 metres

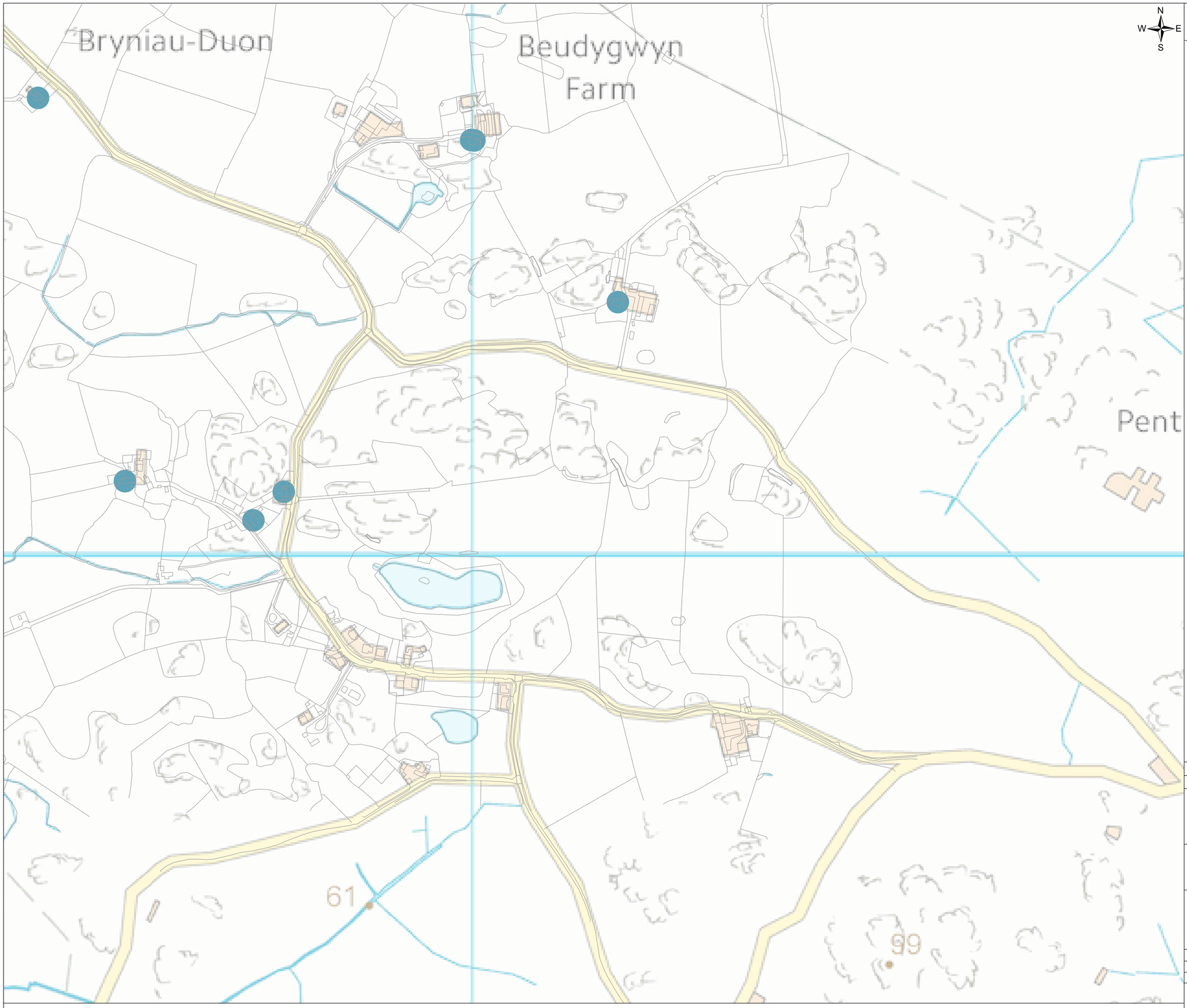


FIGURE 11

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (EVENING)

SHEET 14 OF 17

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Client No.		

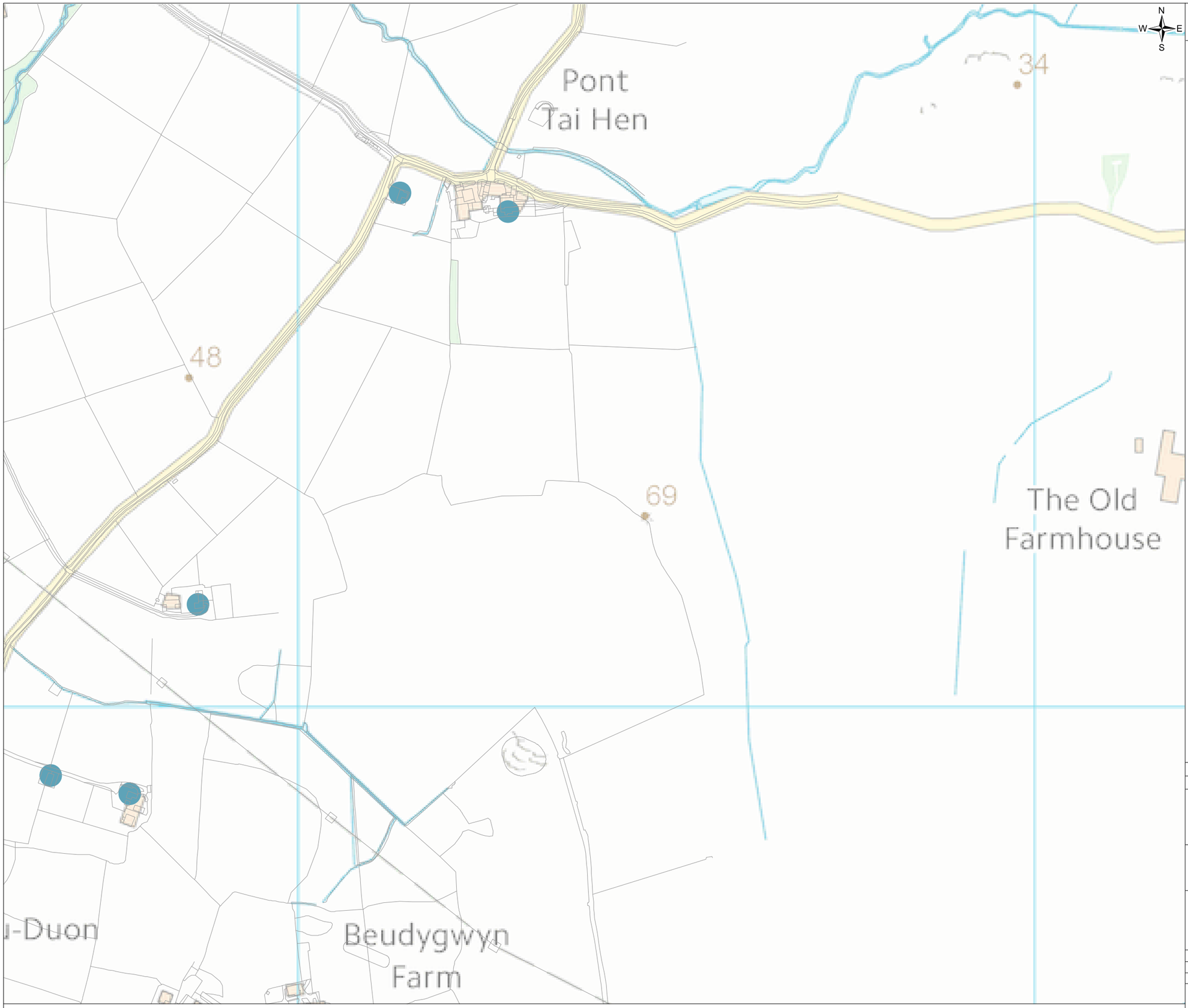
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS31TO33_EVENING

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0 125 250 500 metres

FIGURE 11



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 31 TO 33 (EVENING)

SHEET 15 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS31TO33_EVENING

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0 125 250 500 metres

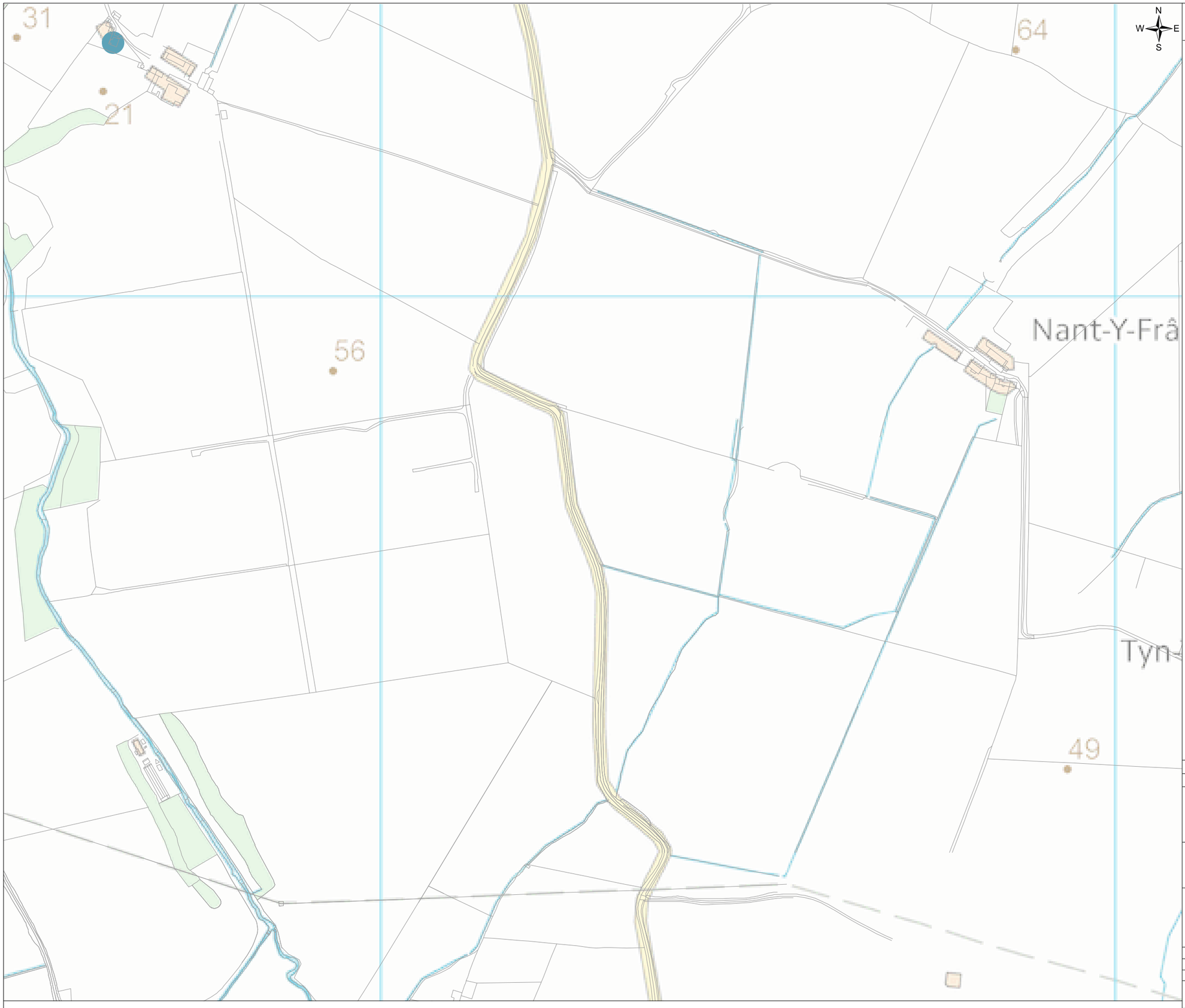


FIGURE 11

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (EVENING)

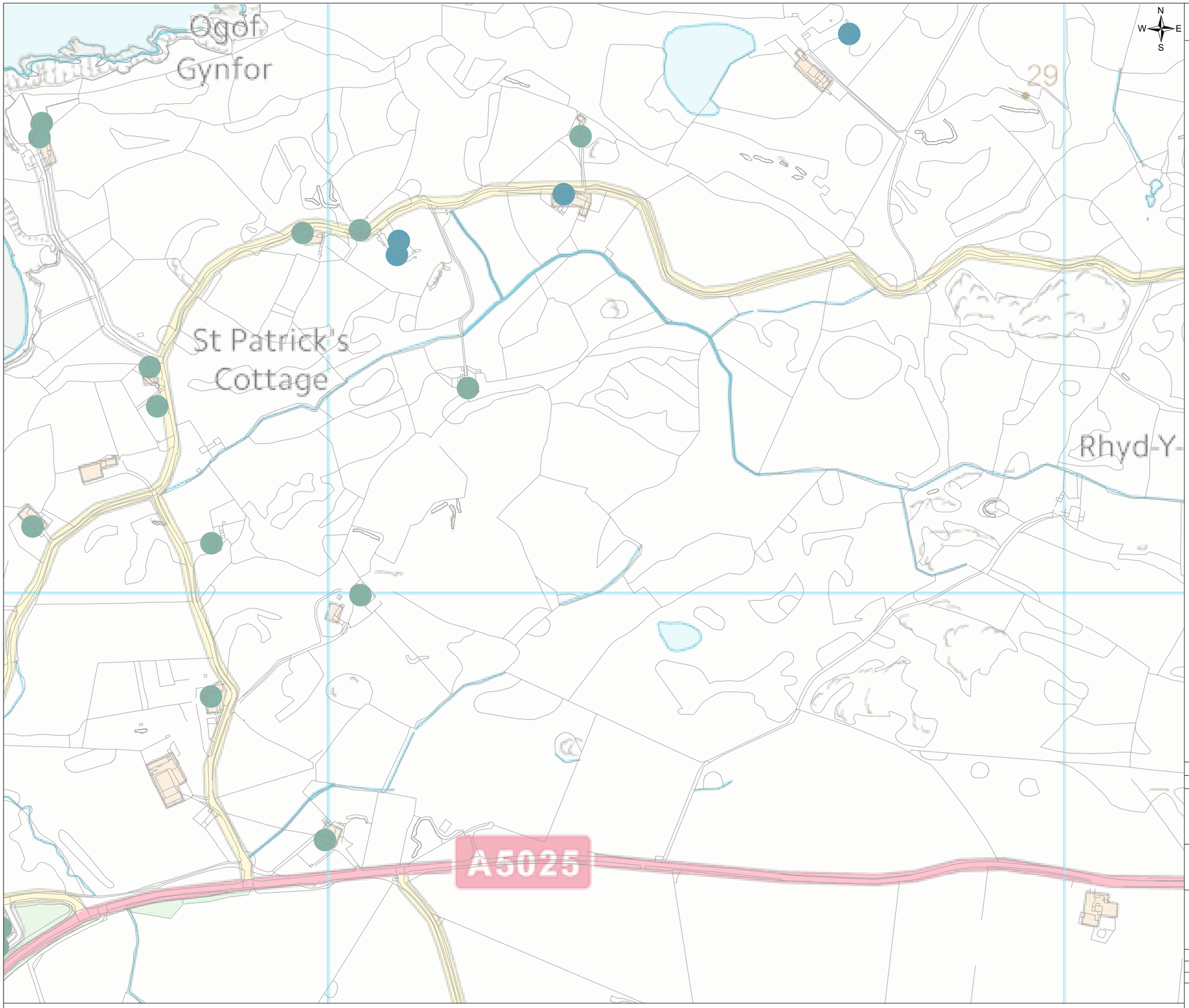
SHEET 16 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS31TO33_EVENING

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0 125 250 500 metres

FIGURE 11

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (EVENING)

SHEET 17 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS31TO33_EVENING

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FIGURE 12

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 -70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (NIGHT-TIME)

SHEET 1 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS31TO33_NIGHTTIME

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0 125 250 500 metres

FIGURE 12

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 -70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (NIGHT-TIME)

SHEET 2 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

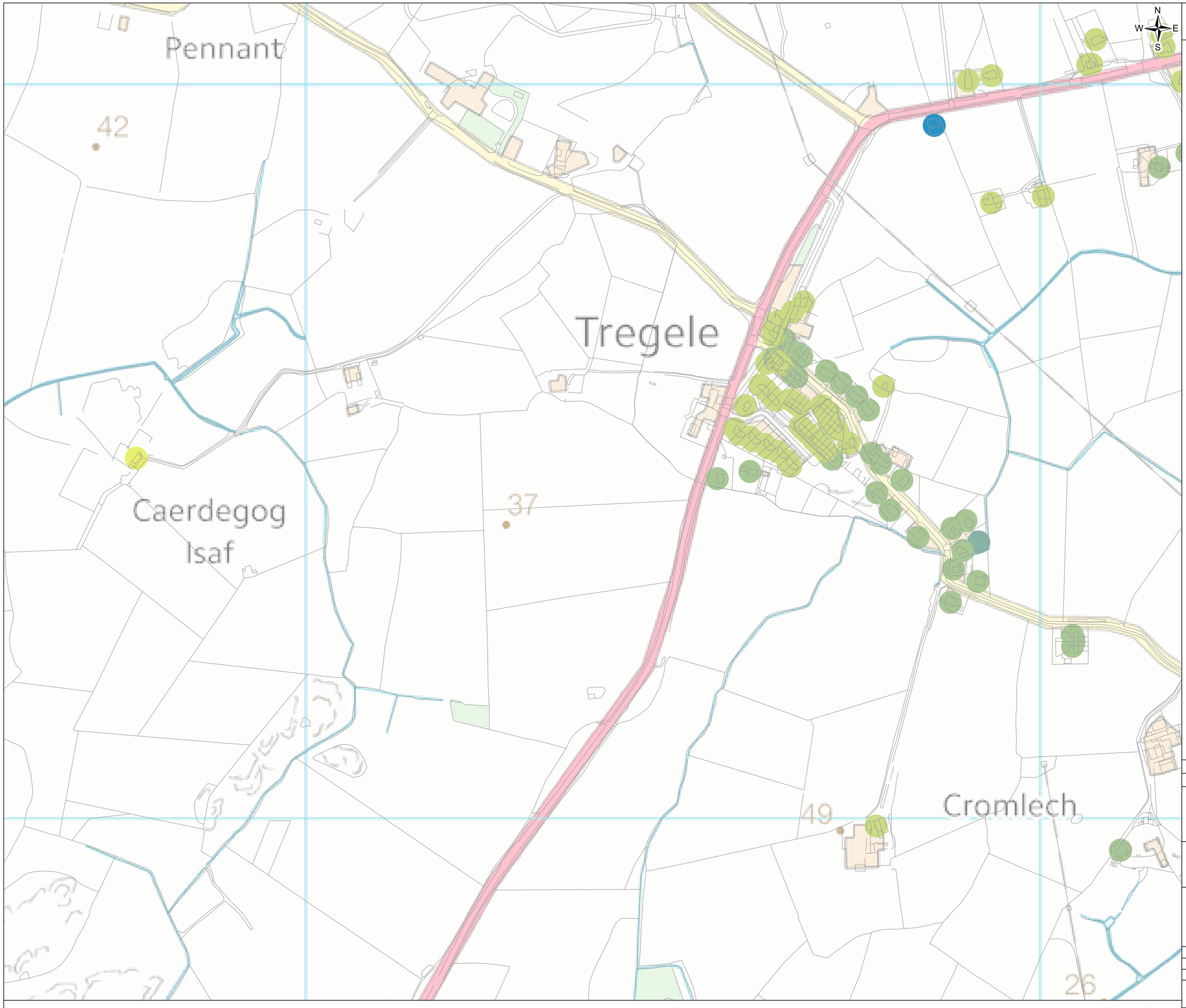
60PO80AS_NOISE_RfNMC_MONTHS31TO33_NIGHTTIME

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0 125 250 500 metres

FIGURE 12



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 -70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (NIGHT-TIME)

SHEET 3 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

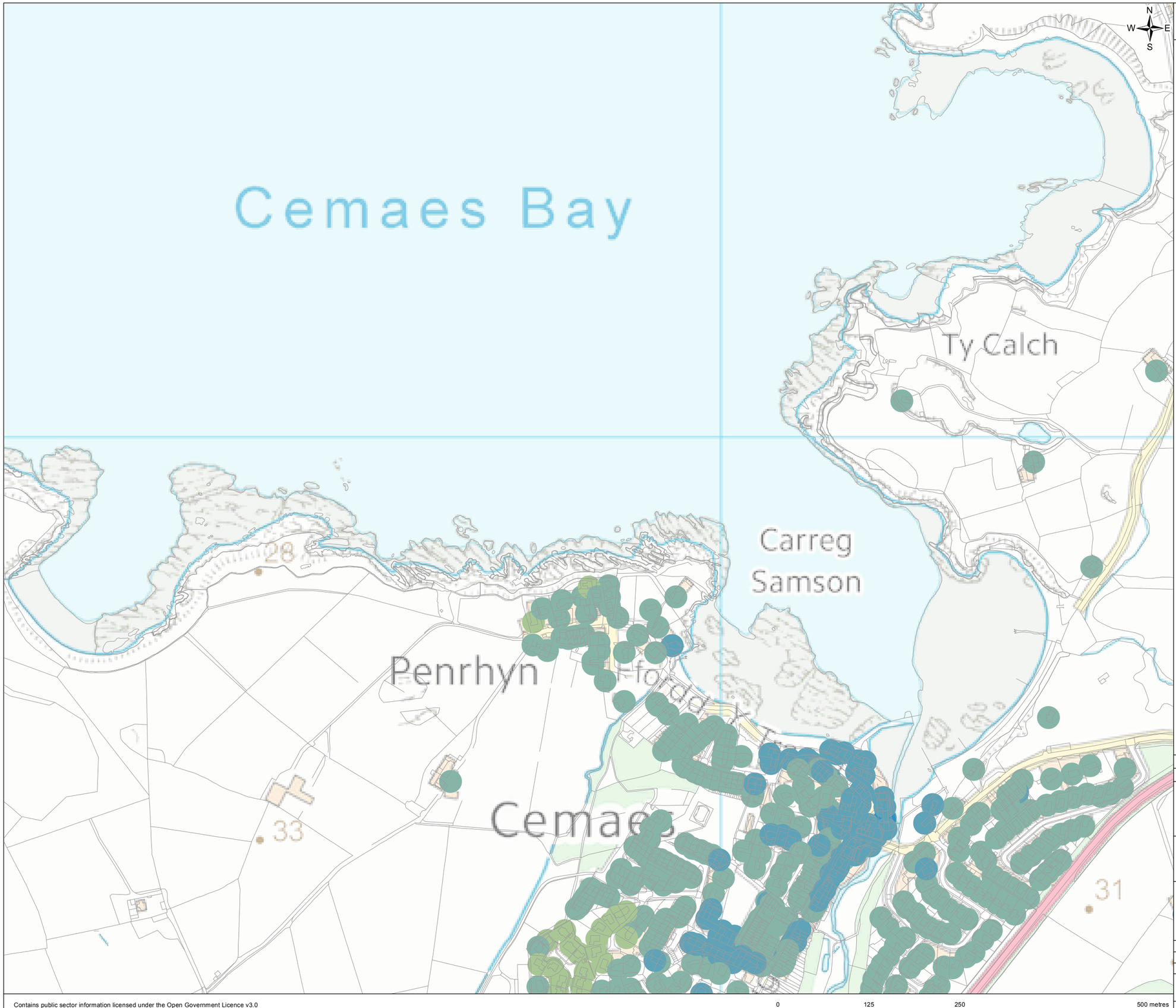
60PO80AS_NOISE_RfNMC_MONTHS31TO33_NIGHTTIME

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0 125 250 500 metres

FIGURE 12



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 -70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (NIGHT-TIME)

SHEET 4 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

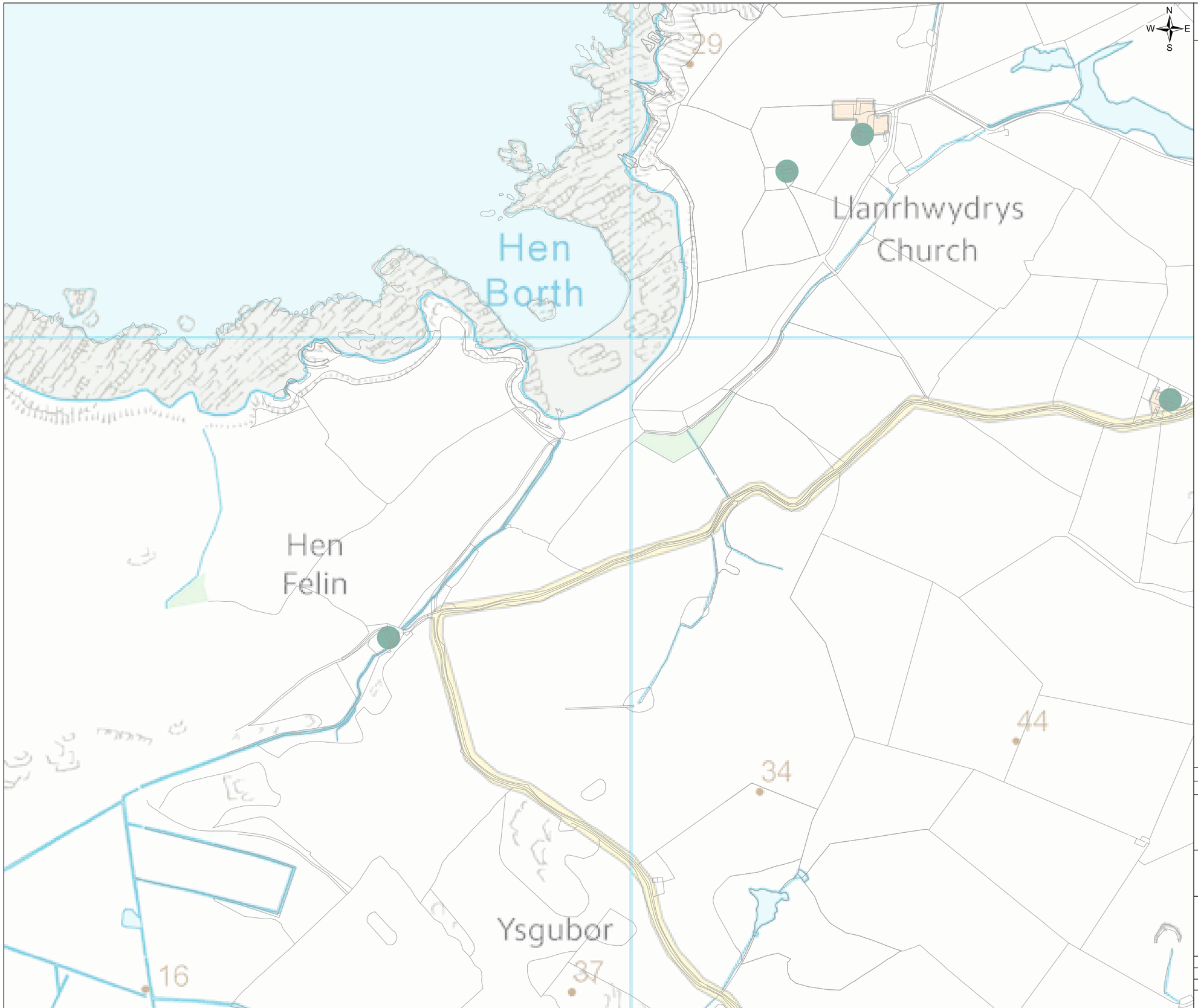
60PO80AS_NOISE_RfNMC_MONTHS31TO33_NIGHTTIME

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0 125 250 500 metres

FIGURE 12



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 -70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (NIGHT-TIME)

SHEET 5 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

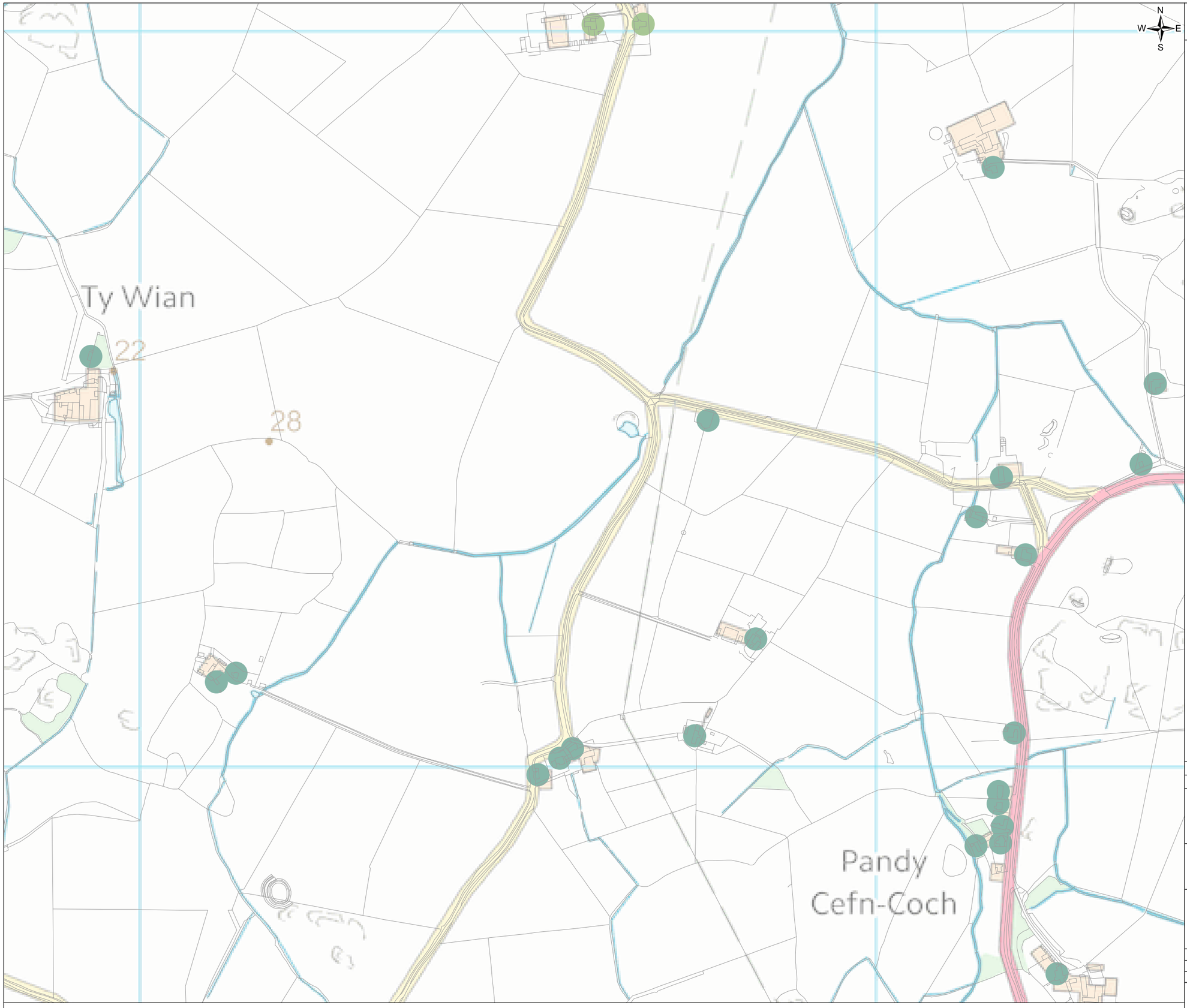
60PO80AS_NOISE_RfNMC_MONTHS31TO33_NIGHTTIME

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0 125 250 500 metres

FIGURE 12



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 -70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (NIGHT-TIME)

SHEET 6 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

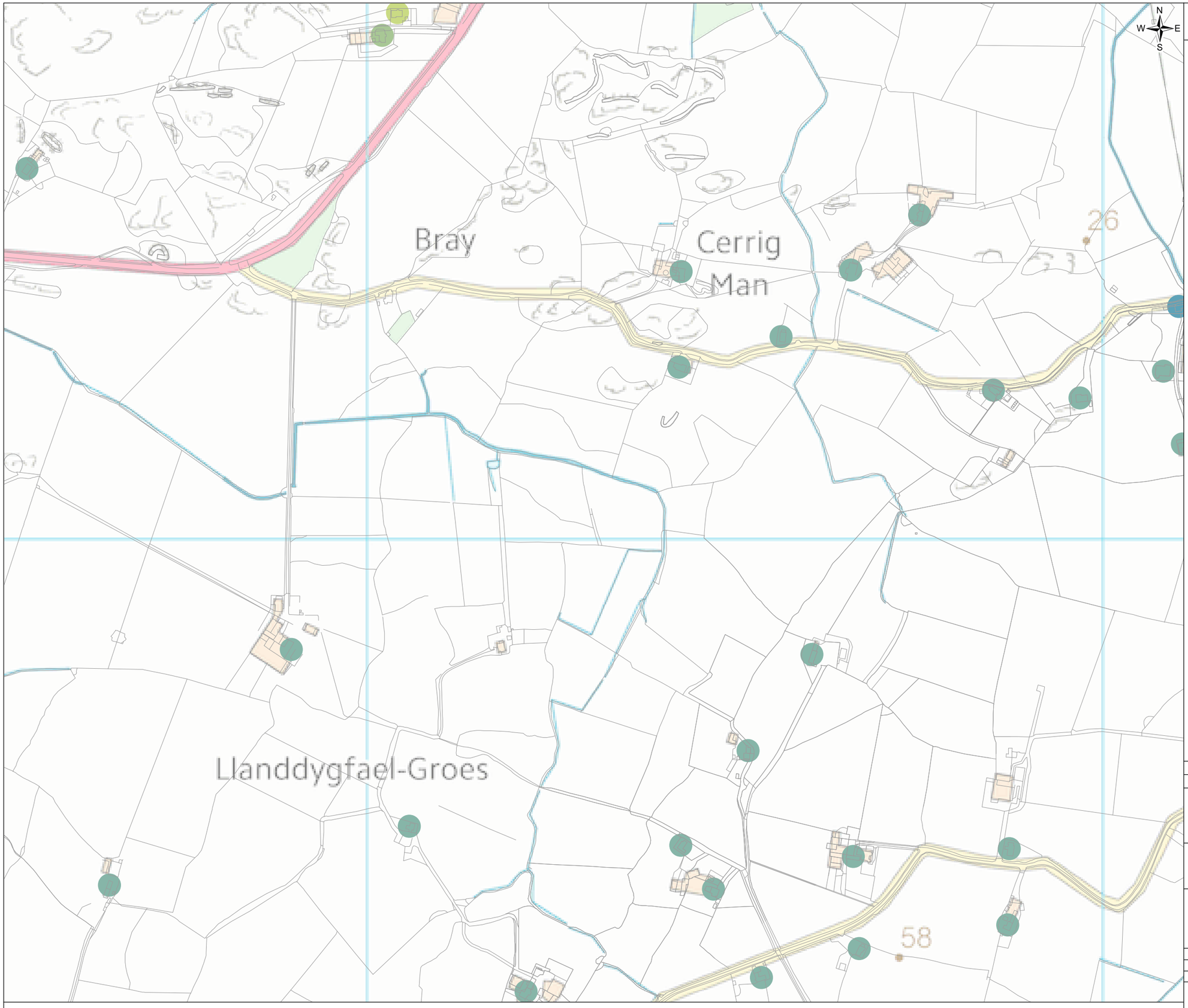
60PO80AS_NOISE_RfNMC_MONTHS31TO33_NIGHTTIME

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0 125 250 500 metres

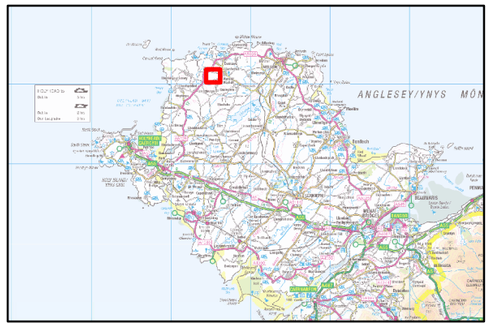
FIGURE 12



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 -70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (NIGHT-TIME)

SHEET 7 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

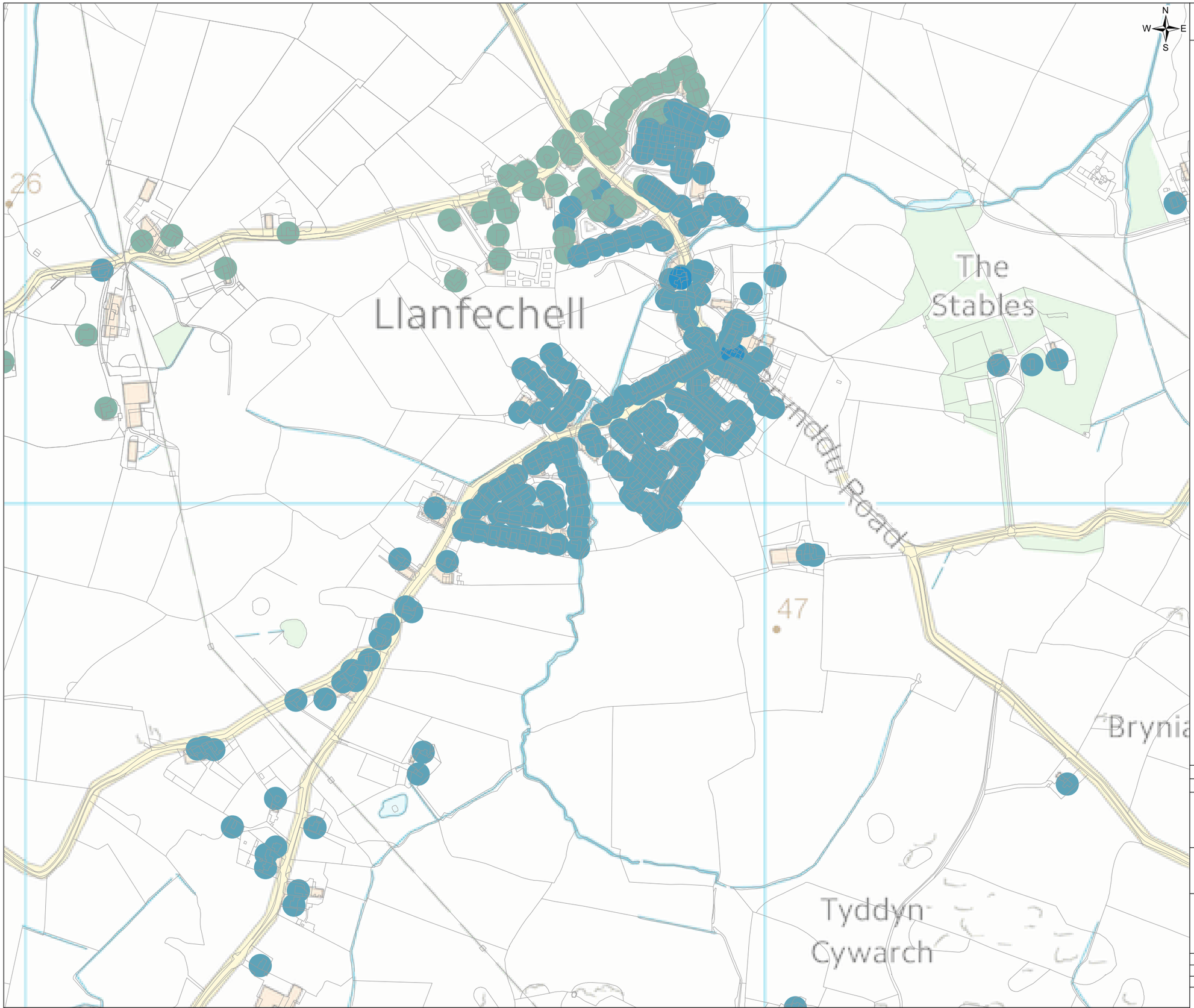
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS31TO33_NIGHTTIME

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0 125 250 500 metres

FIGURE 12



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 -70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (NIGHT-TIME)

SHEET 8 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS31TO33_NIGHTTIME

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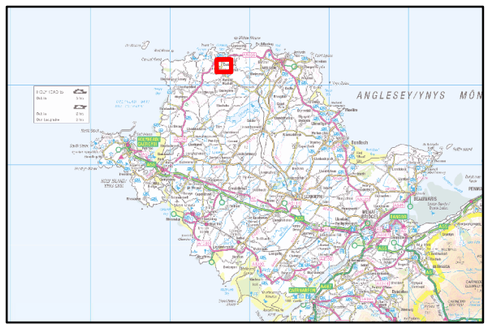
0 125 250 500 metres

FIGURE 12

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 -70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (NIGHT-TIME)

SHEET 9 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS31TO33_NIGHTTIME

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0 125 250 500 metres

FIGURE 12

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 -70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (NIGHT-TIME)

SHEET 10 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS31TO33_NIGHTTIME

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0 125 250 500 metres

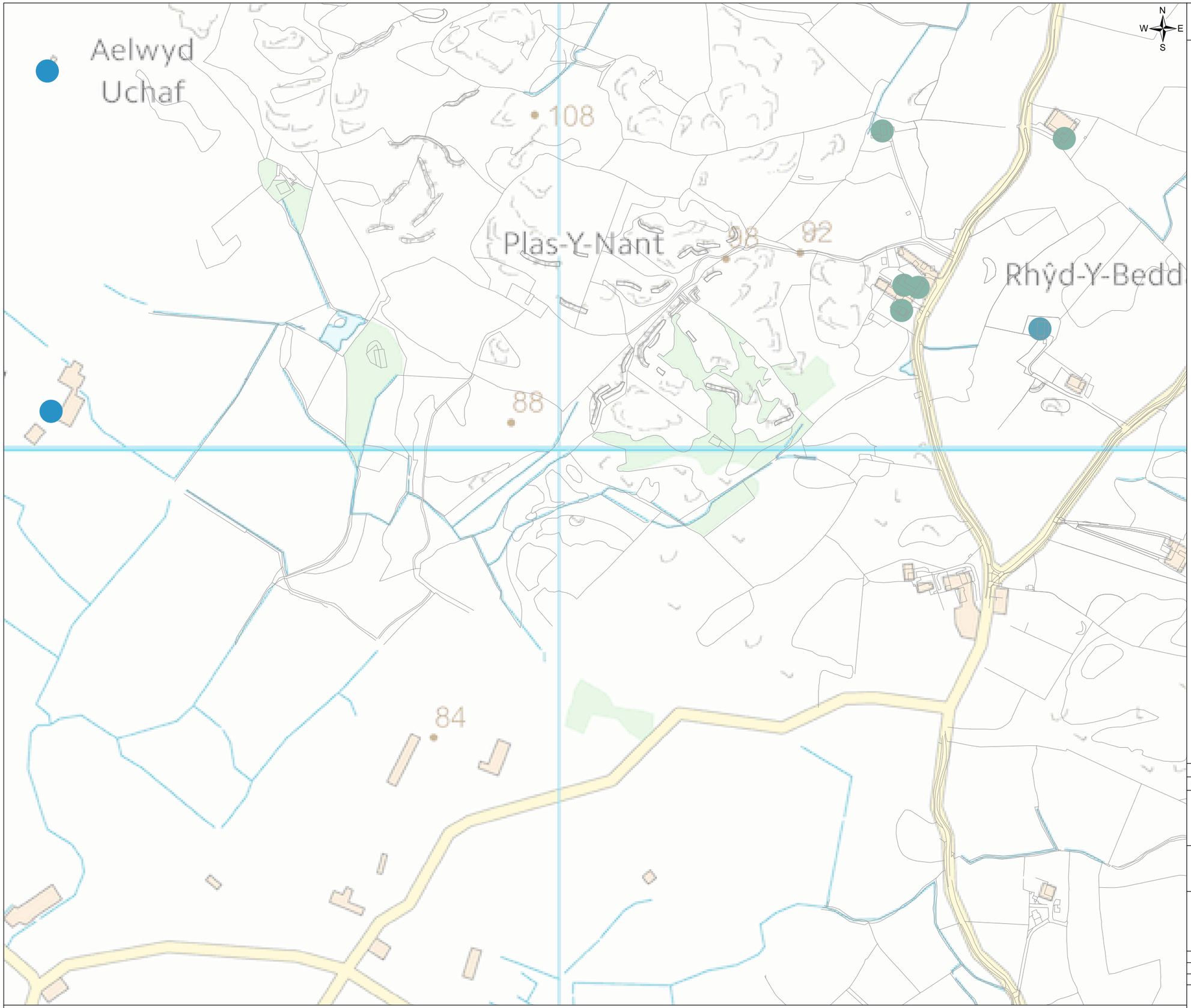


FIGURE 12

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 -70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (NIGHT-TIME)

SHEET 11 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

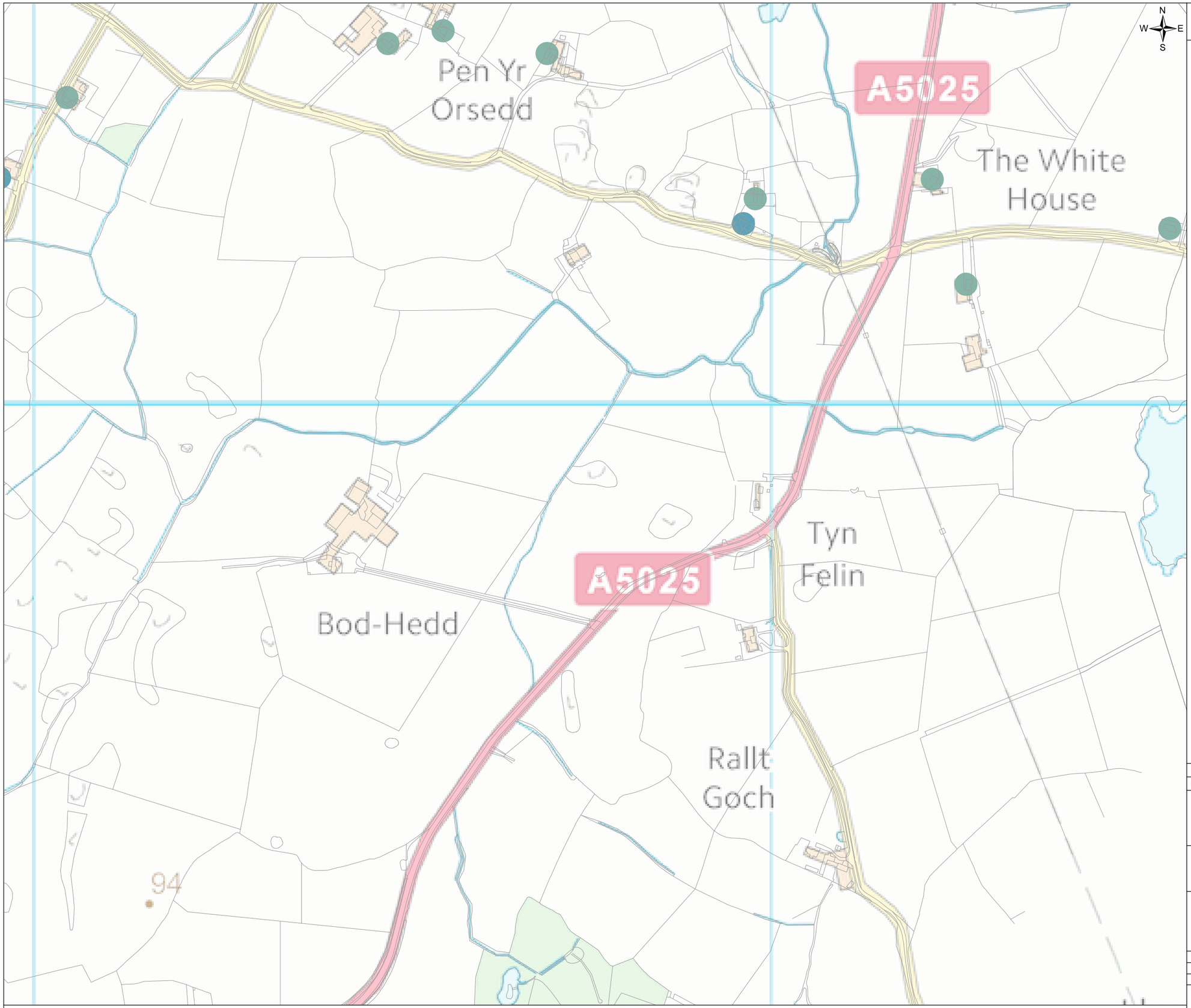
60PO80AS_NOISE_RfNMC_MONTHS31TO33_NIGHTTIME

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0 125 250 500 metres

FIGURE 12



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 -70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 31 TO 33 (NIGHT-TIME)

SHEET 12 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

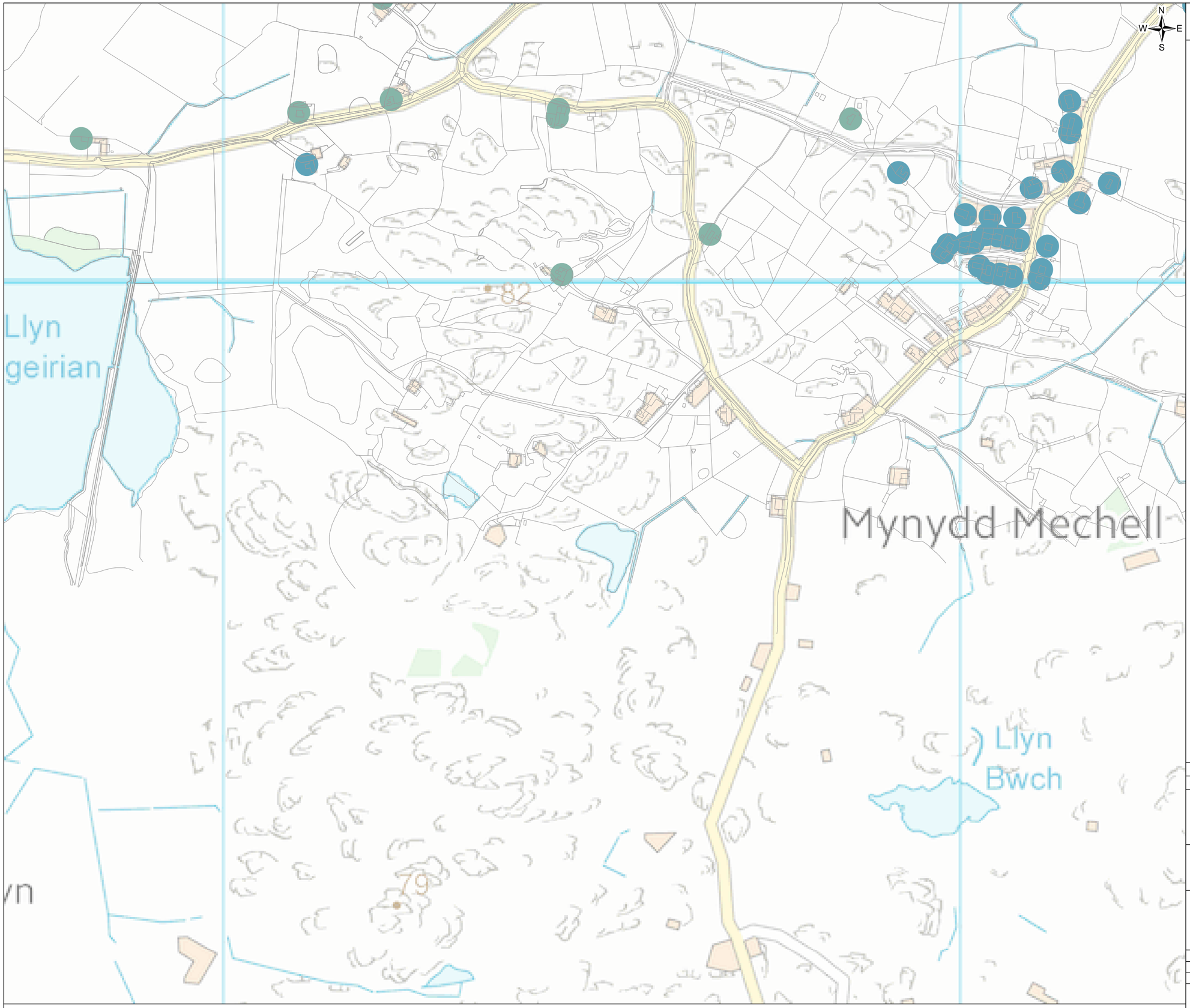
60PO80AS_NOISE_RfNMC_MONTHS31TO33_NIGHTTIME

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0 125 250 500 metres

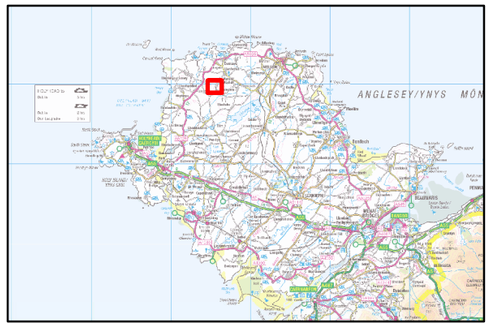
FIGURE 12



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 -70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (NIGHT-TIME)

SHEET 13 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS31TO33_NIGHTTIME

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0 125 250 500 metres

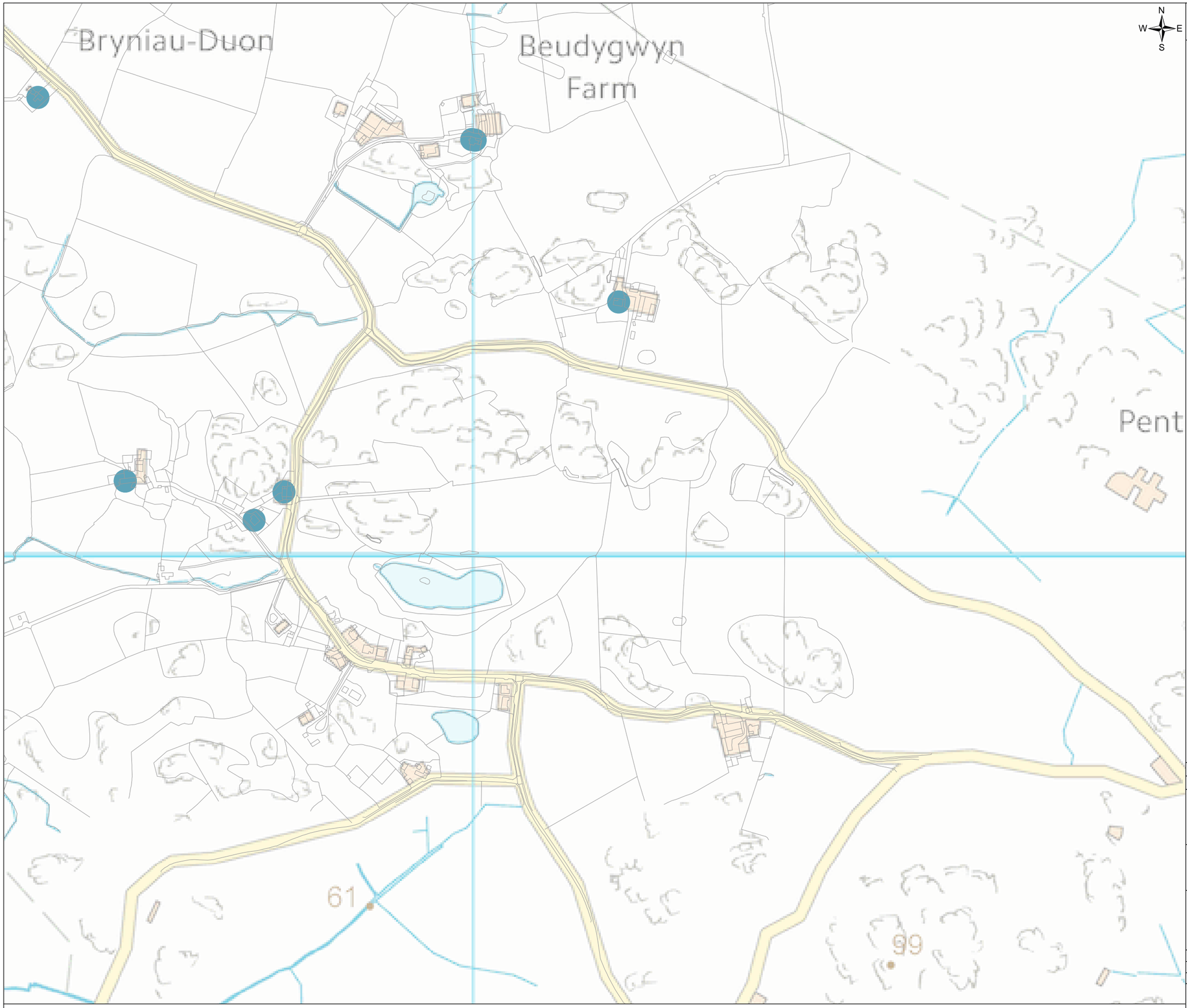


FIGURE 12

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 -70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (NIGHT-TIME)

SHEET 14 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

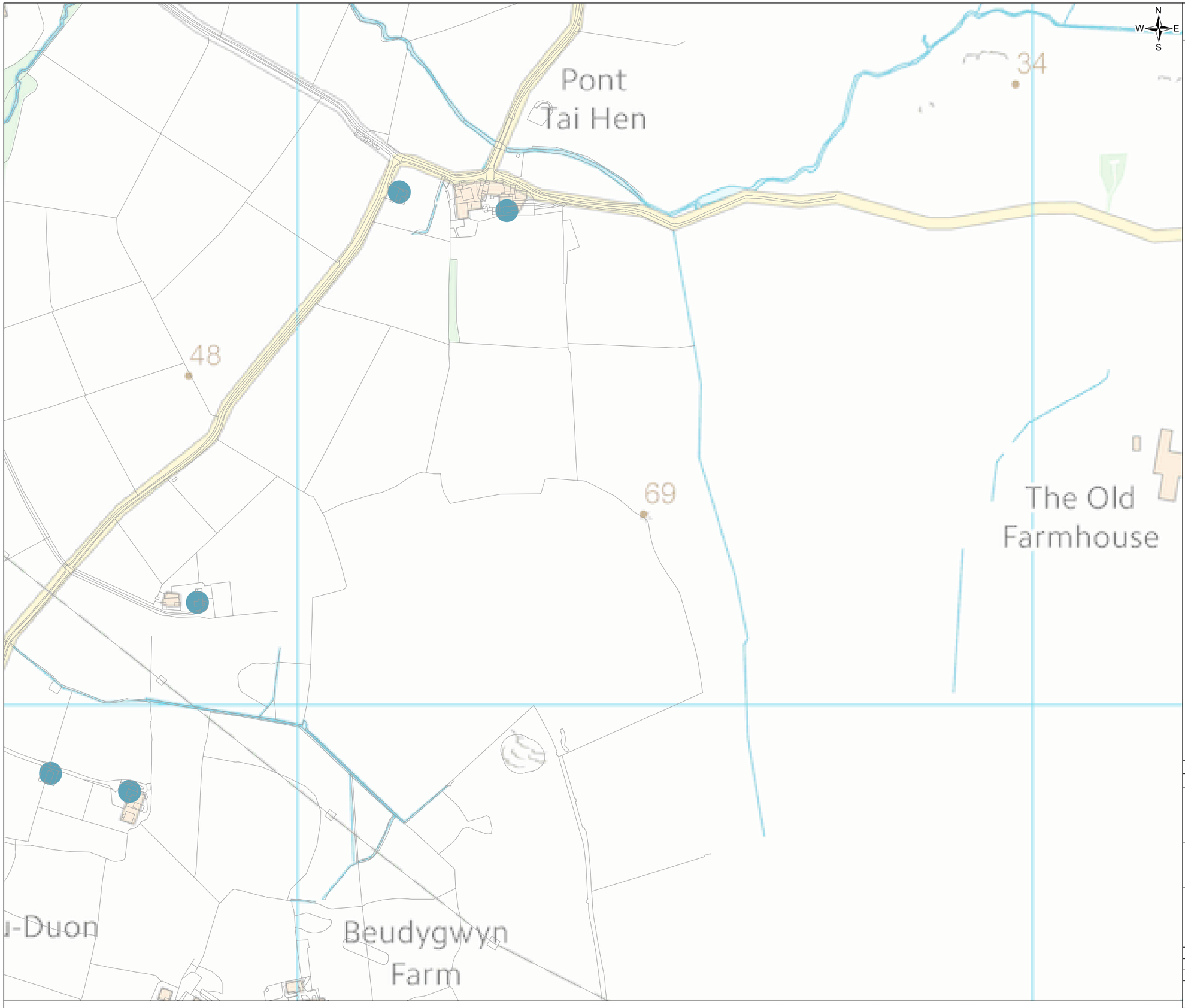
60PO80AS_NOISE_RfNMC_MONTHS31TO33_NIGHTTIME

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0 125 250 500 metres

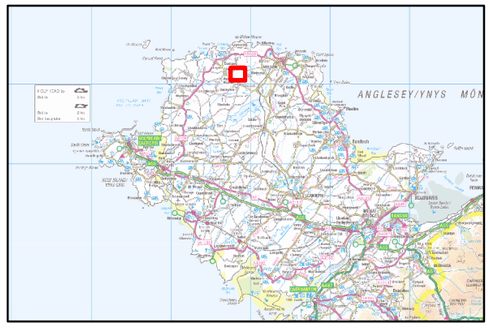
FIGURE 12



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
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- 55 - 60
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- 65 -70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (NIGHT-TIME)

SHEET 15 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS31TO33_NIGHTTIME

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0 125 250 500 metres

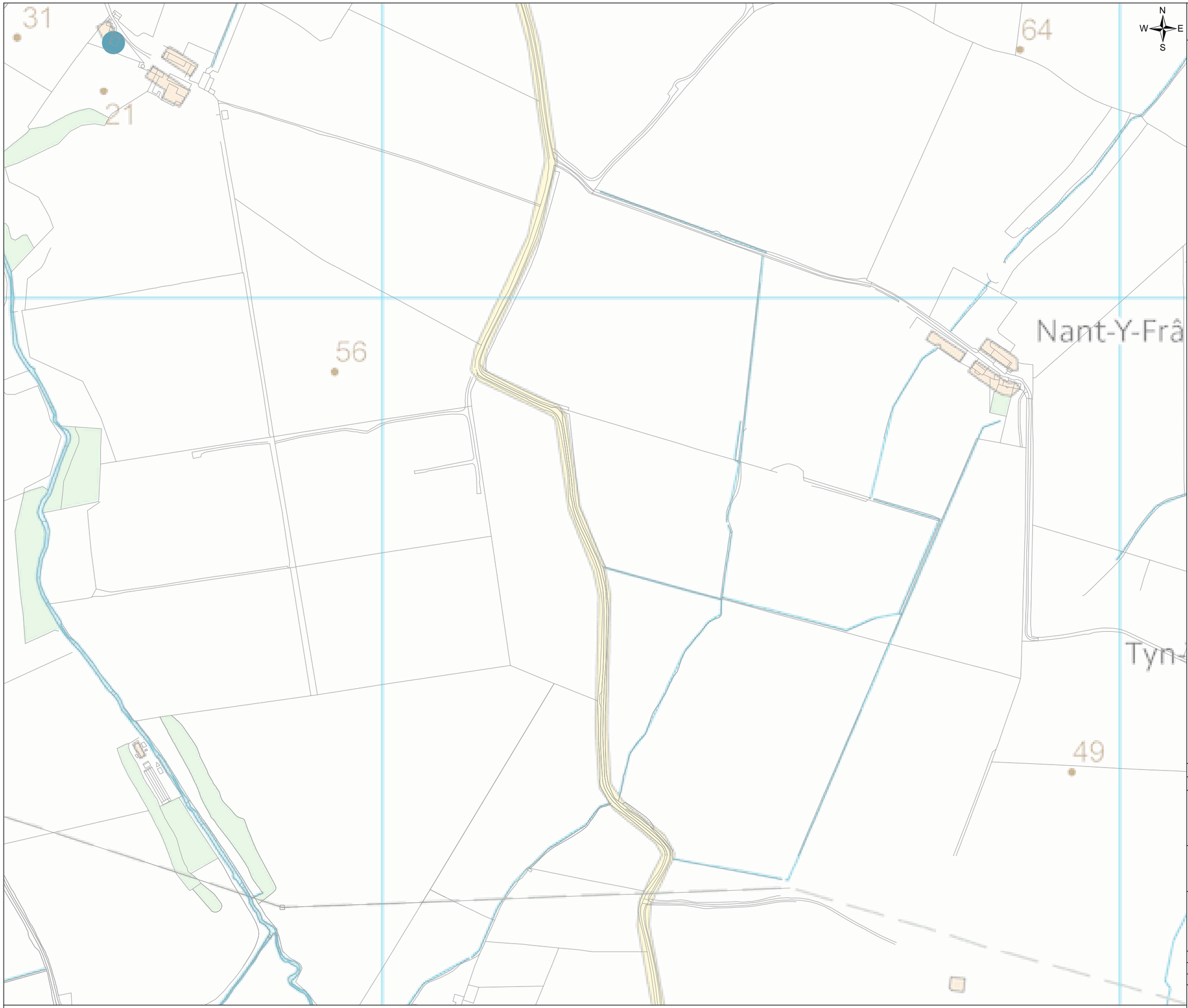


FIGURE 12

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 -70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 31 TO 33 (NIGHT-TIME)

SHEET 16 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS31TO33_NIGHTTIME

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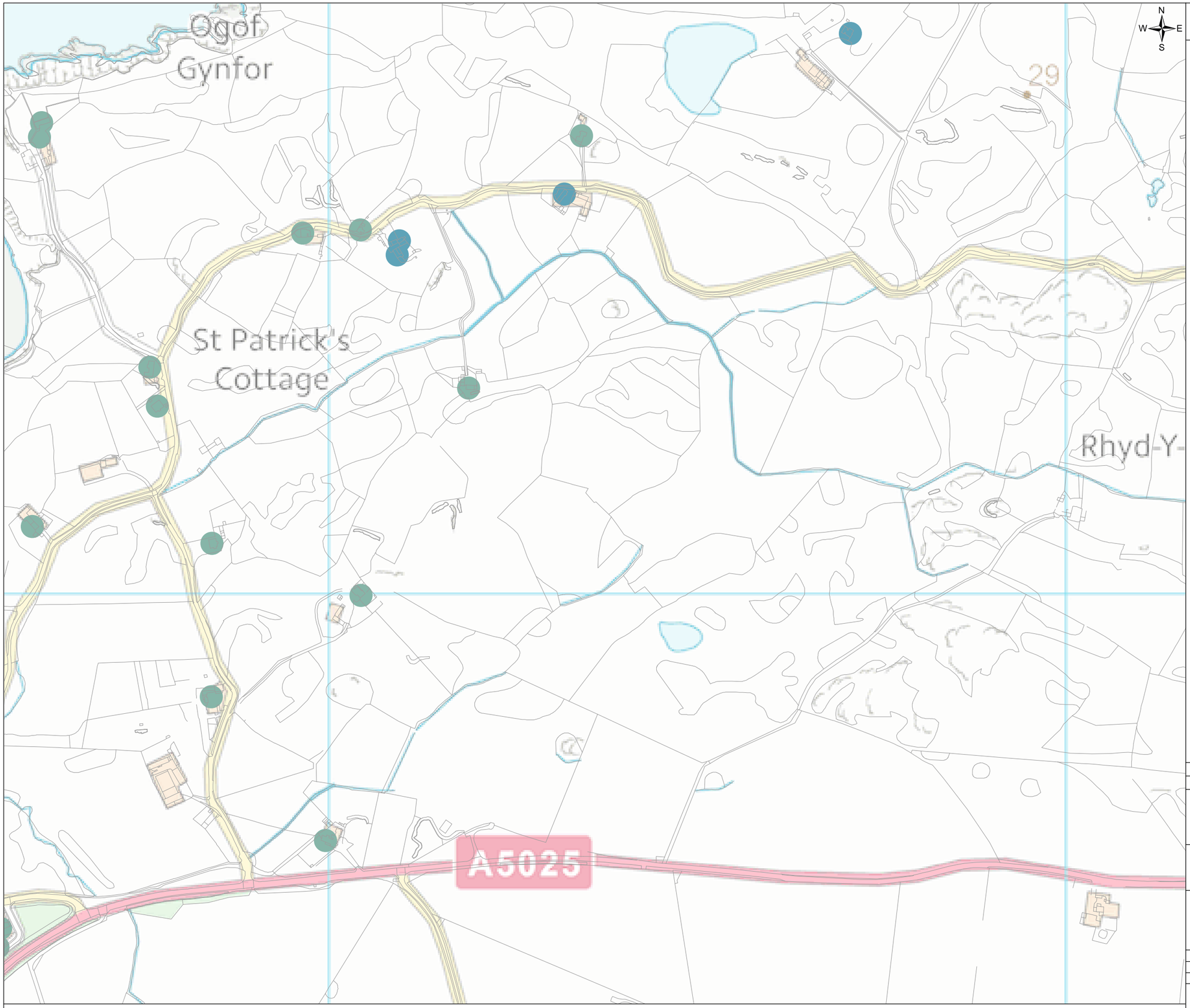


FIGURE 12

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 -70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 31 TO 33 (NIGHT-TIME)

SHEET 17 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

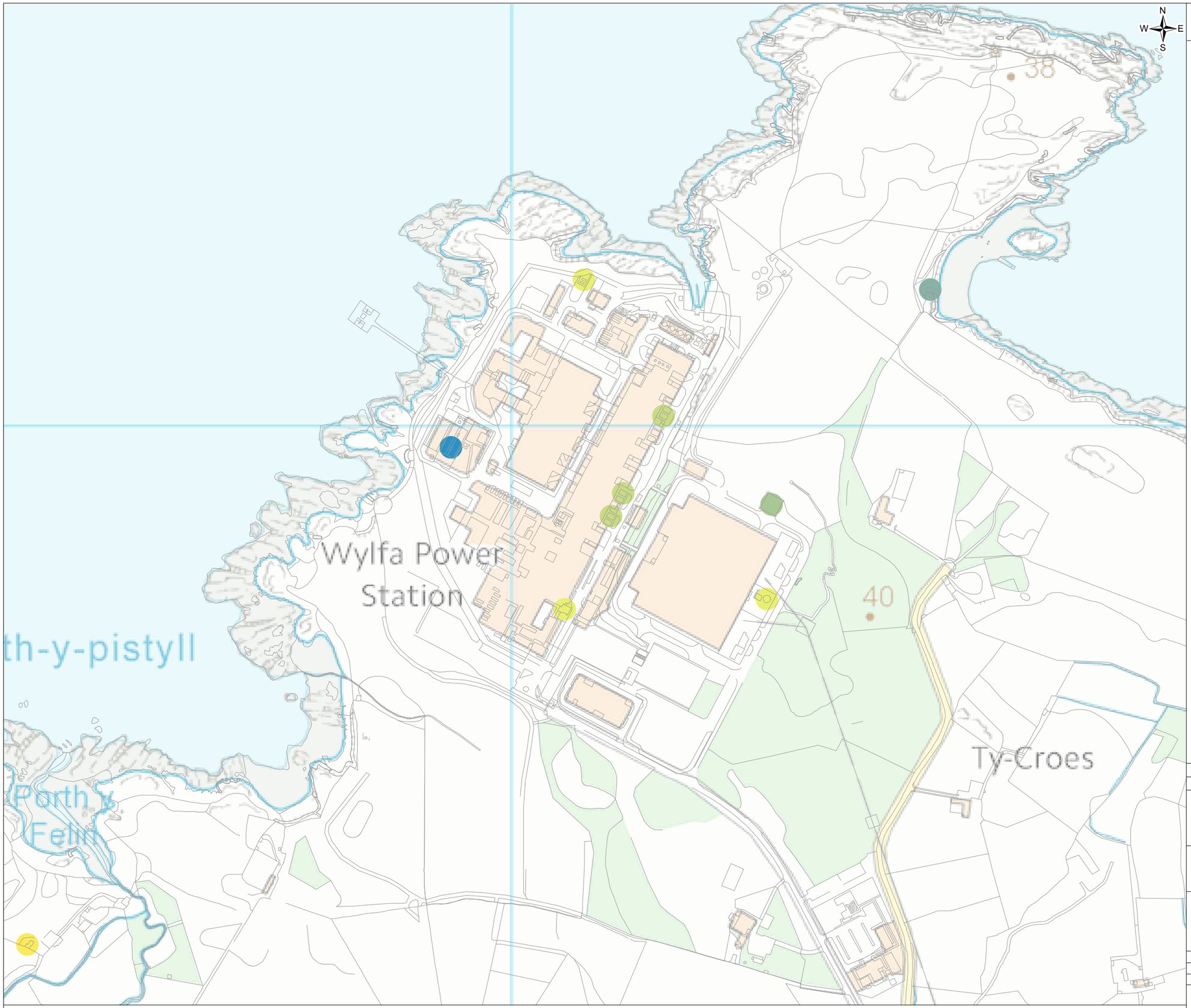
60PO80AS_NOISE_RfNMC_MONTHS31TO33_NIGHTTIME

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0 125 250 500 metres

FIGURE 13



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (DAYTIME)
SHEET 1 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_DAYTIME

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0 125 250 500 metres



FIGURE 13

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (DAYTIME)

SHEET 2 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS58TO60_DAYTIME

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0 125 250 500 metres

FIGURE 13



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (DAYTIME)

SHEET 3 OF 17

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Jacobs No.	60PO80AS	
Client No.		

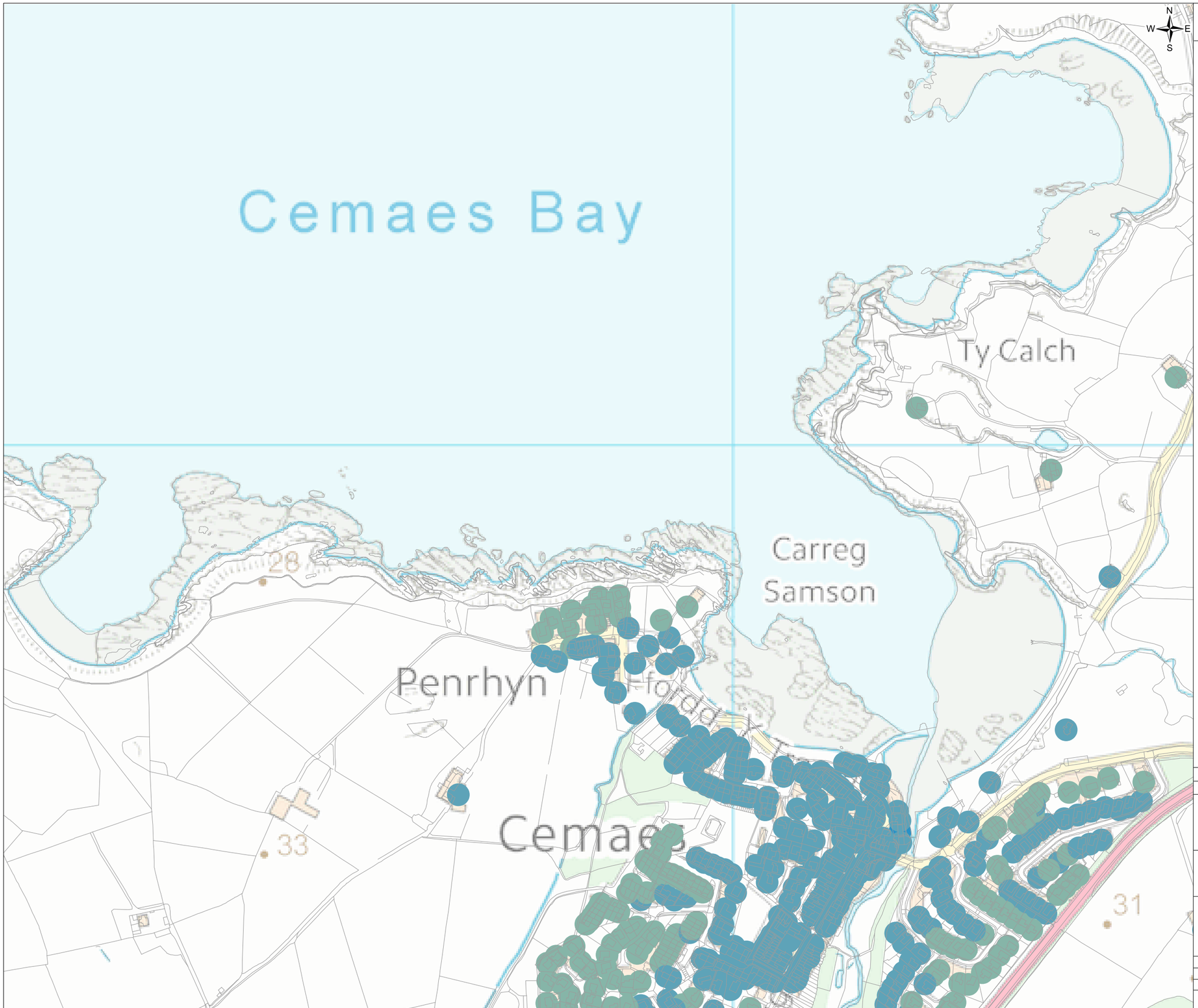
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_DAYTIME

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0 125 250 500 metres

FIGURE 13



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (DAYTIME)
SHEET 4 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

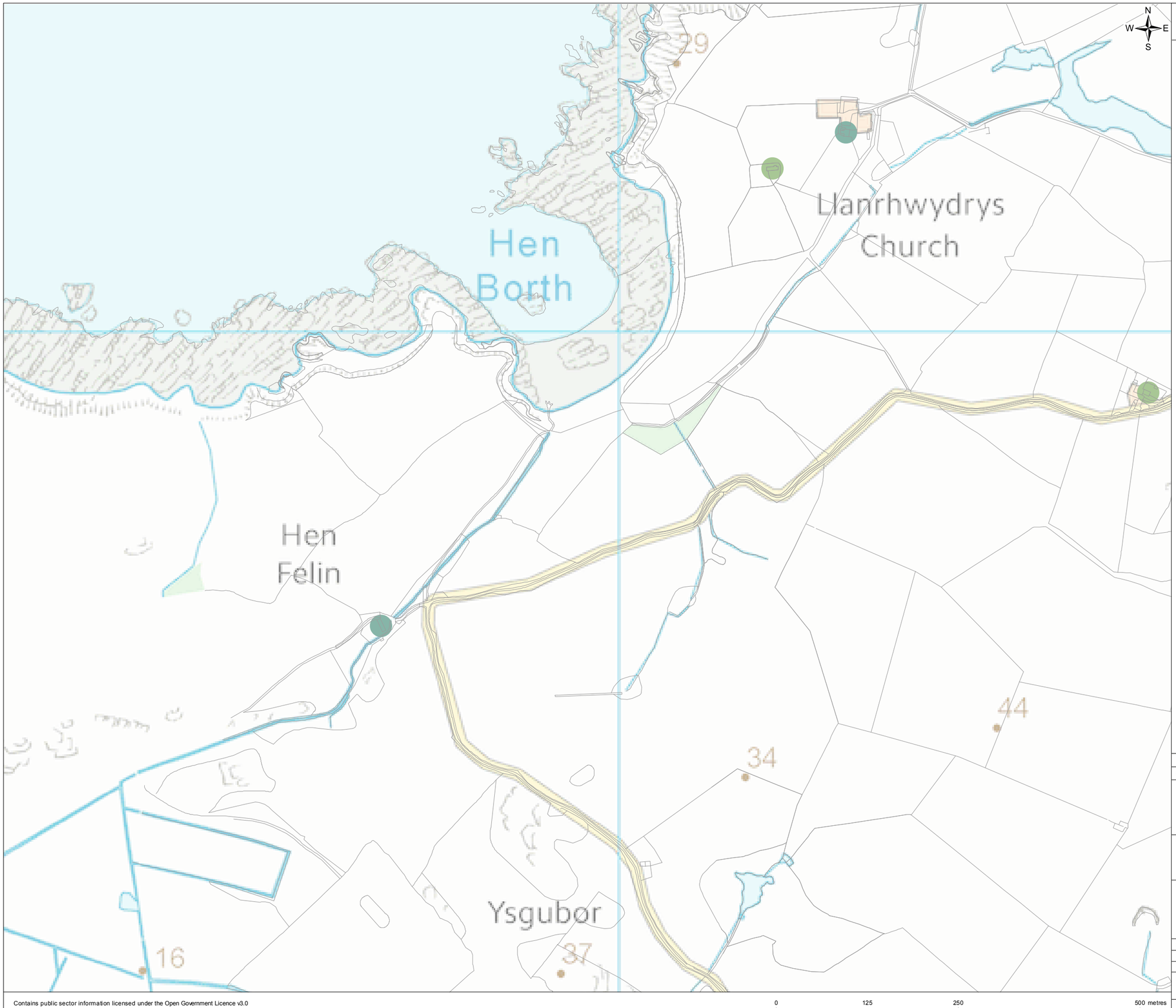
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_DAYTIME

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0 125 250 500 metres

FIGURE 13



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (DAYTIME)

SHEET 5 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS58TO60_DAYTIME

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0 125 250 500 metres

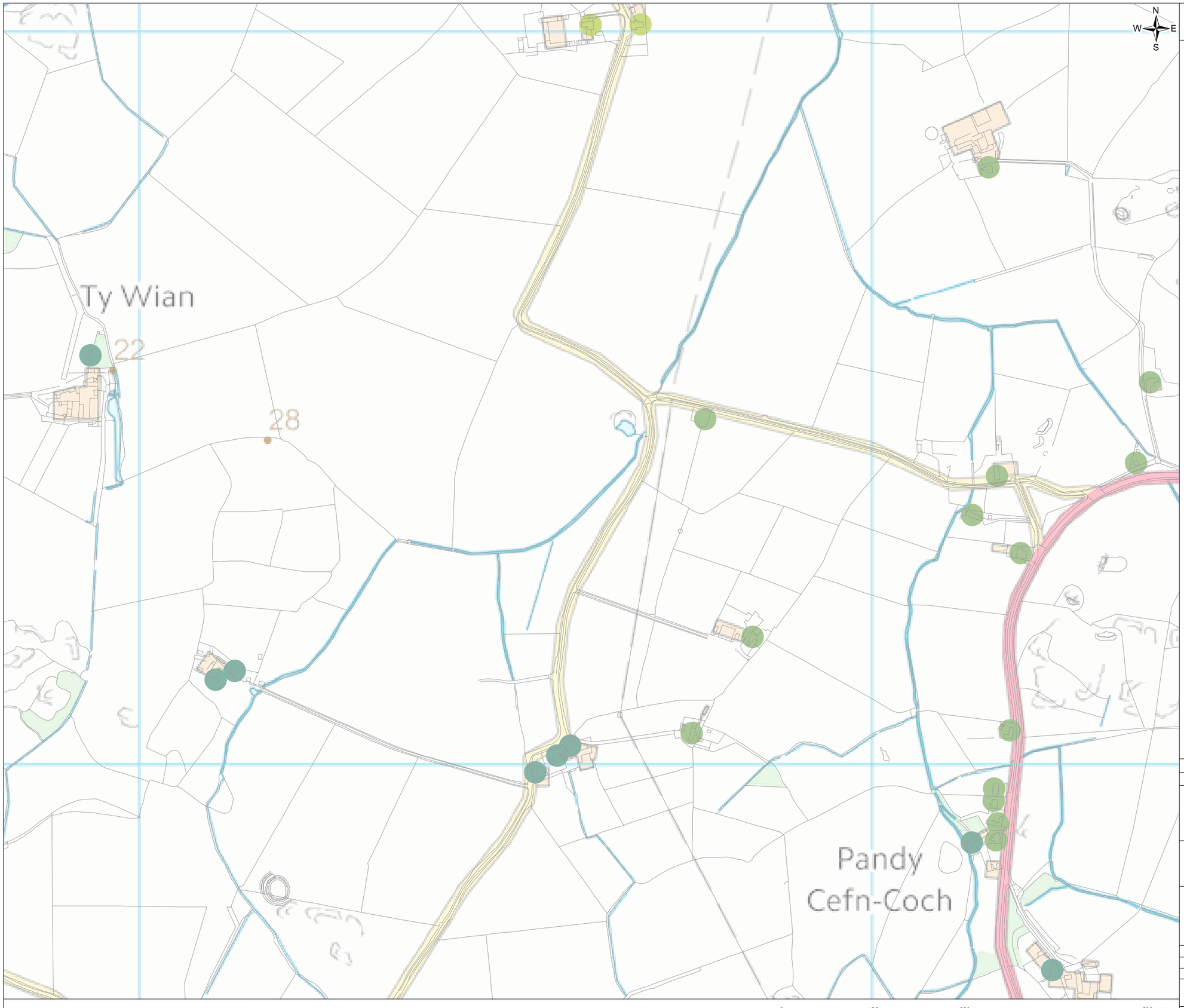


FIGURE 13

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (DAYTIME)

SHEET 6 OF 17

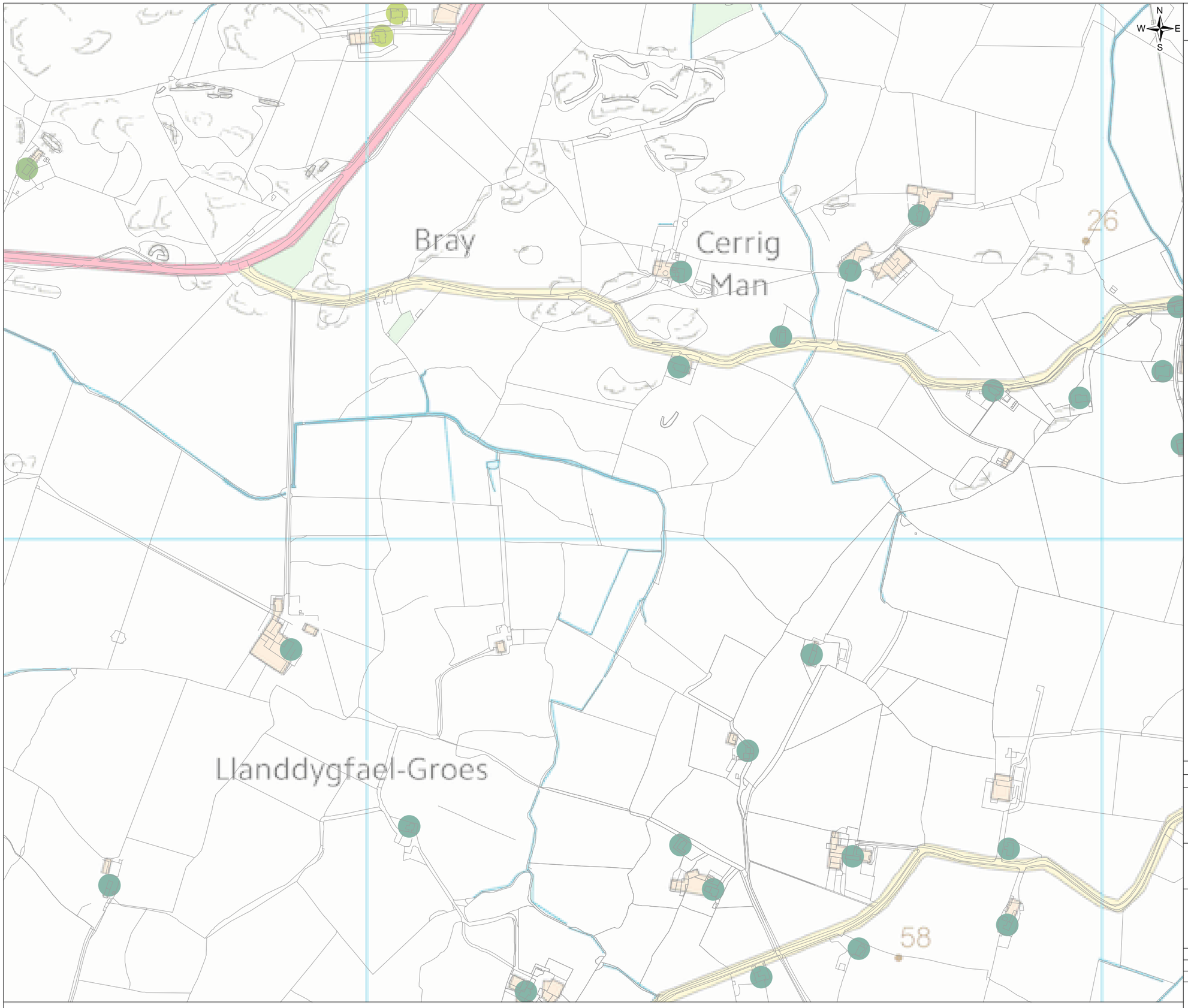
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Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_DAYTIME

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FIGURE 13



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (DAYTIME)

SHEET 7 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

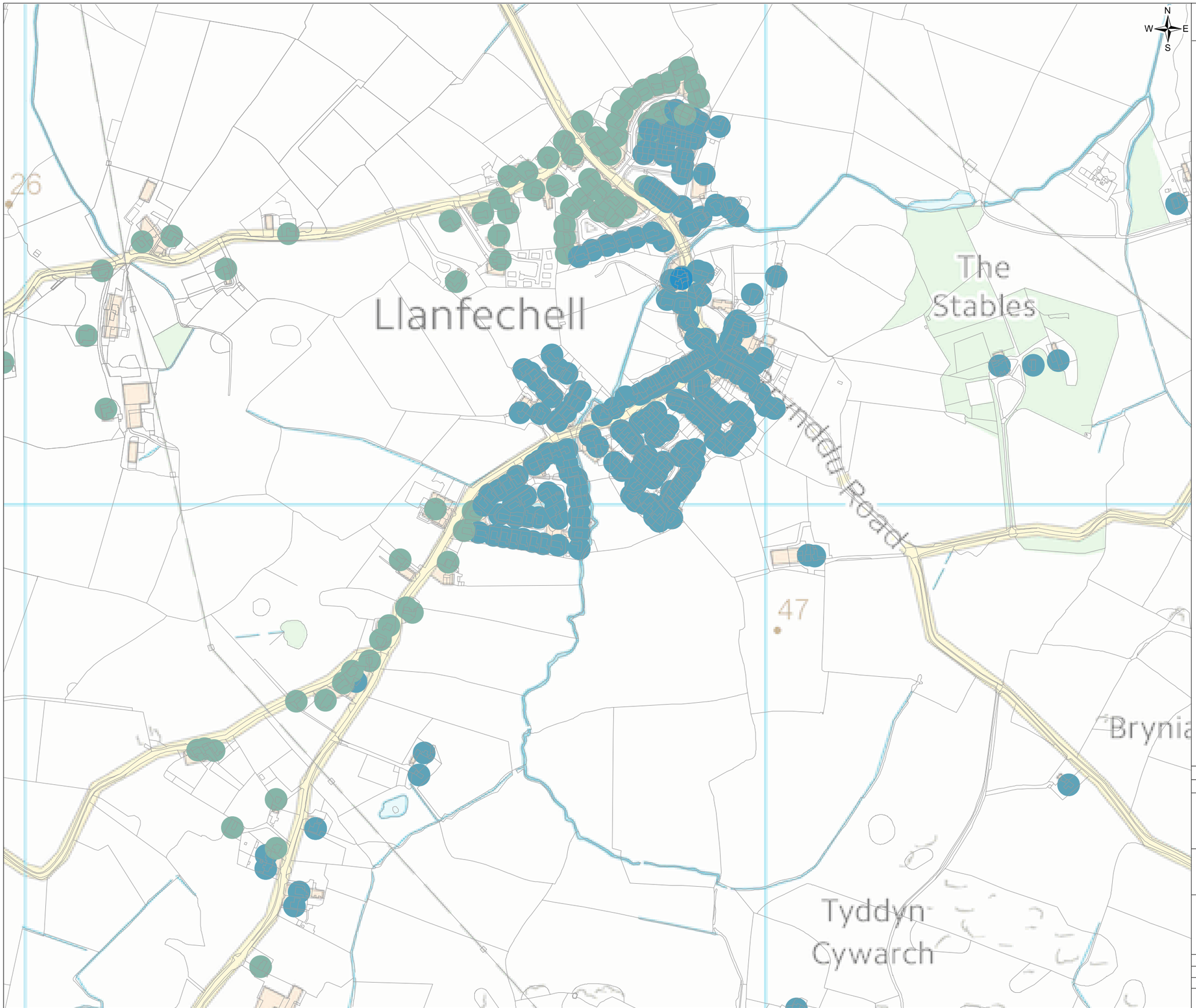
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS58TO60_DAYTIME

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0 125 250 500 metres

FIGURE 13



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (DAYTIME)

SHEET 8 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_DAYTIME

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0 125 250 500 metres

FIGURE 13

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
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- 45 - 50
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- 55 - 60
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- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (DAYTIME)

SHEET 9 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

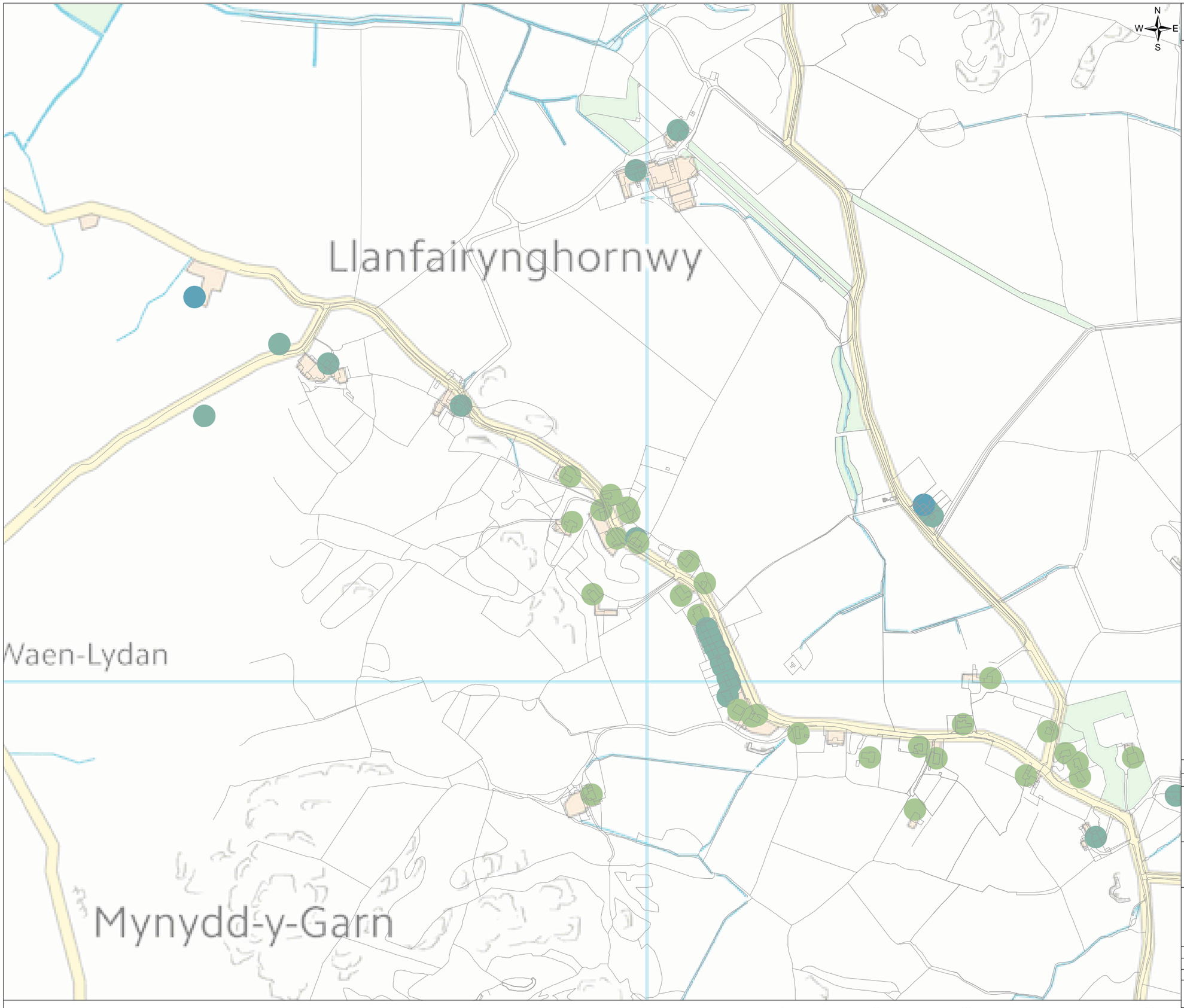
60PO80AS_NOISE_RfNMC_MONTHS58TO60_DAYTIME

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0 125 250 500 metres

FIGURE 13



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (DAYTIME)
SHEET 10 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

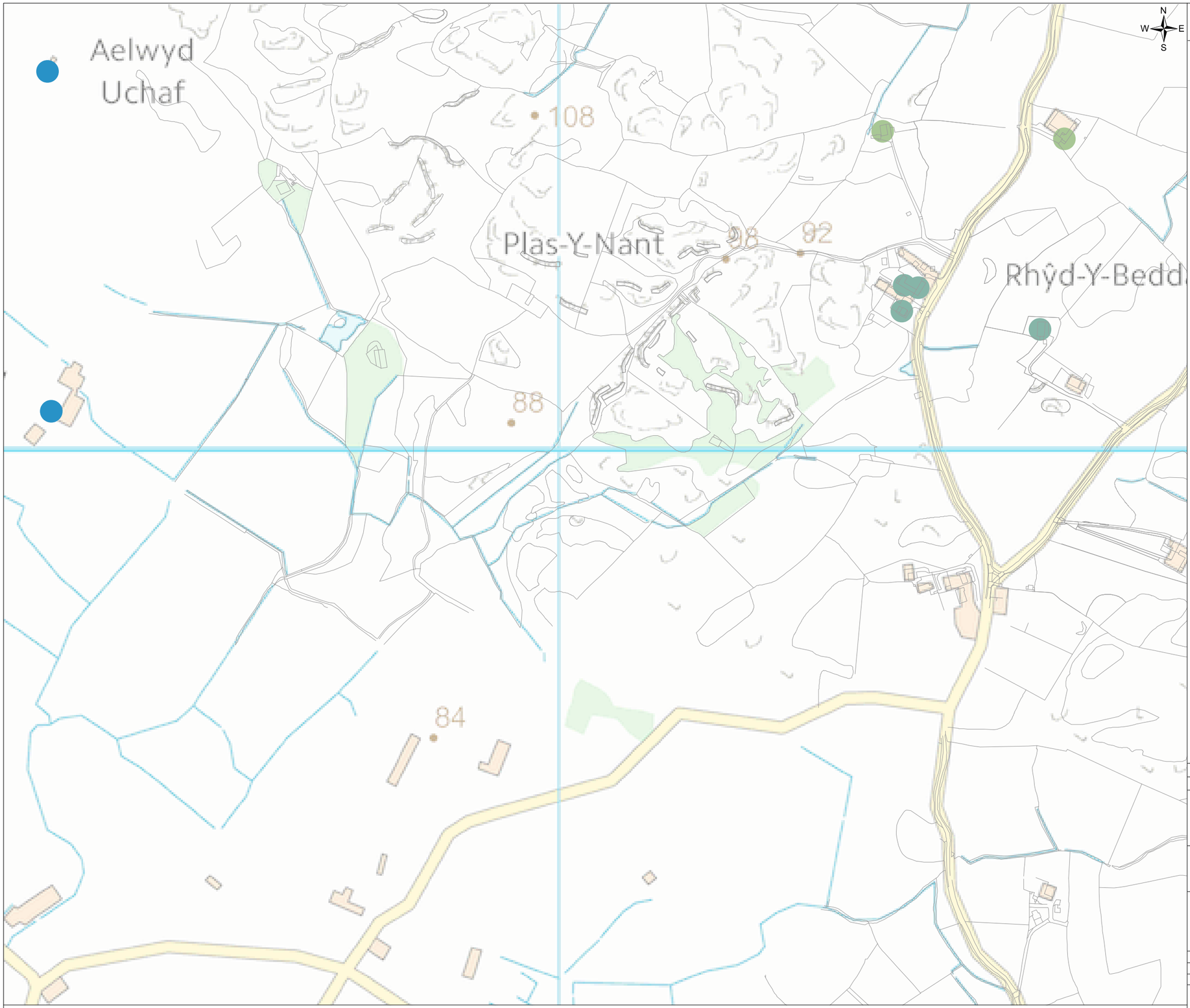
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_DAYTIME

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0 125 250 500 metres

FIGURE 13



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 58 TO 60 (DAYTIME)

SHEET 11 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

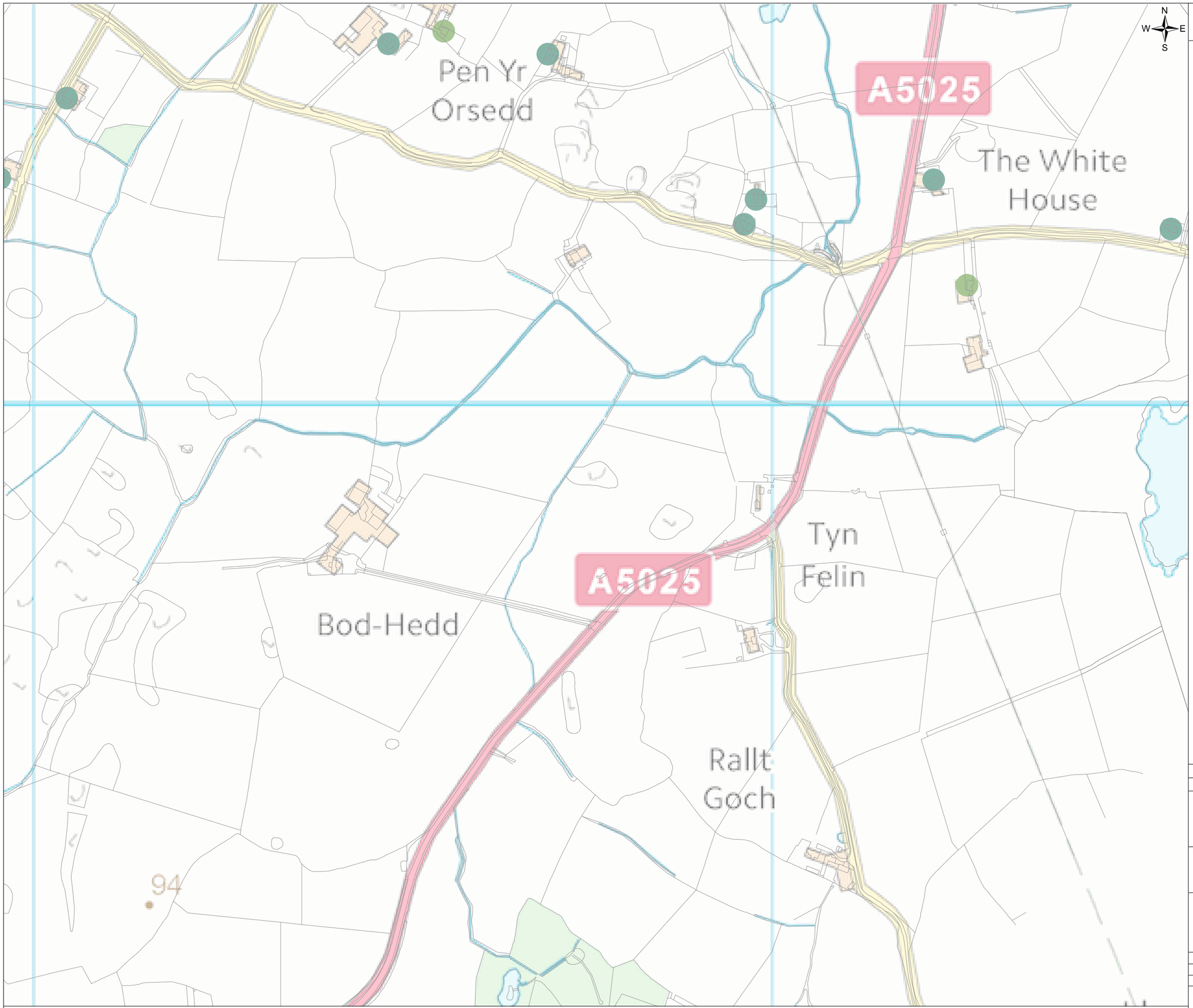
60PO80AS_NOISE_RfNMC_MONTHS58TO60_DAYTIME

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0 125 250 500 metres

FIGURE 13



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
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- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (DAYTIME)

SHEET 12 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

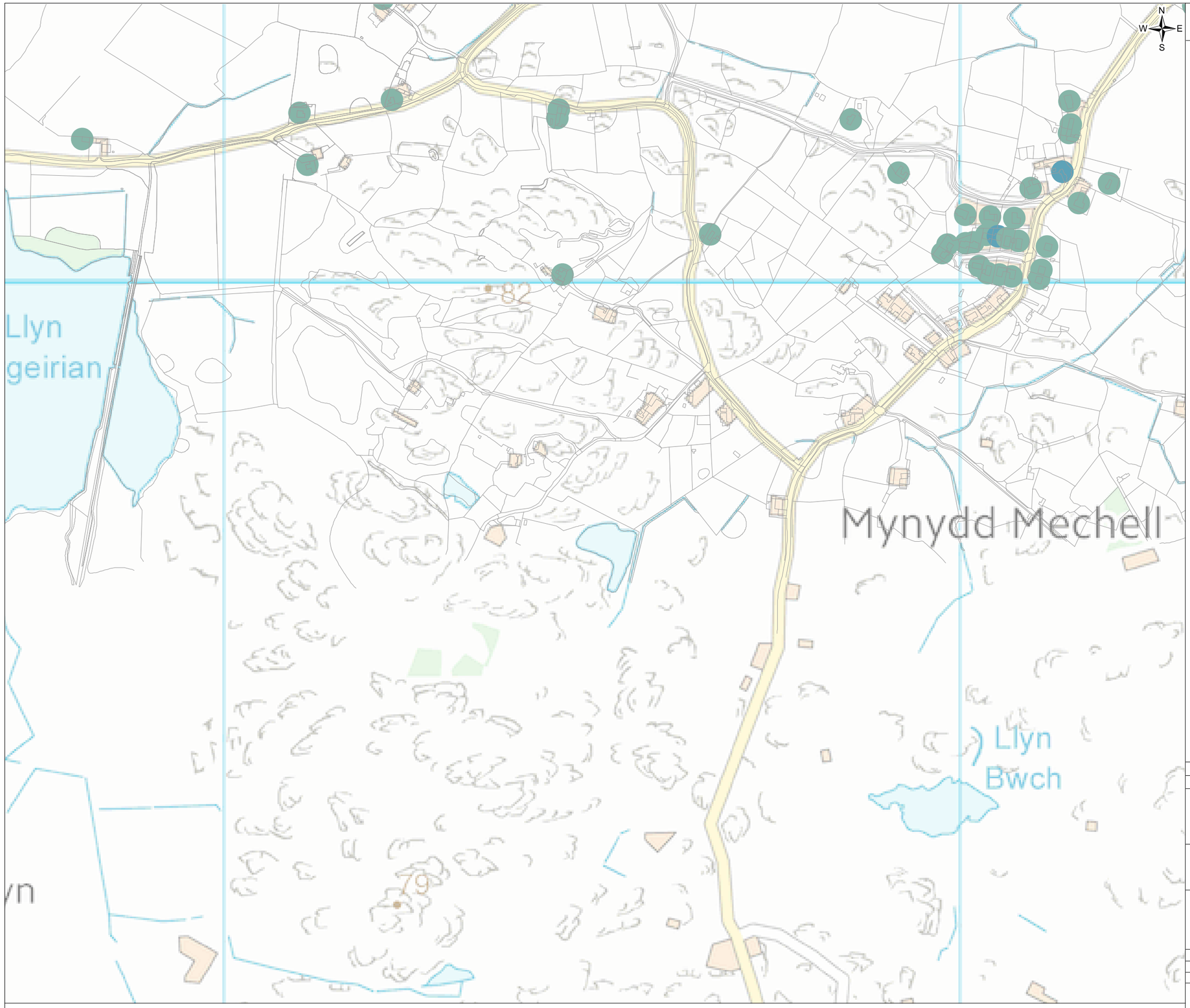
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_DAYTIME

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0 125 250 500 metres

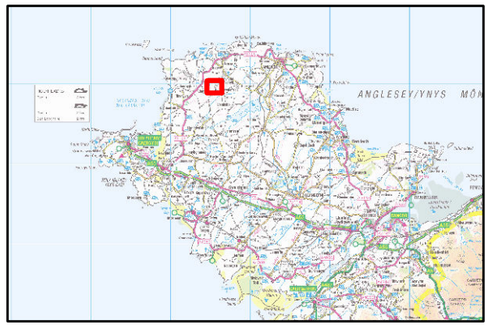
FIGURE 13



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
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- 65 - 70
- 70 - 75
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- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (DAYTIME)

SHEET 13 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_DAYTIME

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0 125 250 500 metres

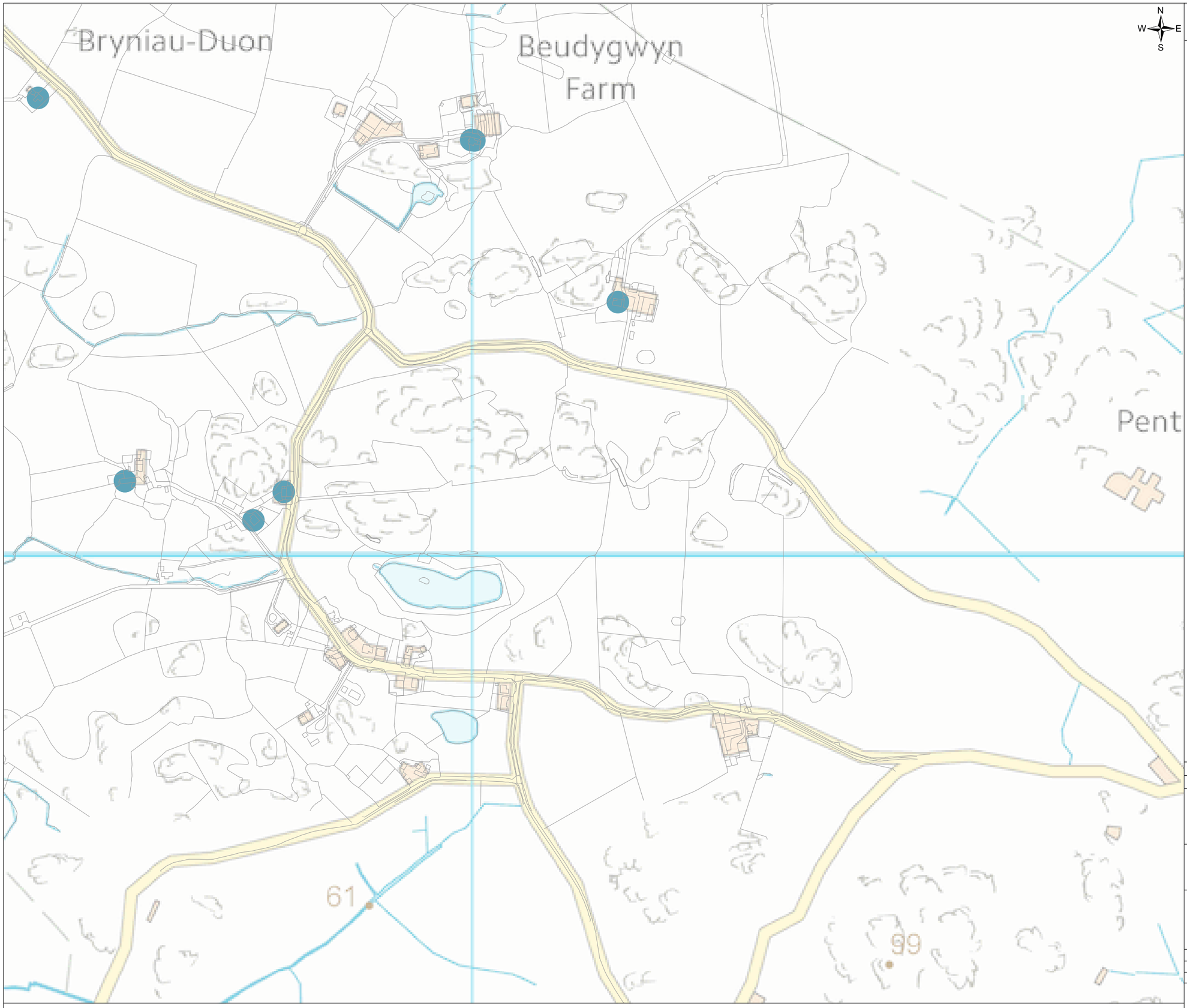


FIGURE 13

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
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- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (DAYTIME)

SHEET 14 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

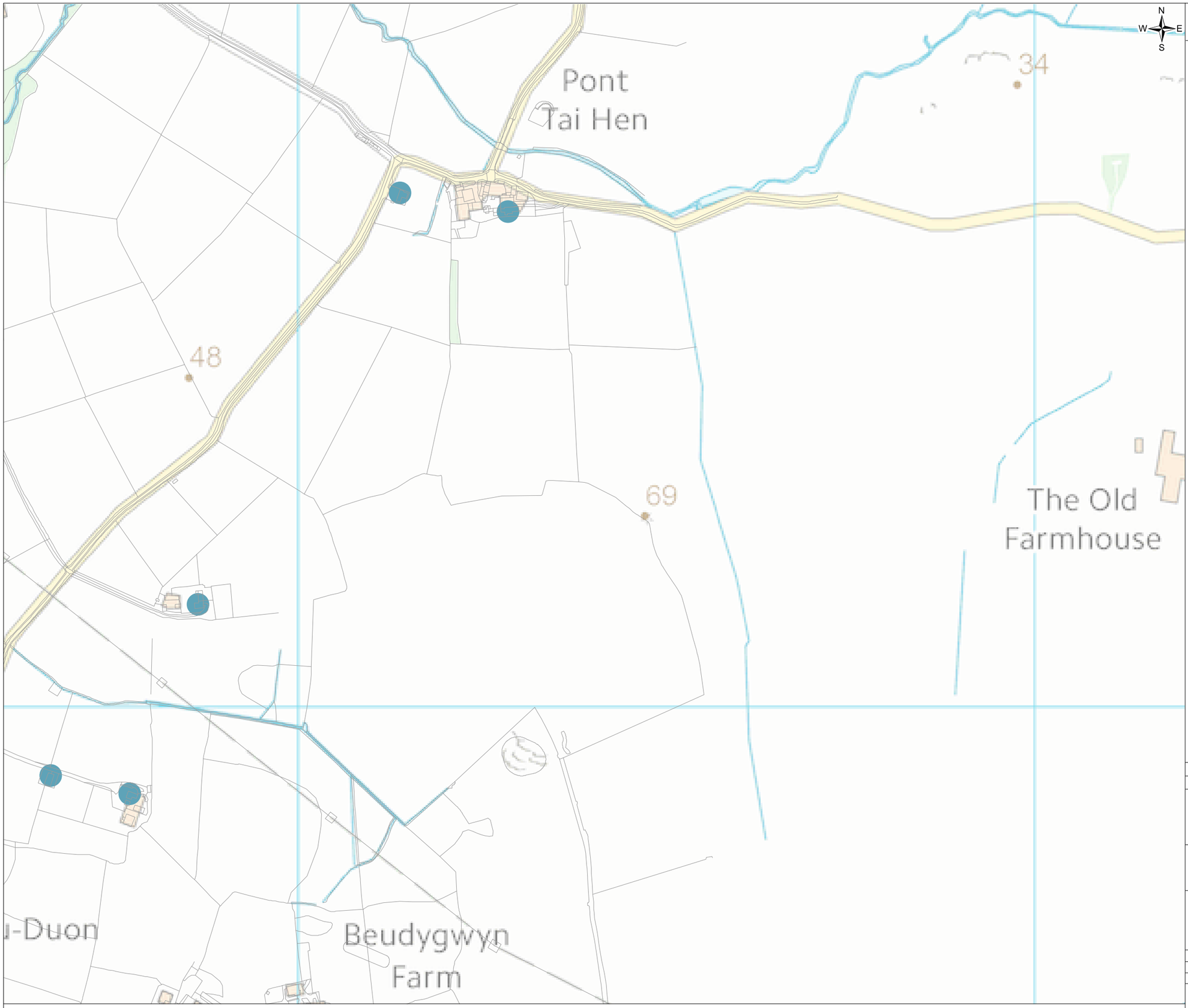
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_DAYTIME

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0 125 250 500 metres

FIGURE 13



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
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- 45 - 50
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- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (DAYTIME)

SHEET 15 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_DAYTIME

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0 125 250 500 metres

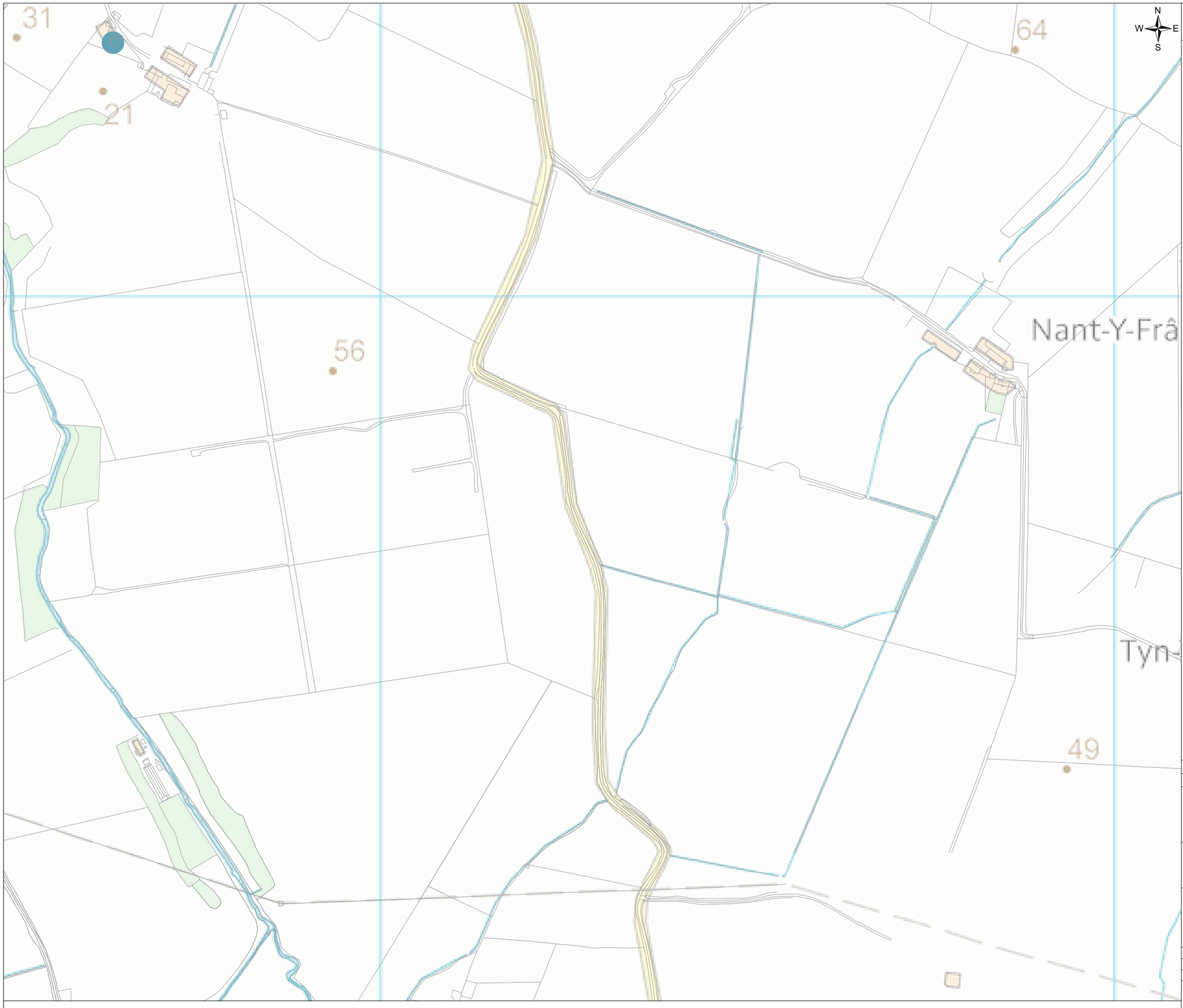


FIGURE 13

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (DAYTIME)

SHEET 16 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_DAYTIME

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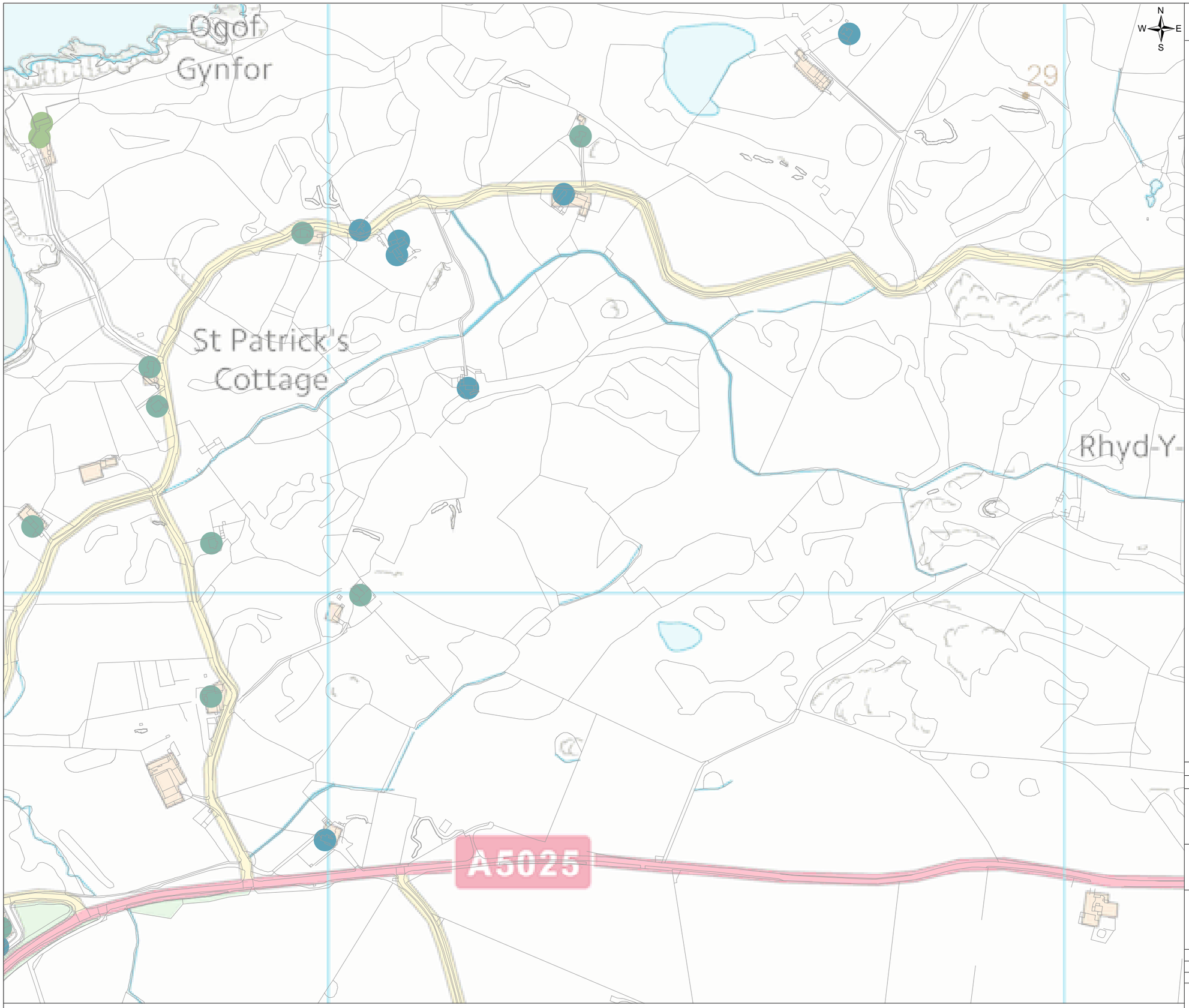


FIGURE 13

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (DAYTIME)

SHEET 17 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

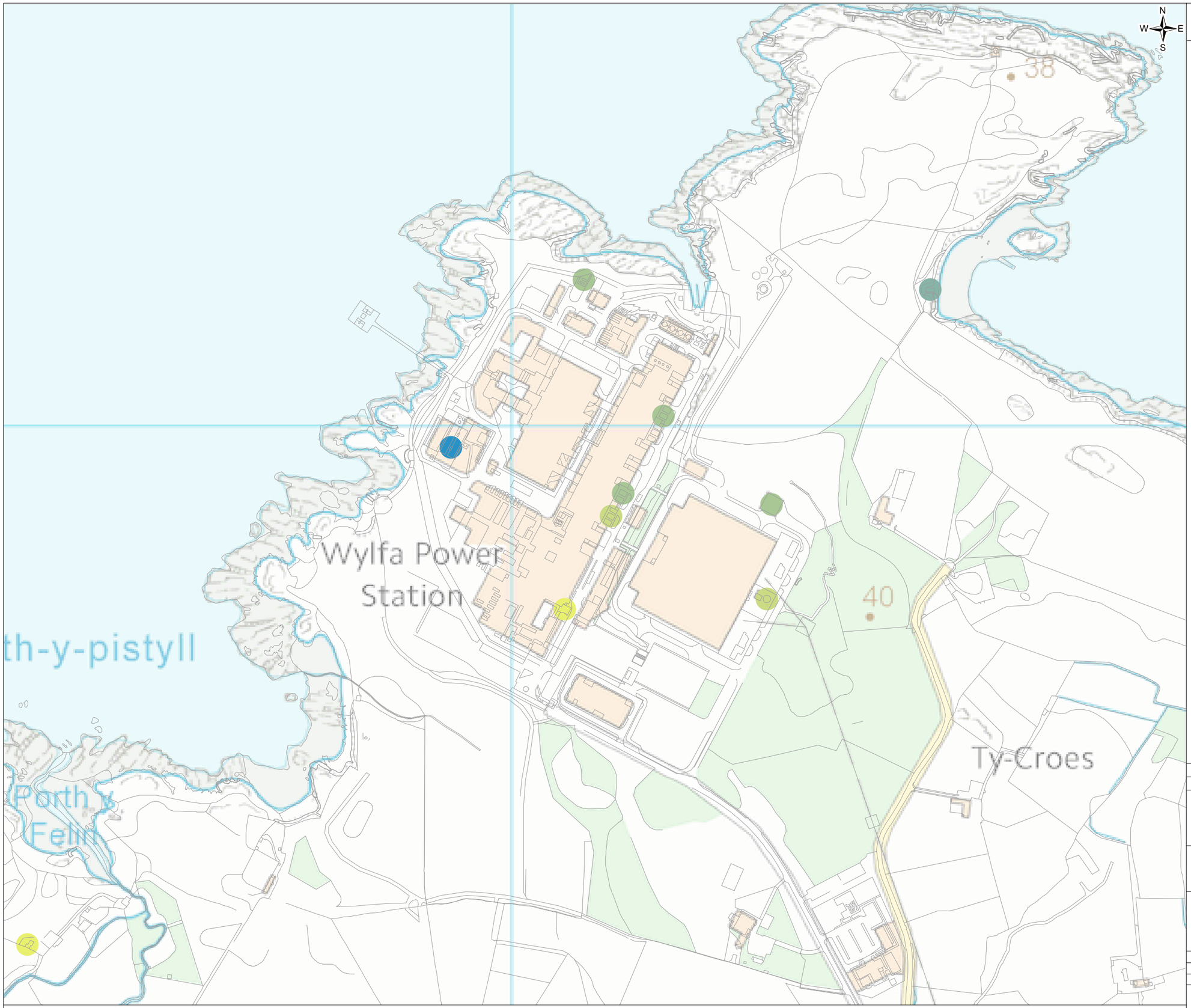
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_DAYTIME

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0 125 250 500 metres

FIGURE 14



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



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0 125 250 500 metres

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (EVENING)

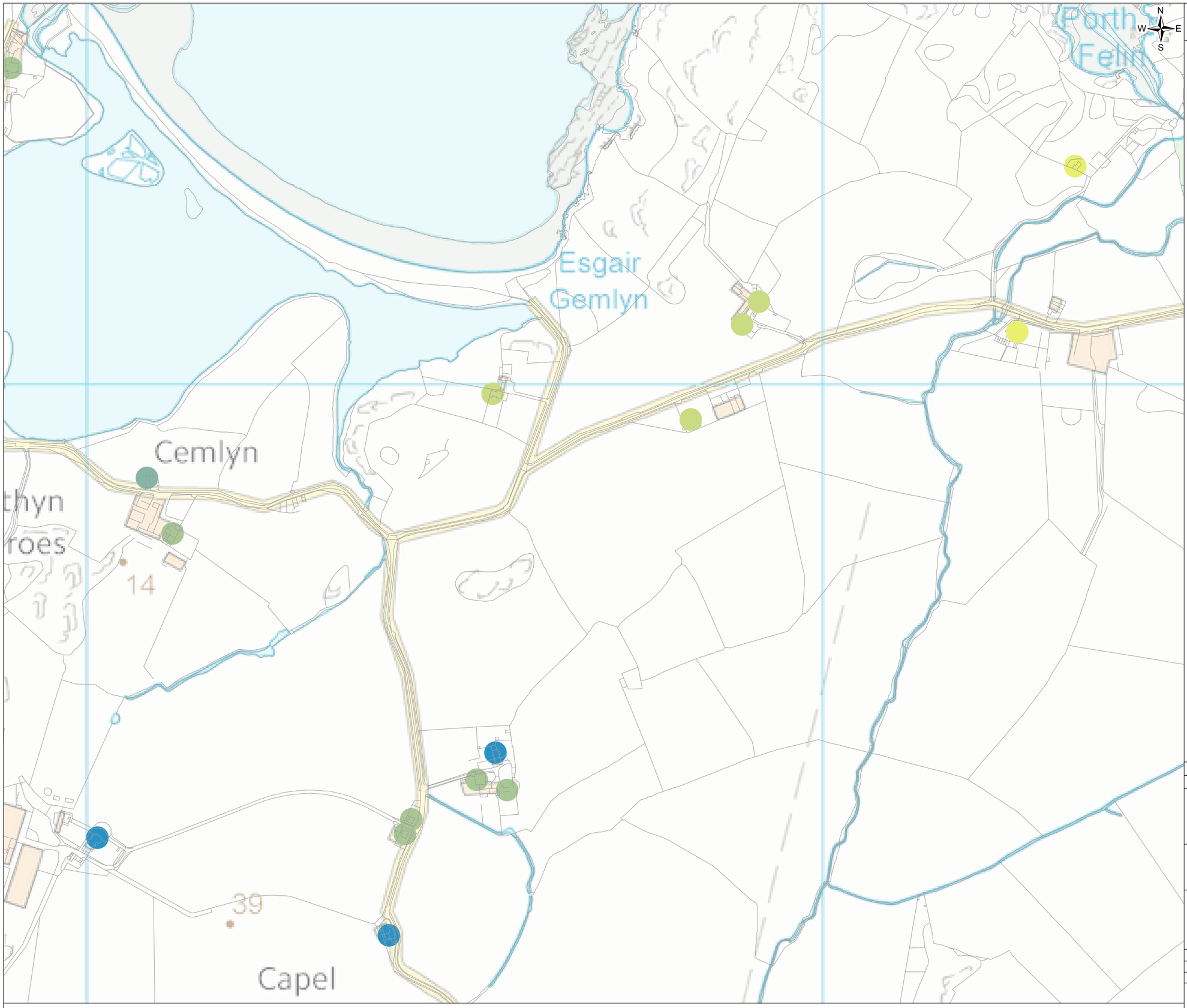
SHEET 1 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_EVENING

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FIGURE 14



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 58 TO 60 (EVENING)

SHEET 2 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS58TO60_EVENING

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0 125 250 500 metres

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FIGURE 14



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (EVENING)

SHEET 3 OF 17

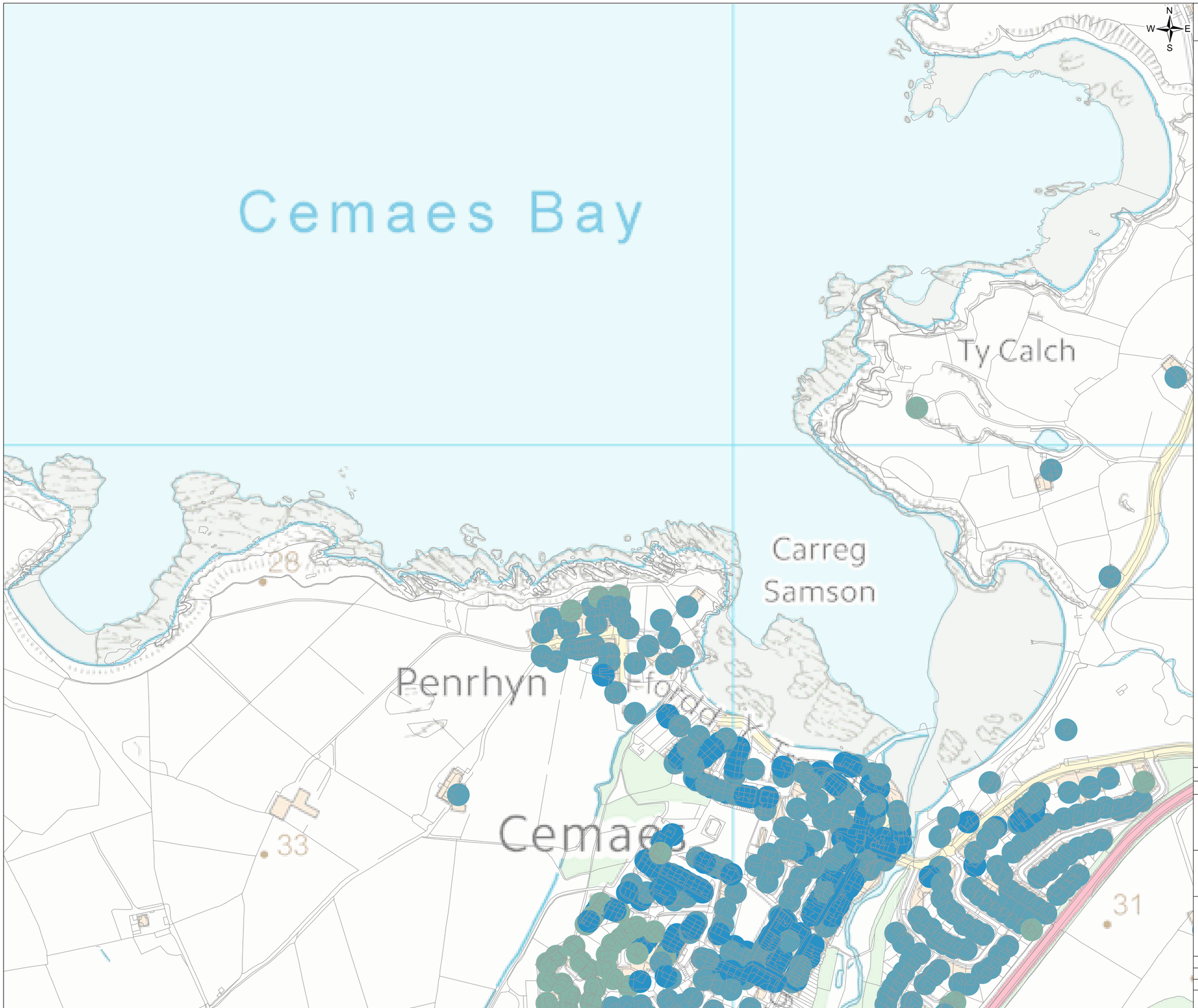
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Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_EVENING

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FIGURE 14



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (EVENING)
SHEET 4 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

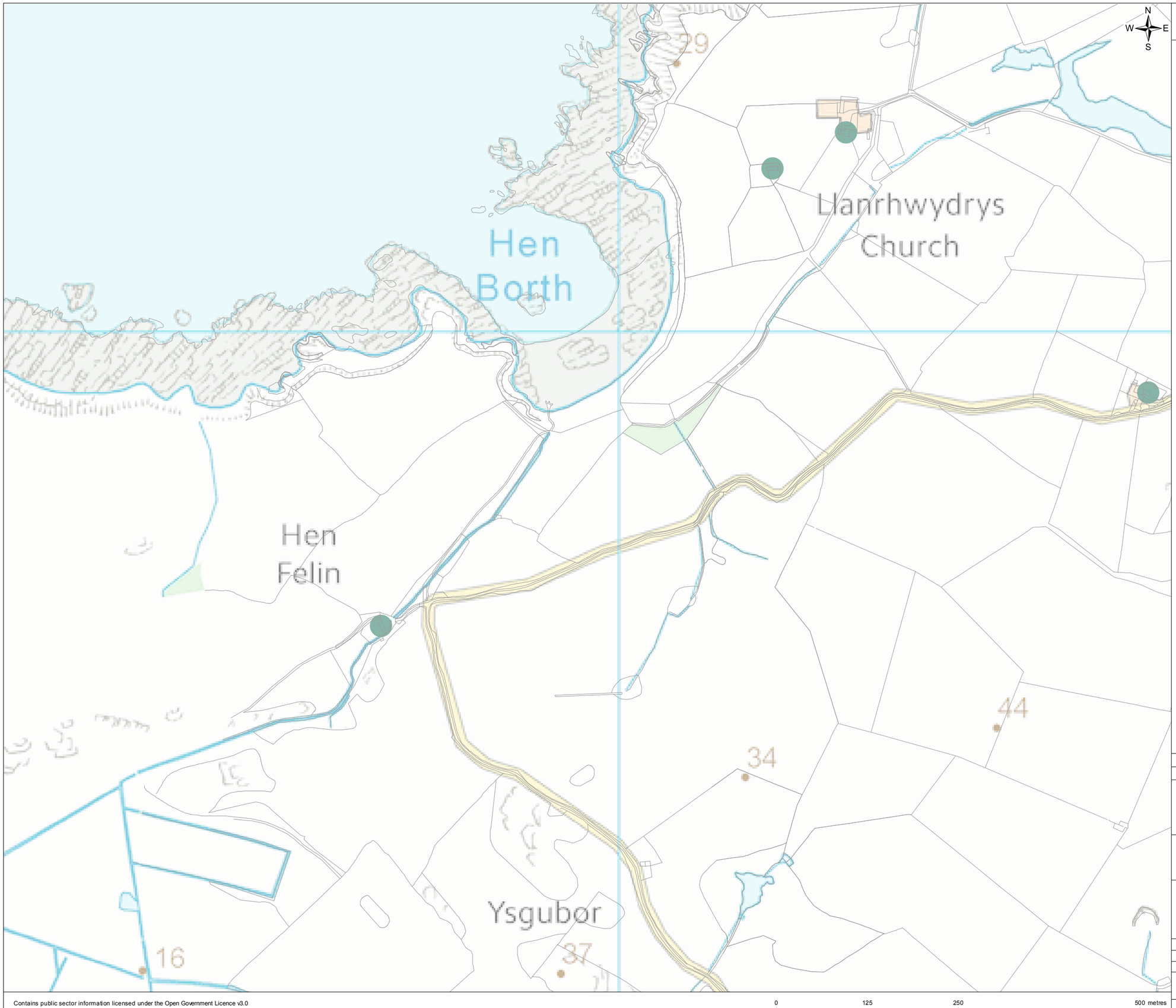
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_EVENING

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0 125 250 500 metres

FIGURE 14



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (EVENING)

SHEET 5 OF 17

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Client No.		

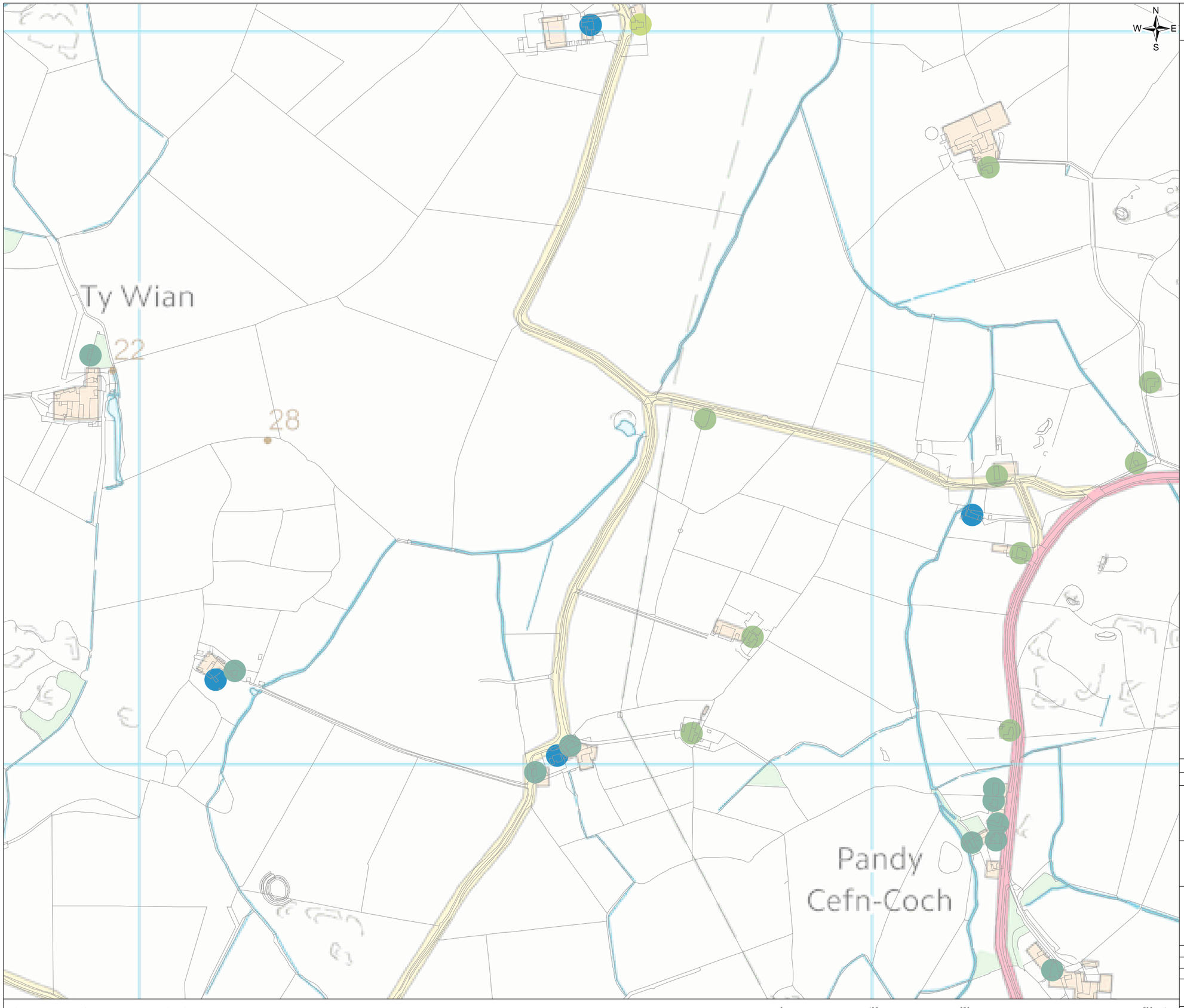
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS58TO60_EVENING

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0 125 250 500 metres

FIGURE 14



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (EVENING)

SHEET 6 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

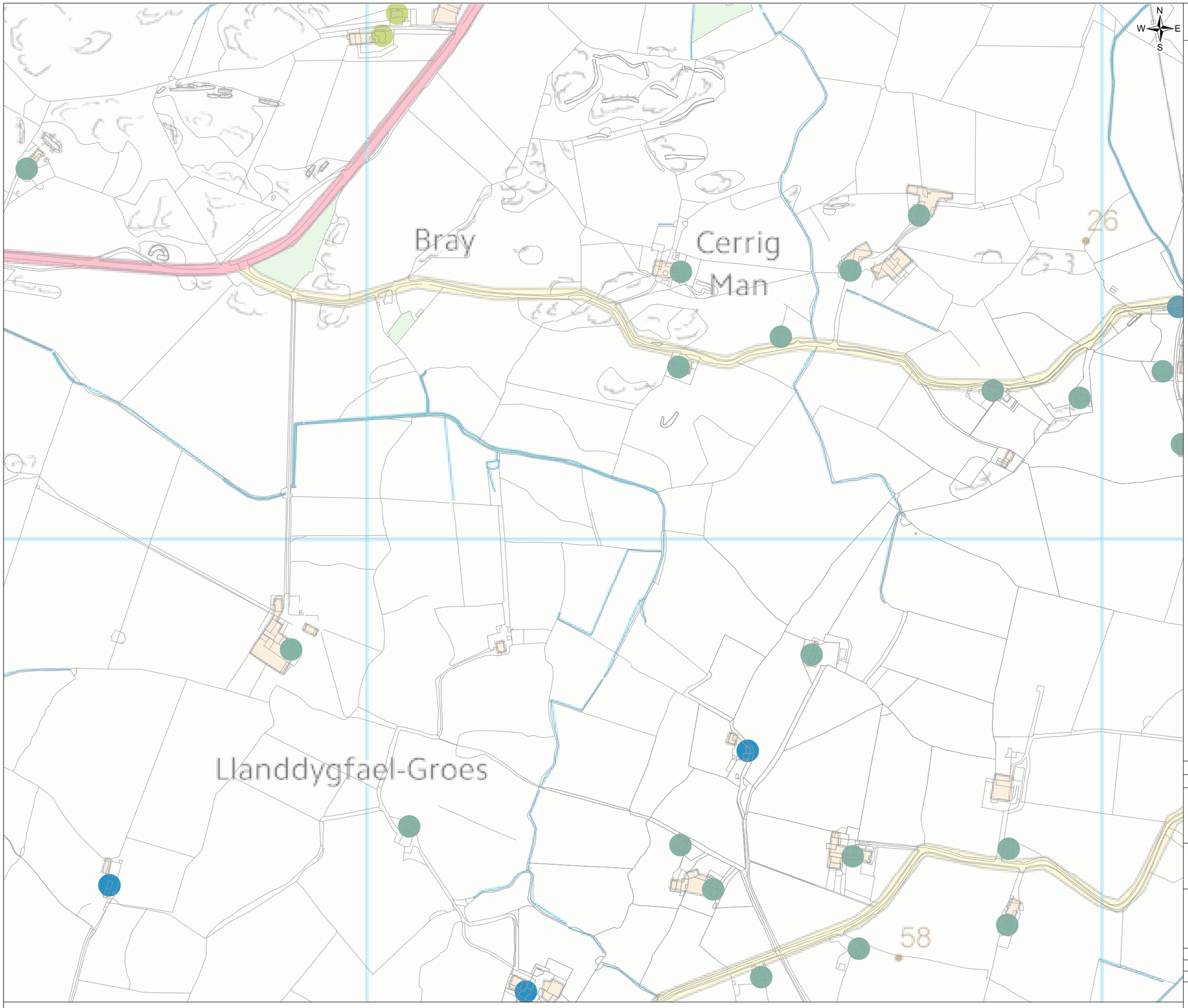
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0 125 250 500 metres

FIGURE 14



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (EVENING)

SHEET 7 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

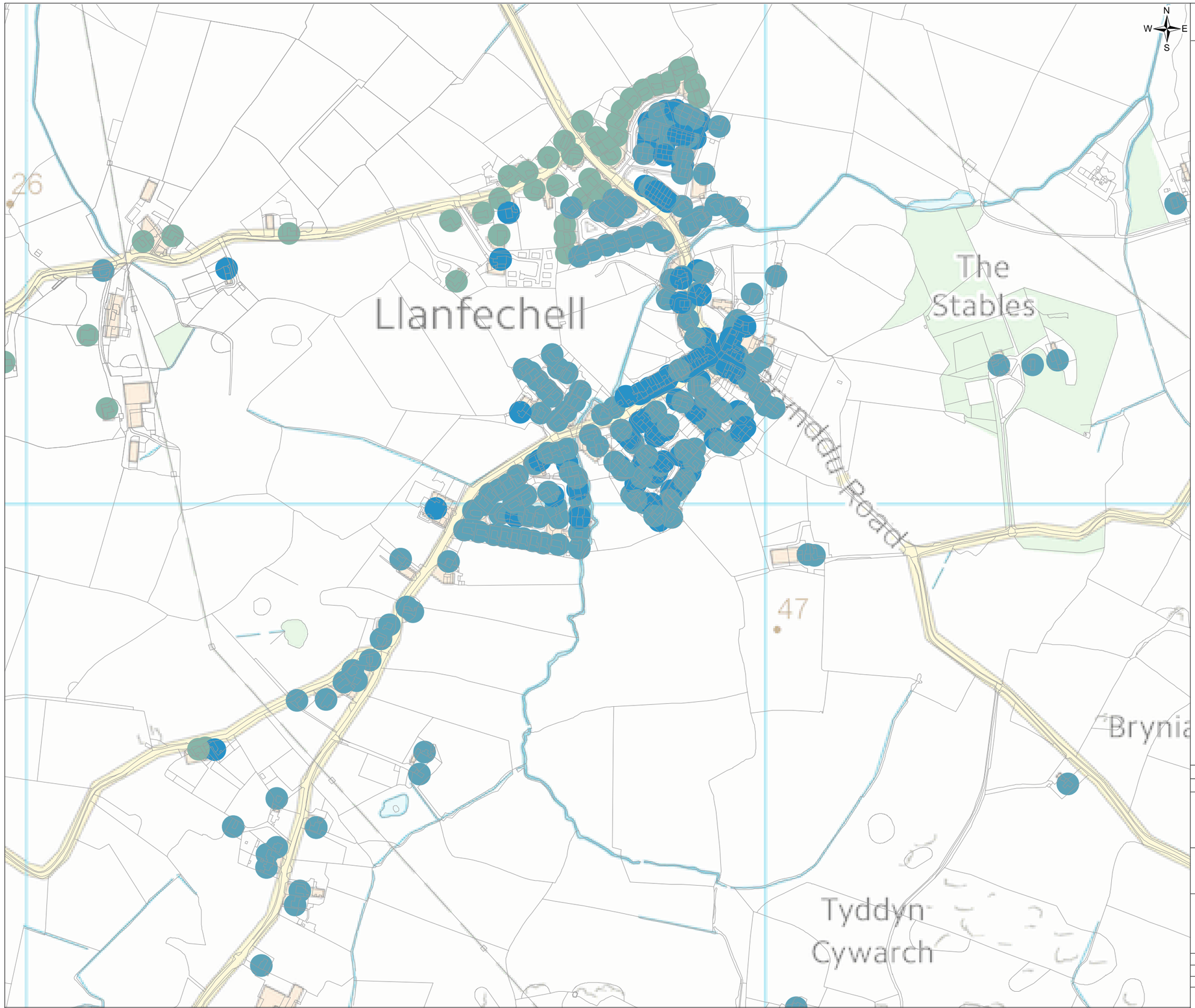
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0 125 250 500 metres

FIGURE 14



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (EVENING)

SHEET 8 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS58TO60_EVENING

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0 125 250 500 metres

FIGURE 14

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
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- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (EVENING)

SHEET 9 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

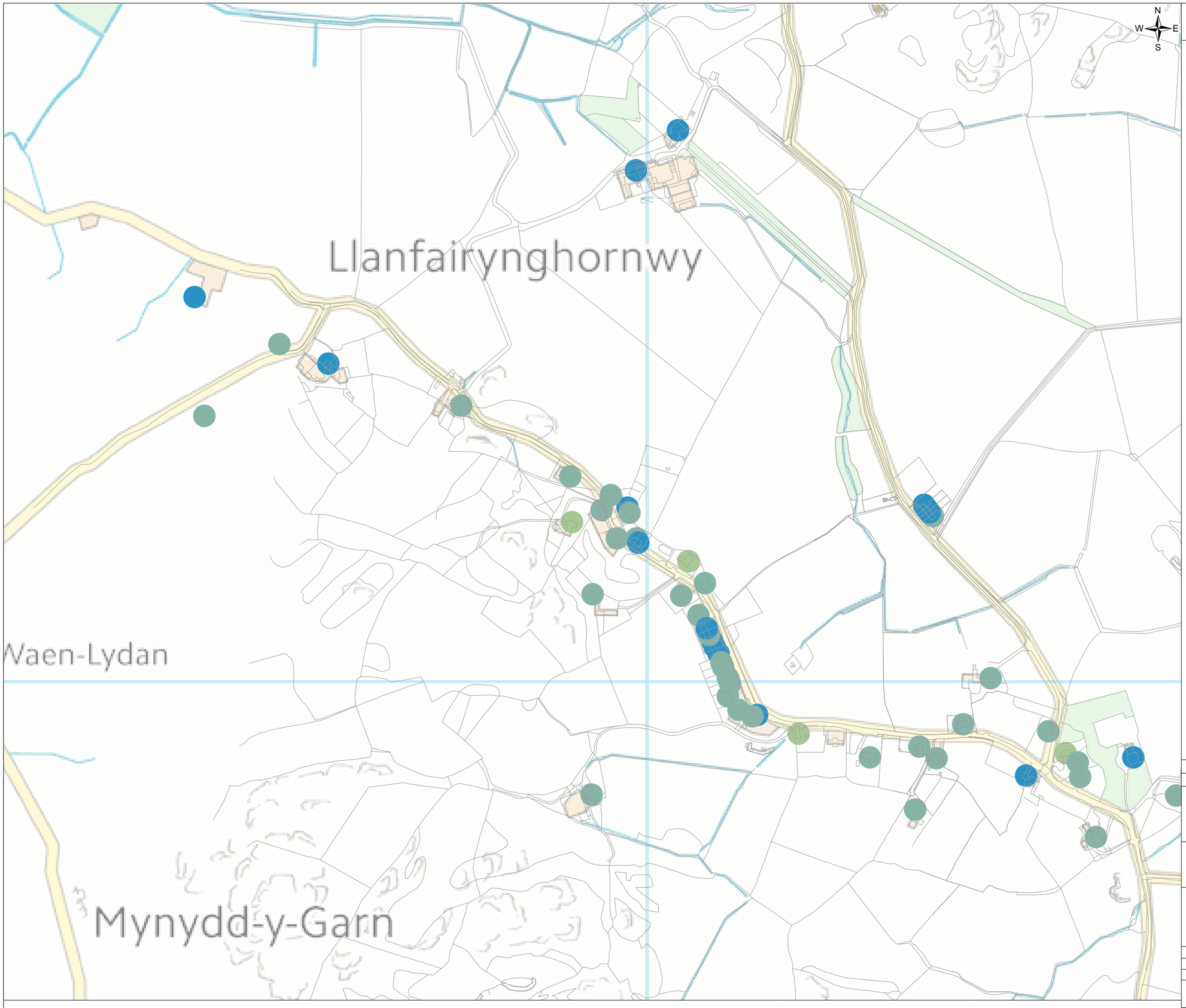
60PO80AS_NOISE_RfNMC_MONTHS58TO60_EVENING

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0 125 250 500 metres

FIGURE 14



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (EVENING)
SHEET 10 OF 17

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Client No.		

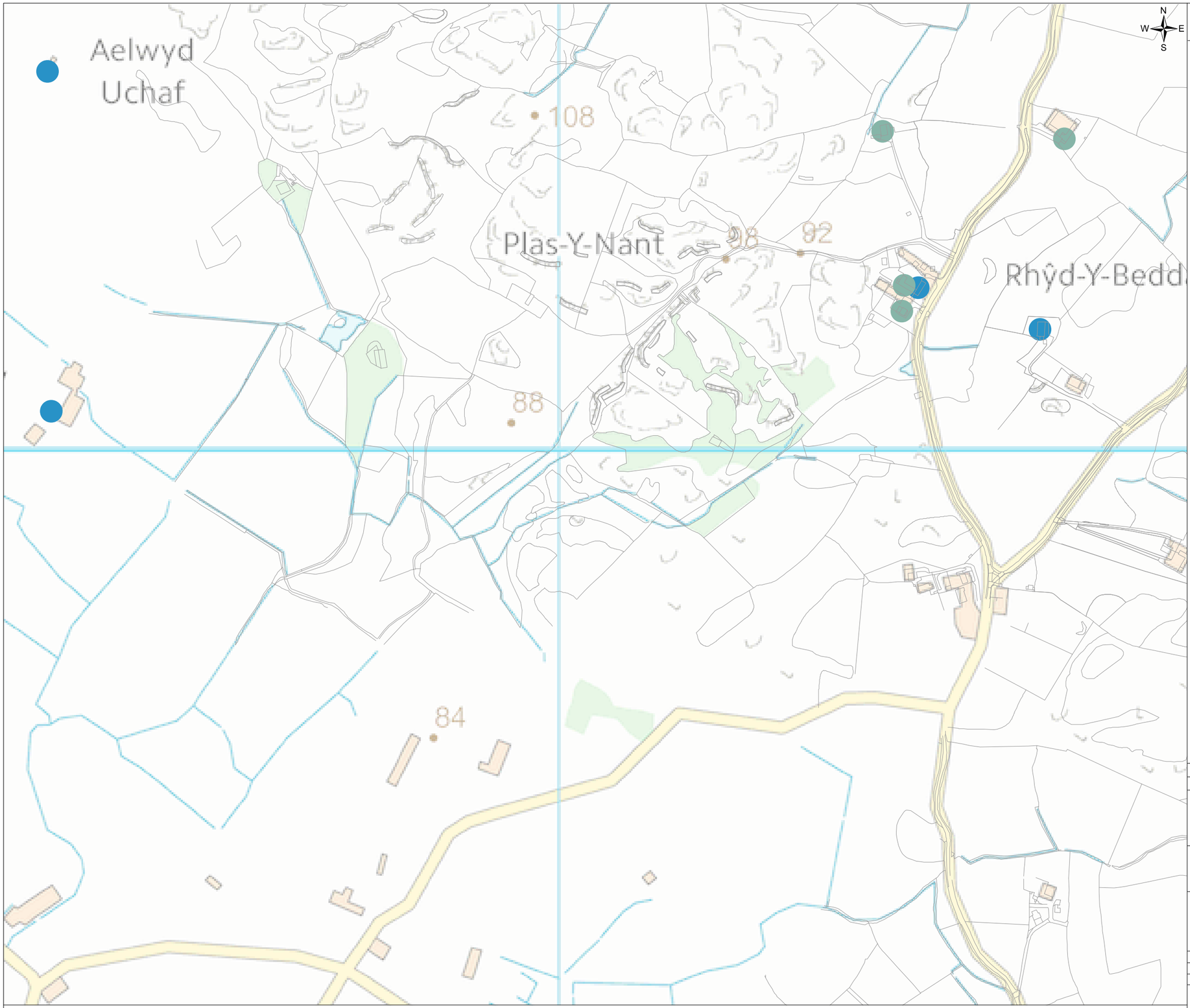
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_EVENING

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0 125 250 500 metres

FIGURE 14



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
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- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 58 TO 60 (EVENING)

SHEET 11 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

Drawing No.

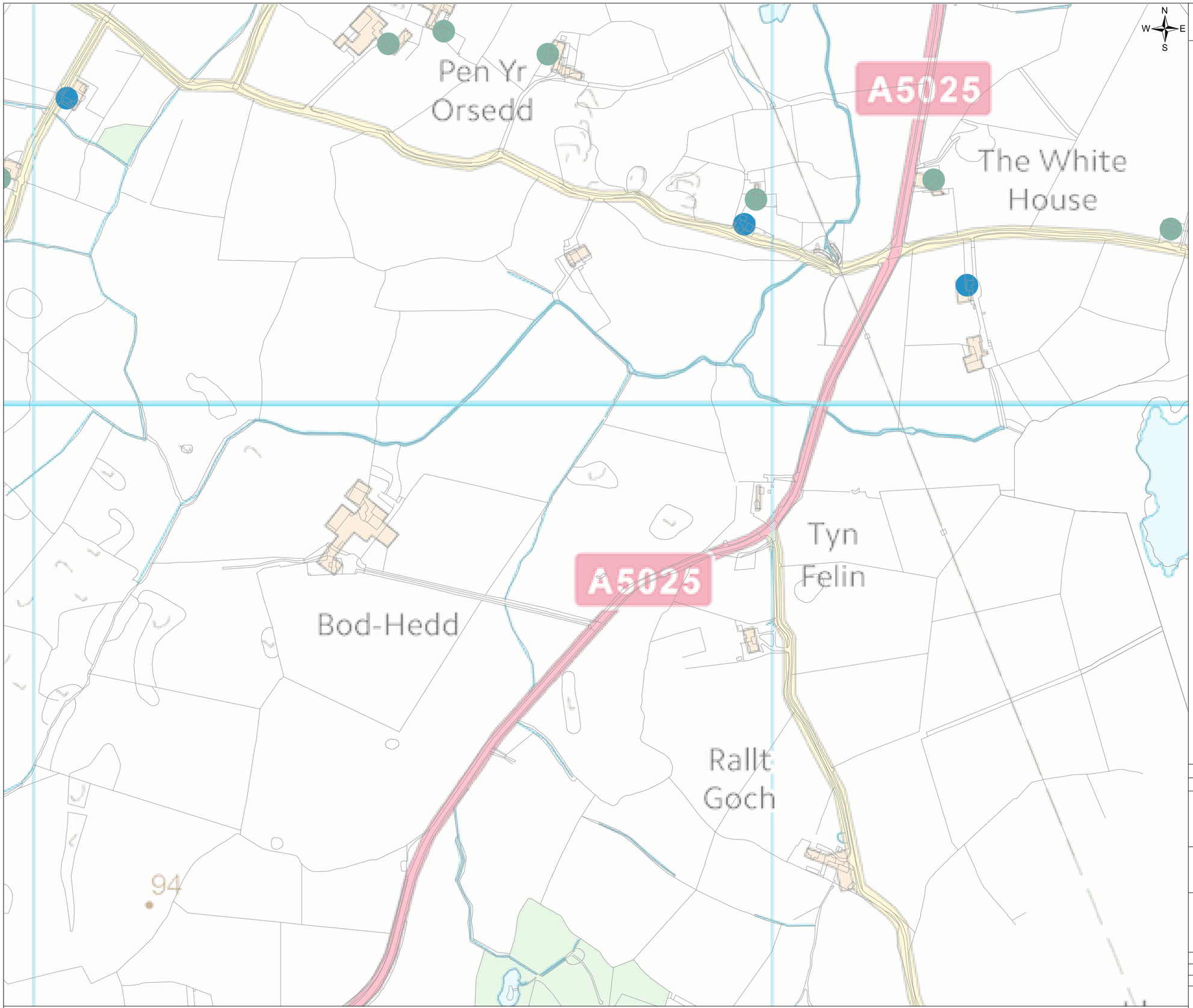
60PO80AS_NOISE_RfNMC_MONTHS58TO60_EVENING

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0 125 250 500 metres

FIGURE 14



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (EVENING)

SHEET 12 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

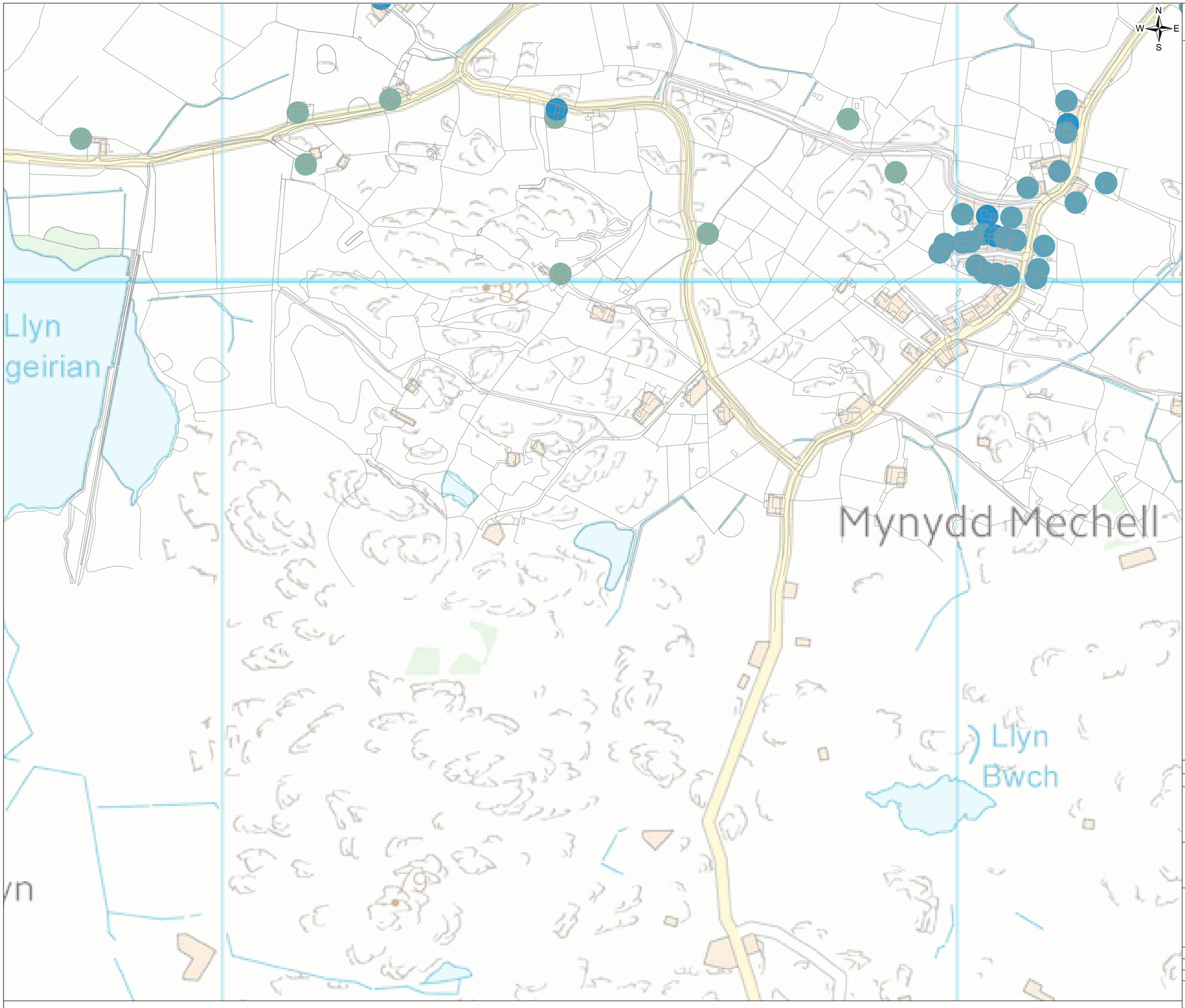
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_EVENING

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0 125 250 500 metres

FIGURE 14



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
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- 45 - 50
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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (EVENING)

SHEET 13 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_EVENING

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0 125 250 500 metres

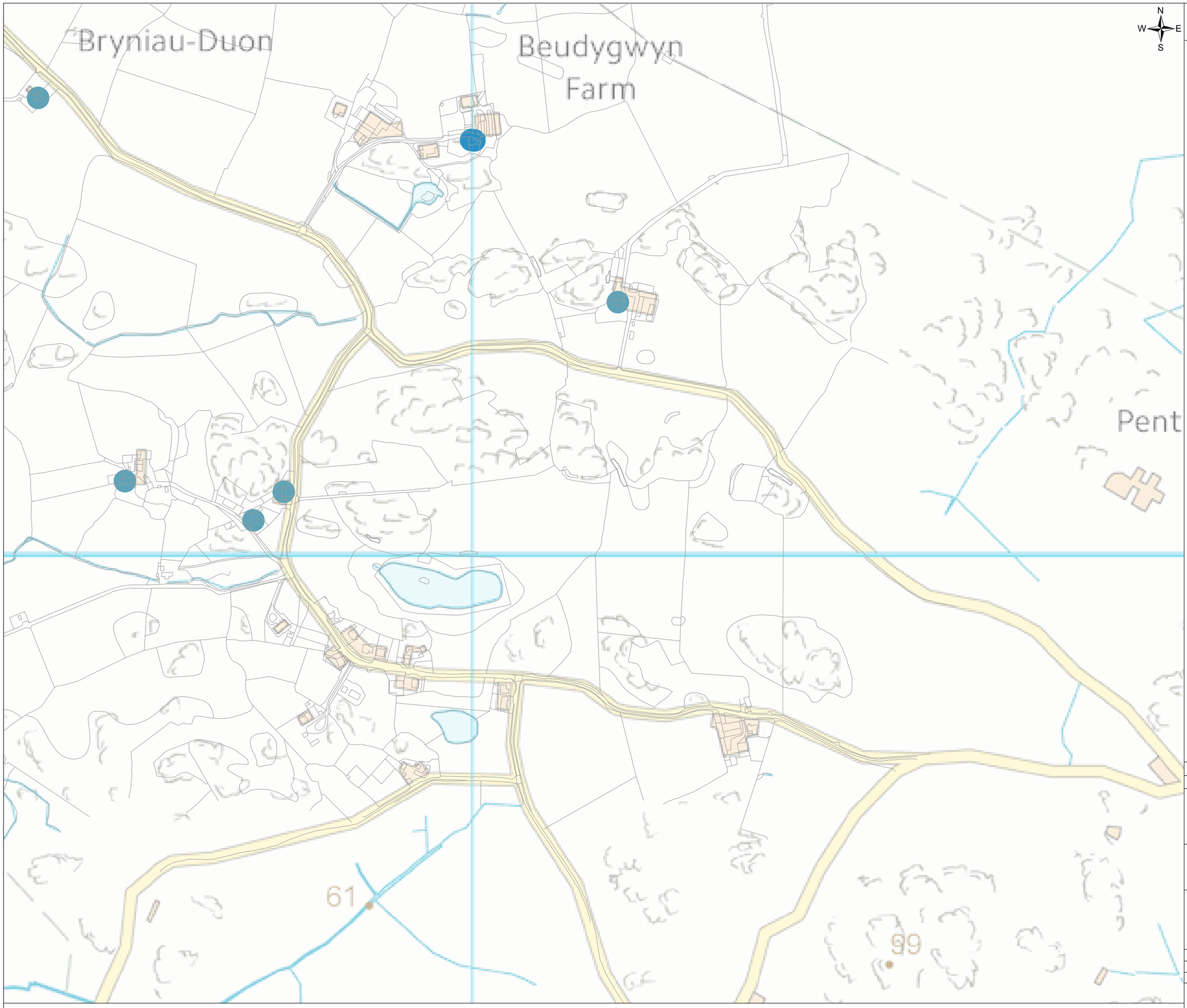


FIGURE 14

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (EVENING)

SHEET 14 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

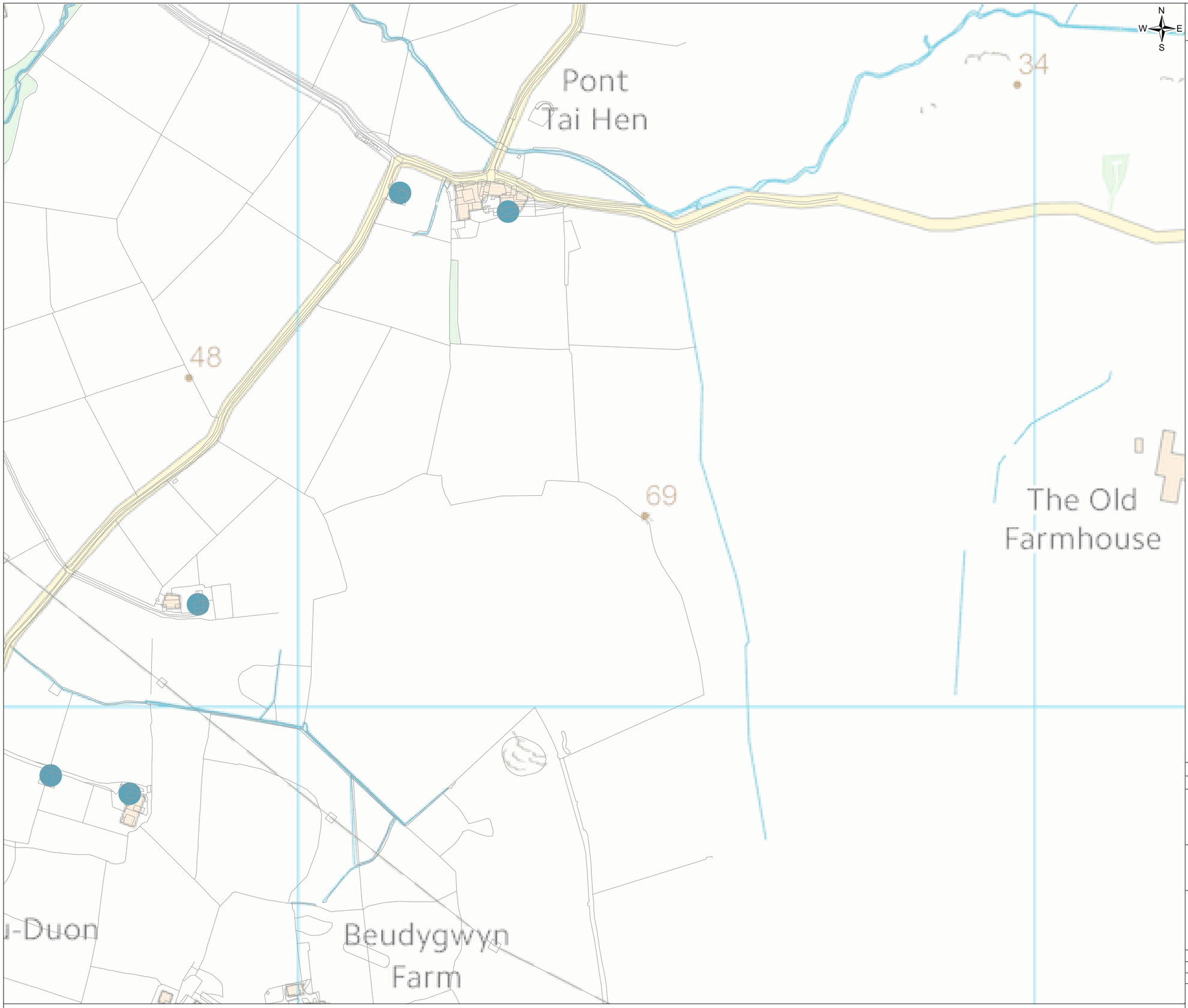
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0 125 250 500 metres

FIGURE 14



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
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- 45 - 50
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Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 58 TO 60 (EVENING)

SHEET 15 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS58TO60_EVENING

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0 125 250 500 metres

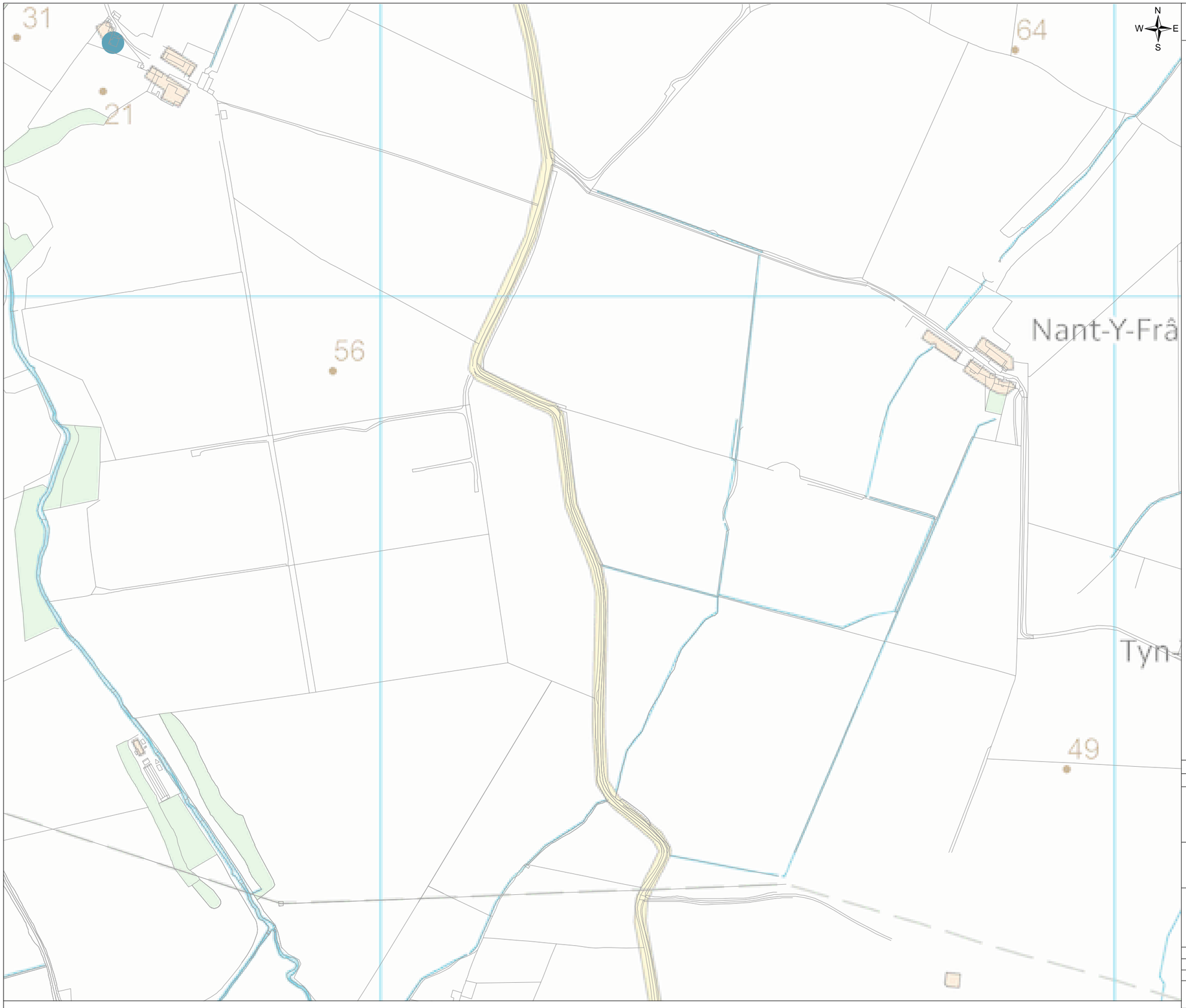


FIGURE 14

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (EVENING)

SHEET 16 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_EVENING

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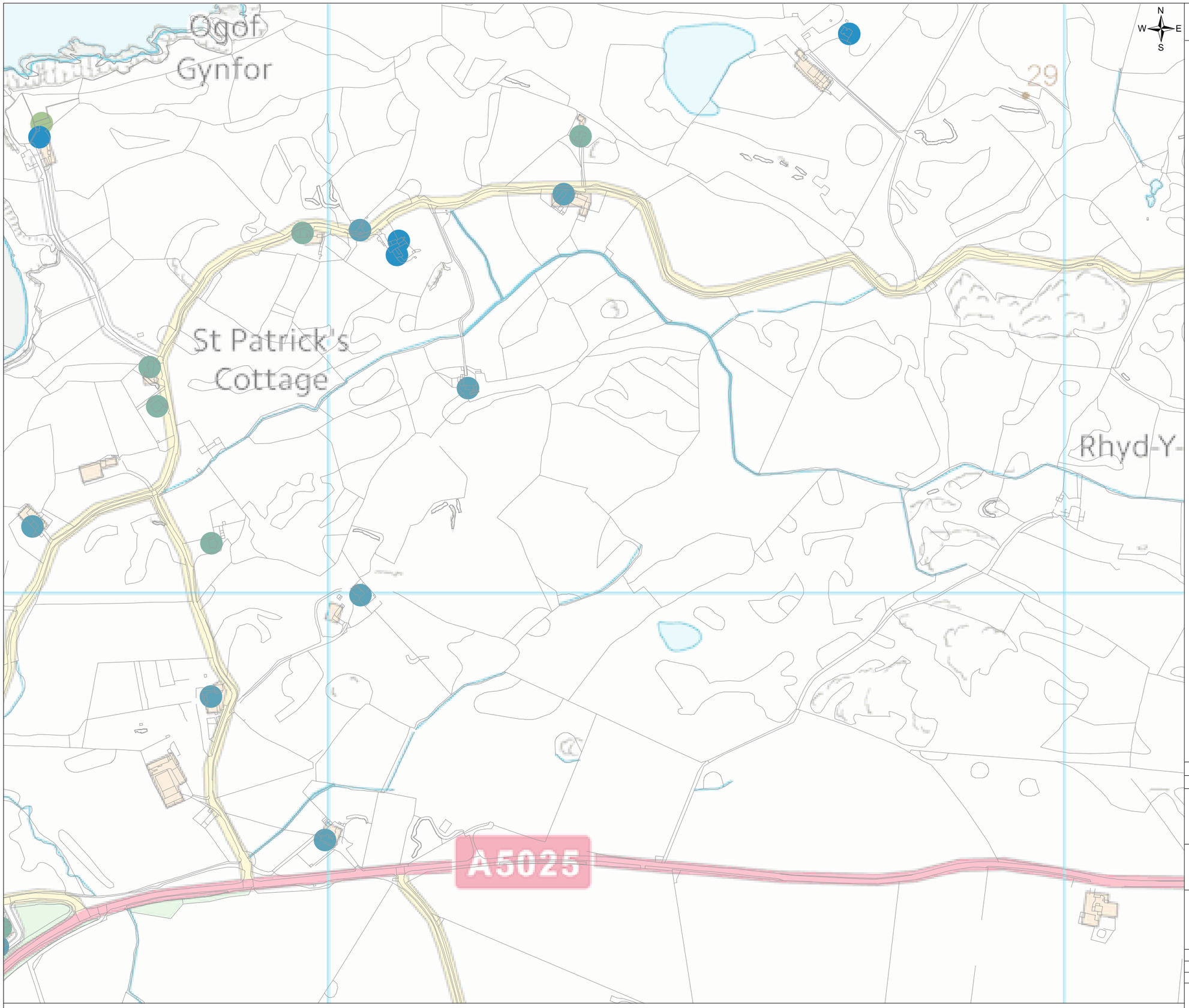


FIGURE 14

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (EVENING)

SHEET 17 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

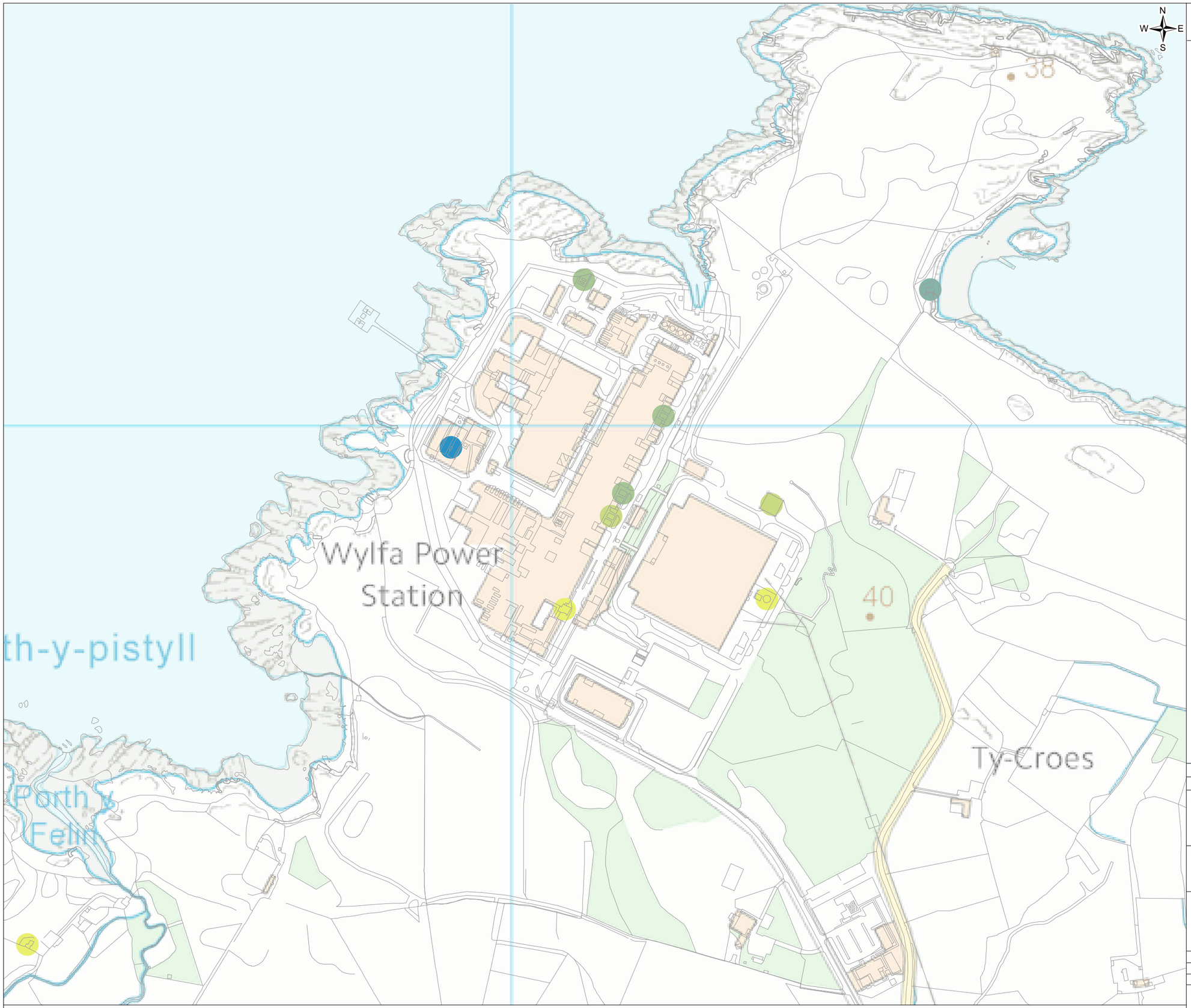
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_EVENING

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0 125 250 500 metres

FIGURE 15



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (NIGHT-TIME)

SHEET 1 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_NIGHTTIME

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0 125 250 500 metres



FIGURE 15

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (NIGHT-TIME)

SHEET 2 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS58TO60_NIGHTTIME

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0 125 250 500 metres

FIGURE 15

Pennant
42
Tregele
Caerdegog
Isaf
37
49
Cromlech
26

N
W
E
S

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (NIGHT-TIME)

SHEET 3 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

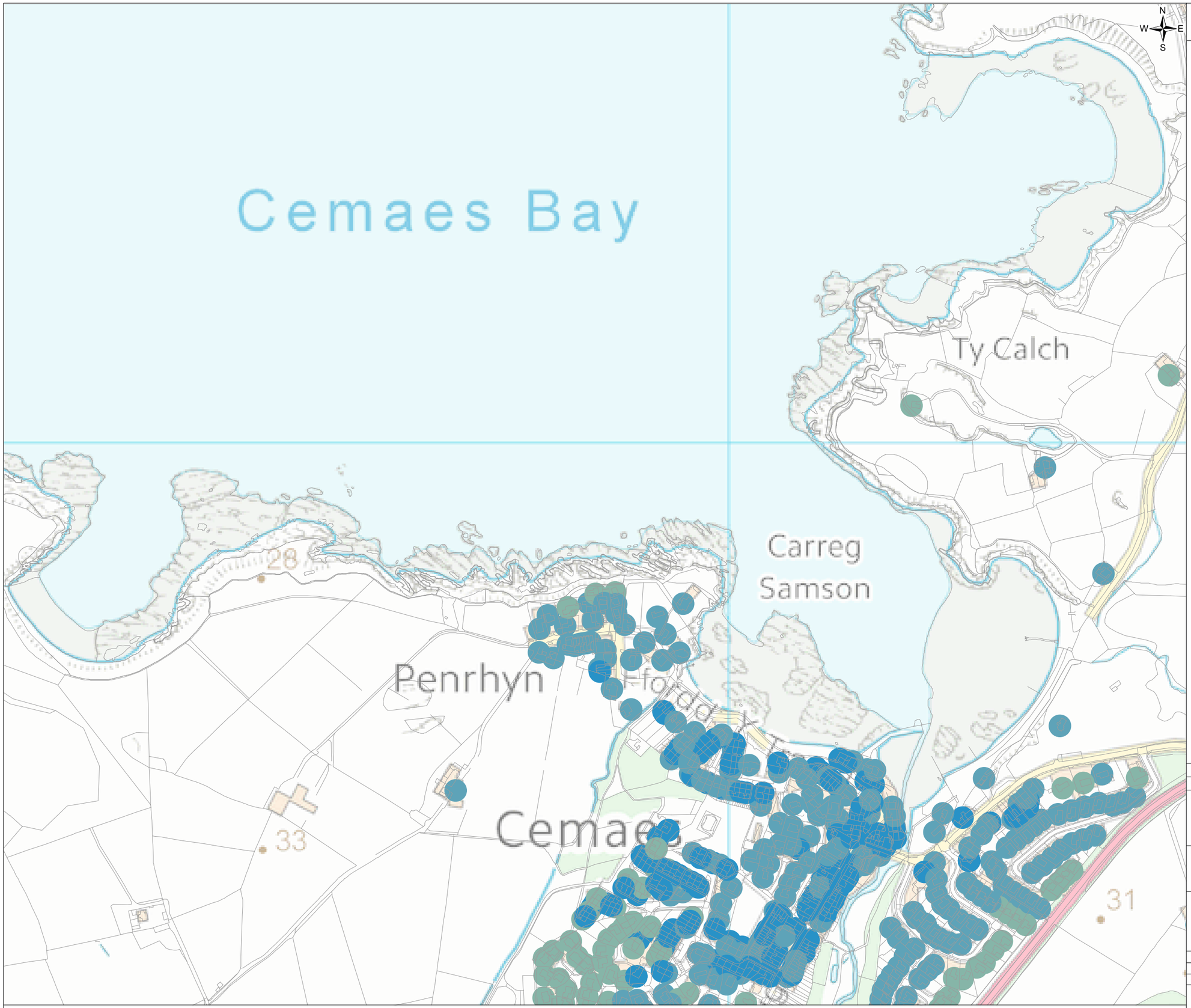
60PO80AS_NOISE_RfNMC_MONTHS58TO60_NIGHTTIME

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0 125 250 500 metres

FIGURE 15



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
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- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (NIGHT-TIME)
SHEET 4 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

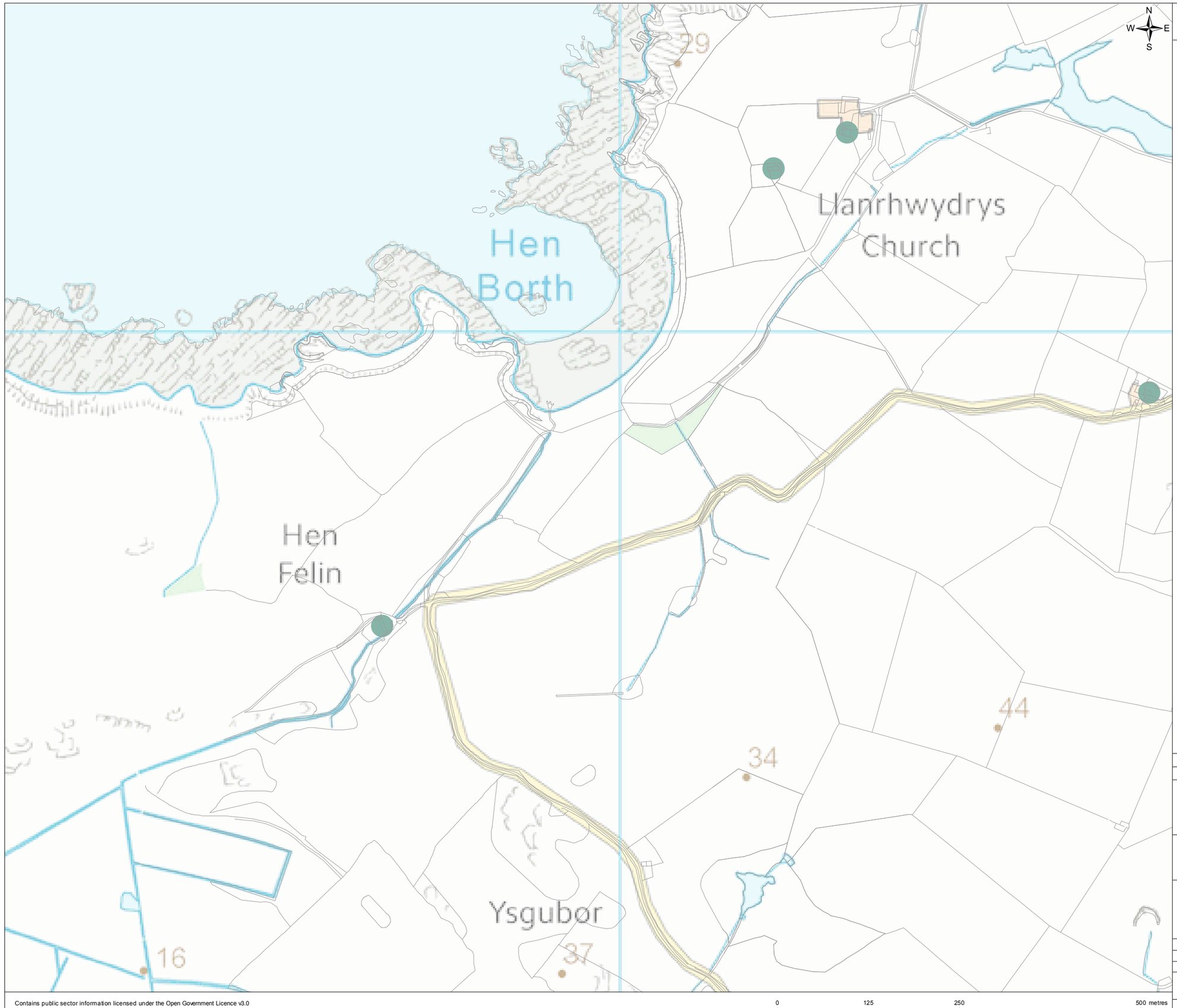
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_NIGHTTIME

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0 125 250 500 metres

FIGURE 15



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (NIGHT-TIME)
SHEET 5 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS58TO60_NIGHTTIME

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0 125 250 500 metres

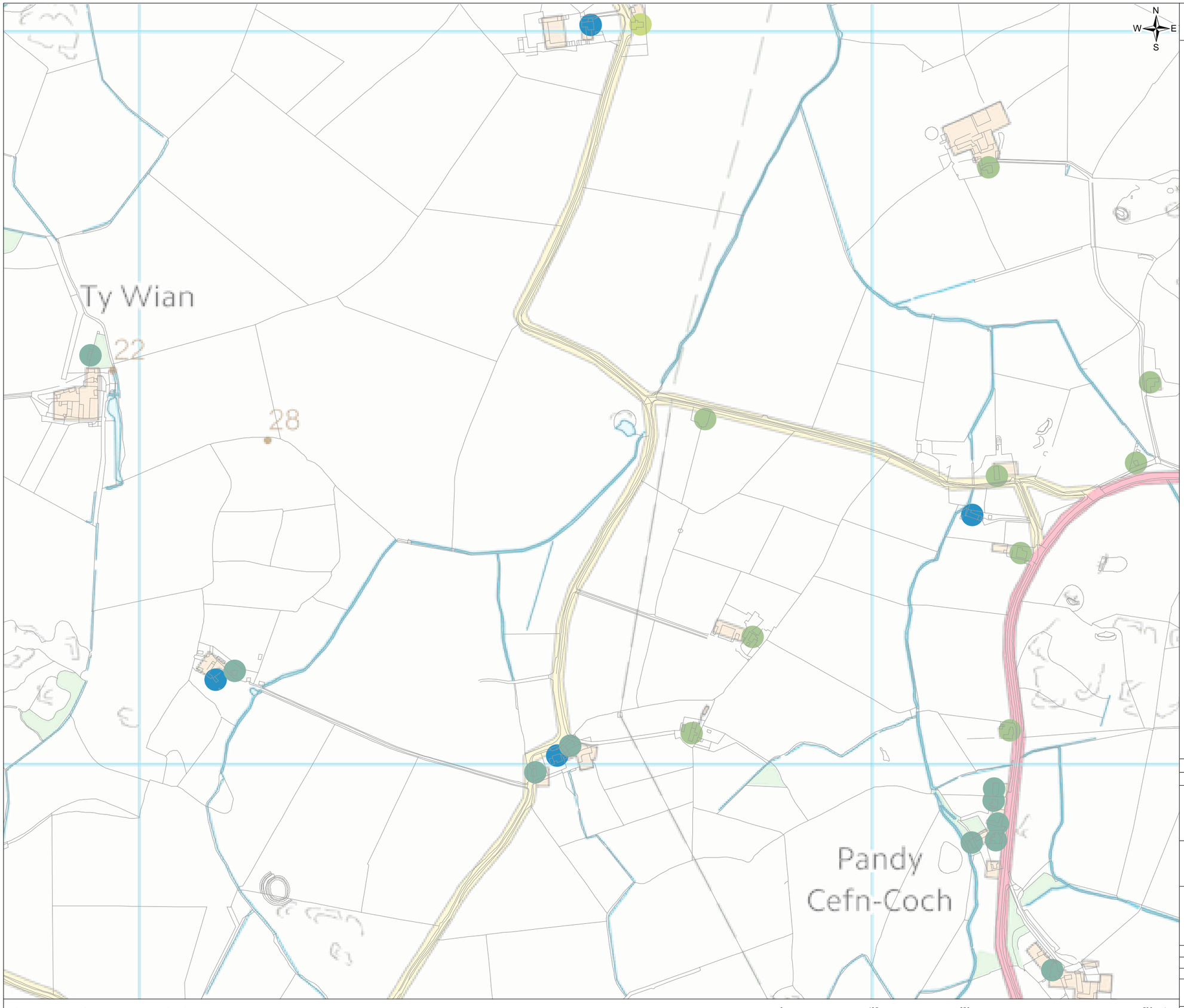


FIGURE 15

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
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- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (NIGHT-TIME)

SHEET 6 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

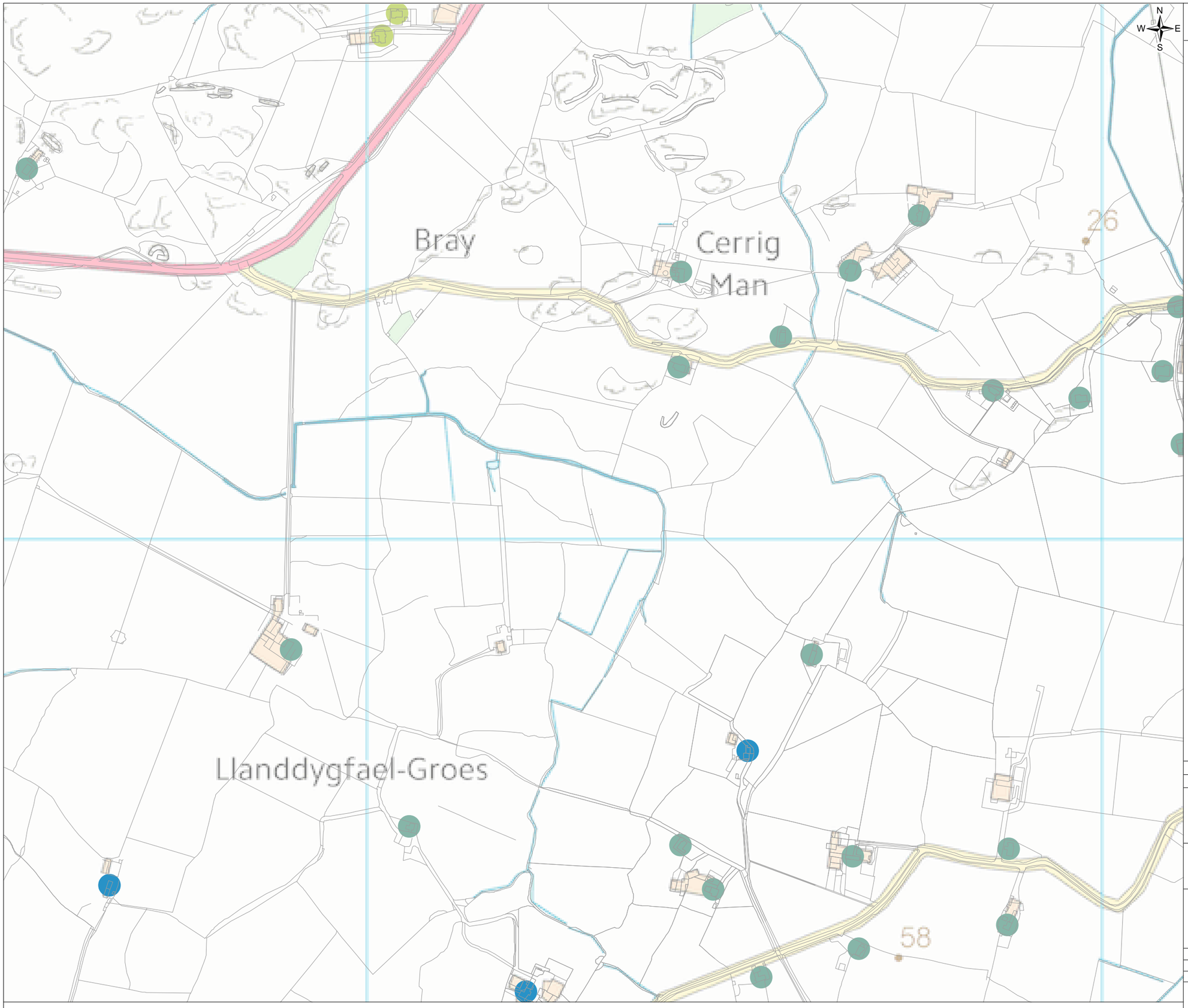
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0 125 250 500 metres

FIGURE 15



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
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- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (NIGHT-TIME)

SHEET 7 OF 17

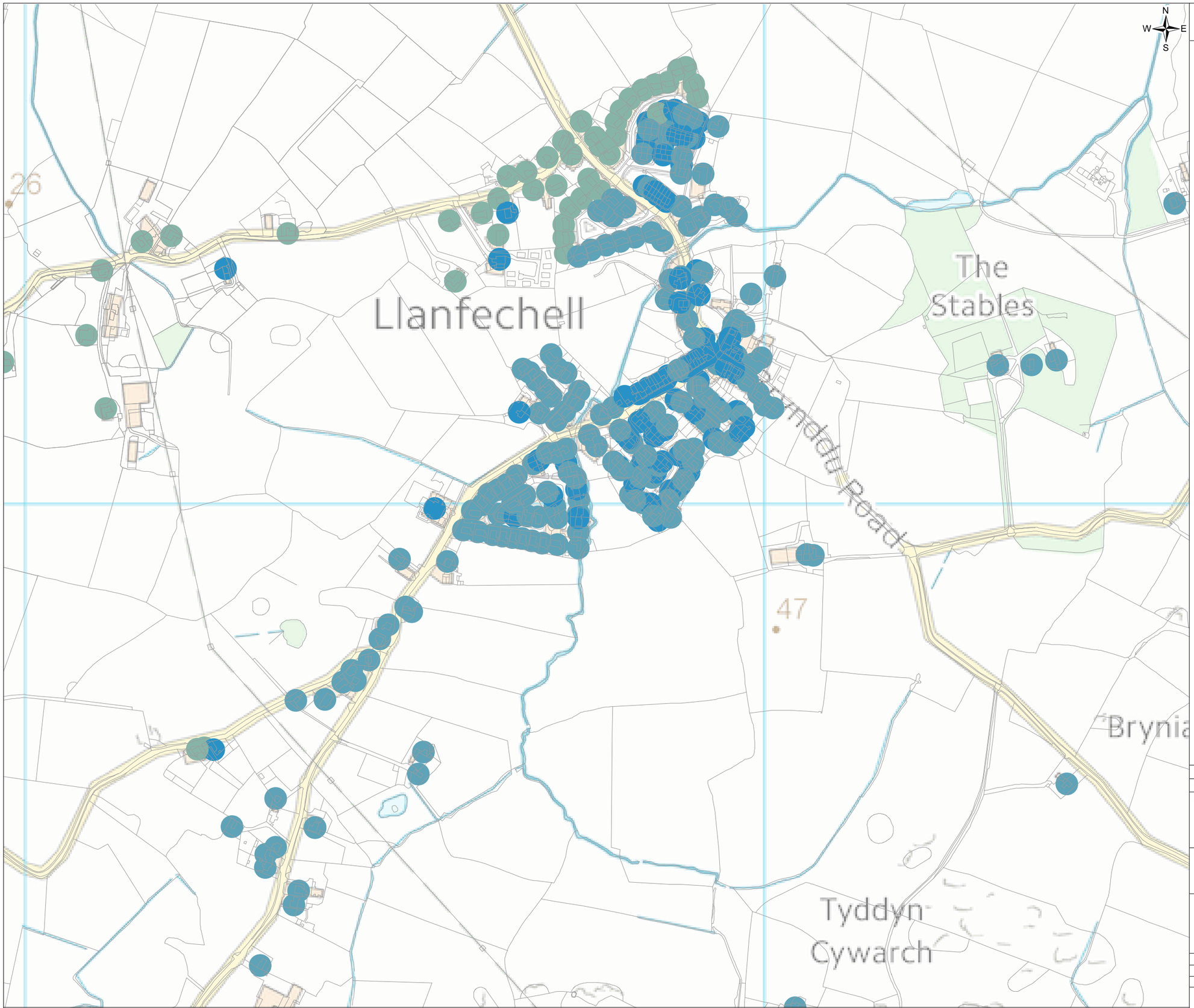
Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS58TO60_NIGHTTIME

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0 125 250 500 metres



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FIGURE 15

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
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- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (NIGHT-TIME)

SHEET 8 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS58TO60_NIGHTTIME

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FIGURE 15

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (NIGHT-TIME)

SHEET 9 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

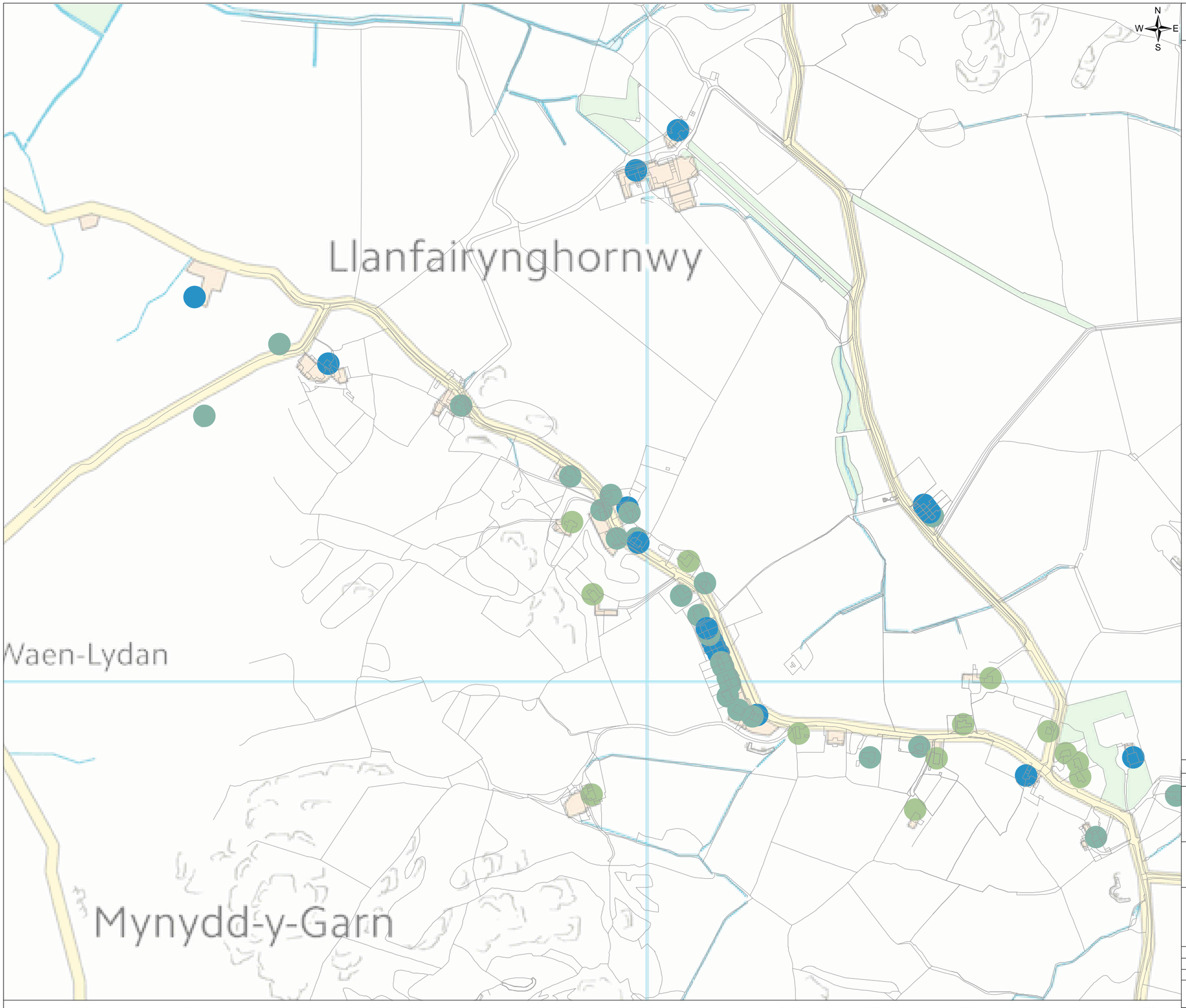
60PO80AS_NOISE_RfNMC_MONTHS58TO60_NIGHTTIME

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0 125 250 500 metres

FIGURE 15



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
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- 60 - 65
- 65 - 70
- 70 - 75
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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (NIGHT-TIME)
SHEET 10 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_NIGHTTIME

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0 125 250 500 metres

FIGURE 15

Aelwyd Uchaf

Plas-Y-Nant

Rhŷd-Y-Bedd

108

98

92

88

84

N
W E
S

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (NIGHT-TIME)

SHEET 11 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

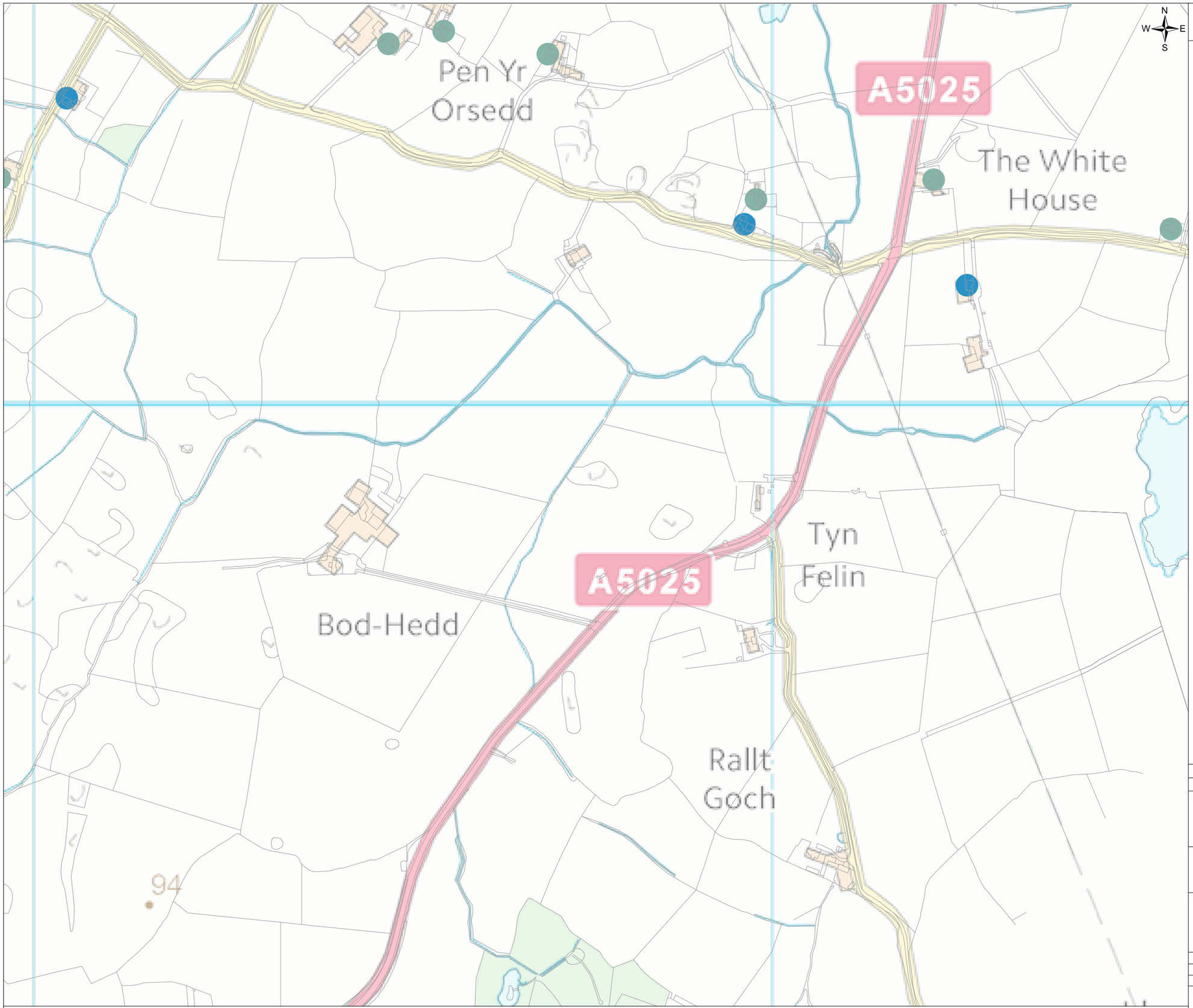
60PO80AS_NOISE_RfNMC_MONTHS58TO60_NIGHTTIME

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0 125 250 500 metres

FIGURE 15



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (NIGHT-TIME)

SHEET 12 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

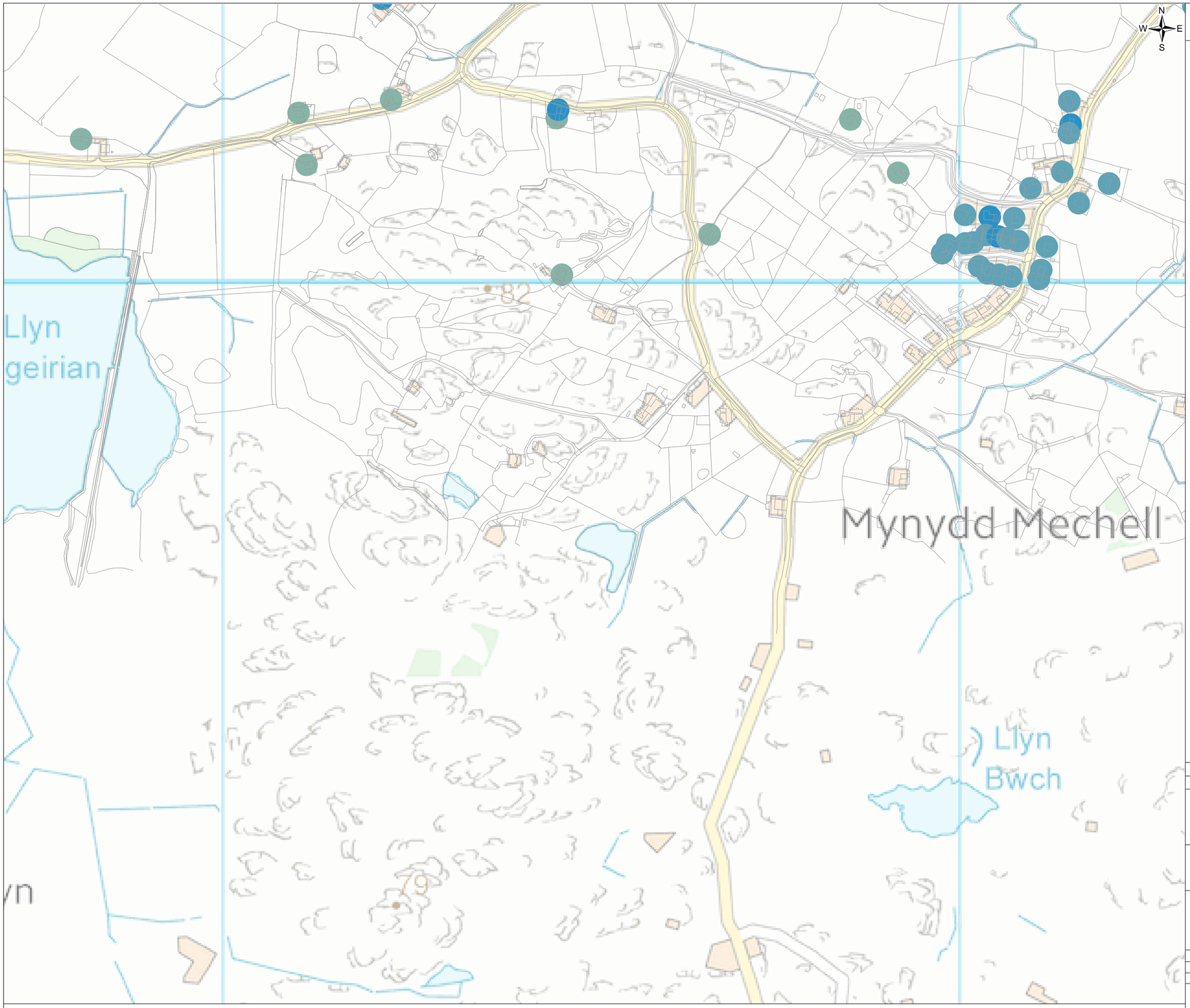
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_NIGHTTIME

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0 125 250 500 metres

FIGURE 15



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (NIGHT-TIME)

SHEET 13 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

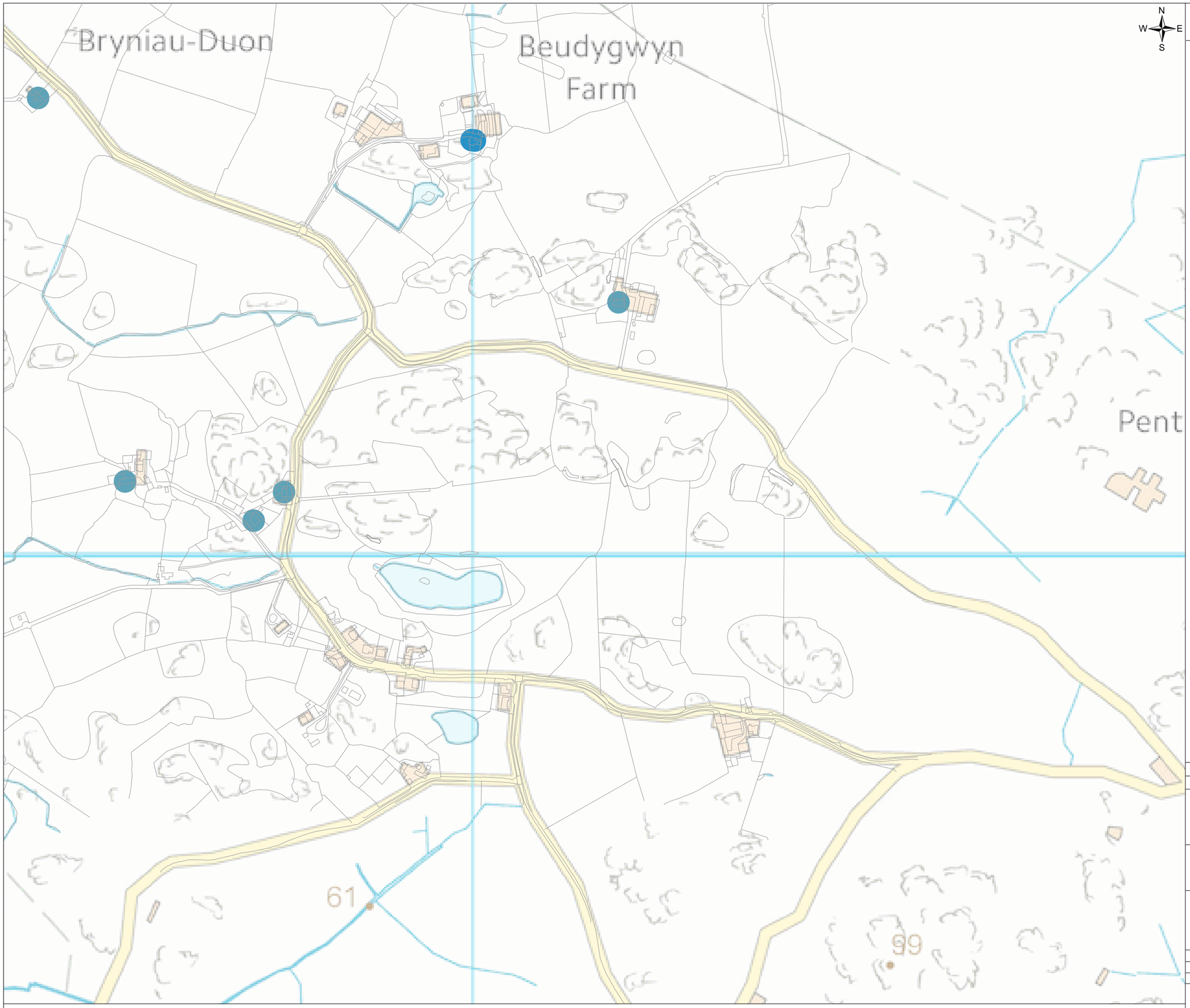
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS58TO60_NIGHTTIME

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0 125 250 500 metres

FIGURE 15



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

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- 35 - 40
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Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (NIGHT-TIME)

SHEET 14 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

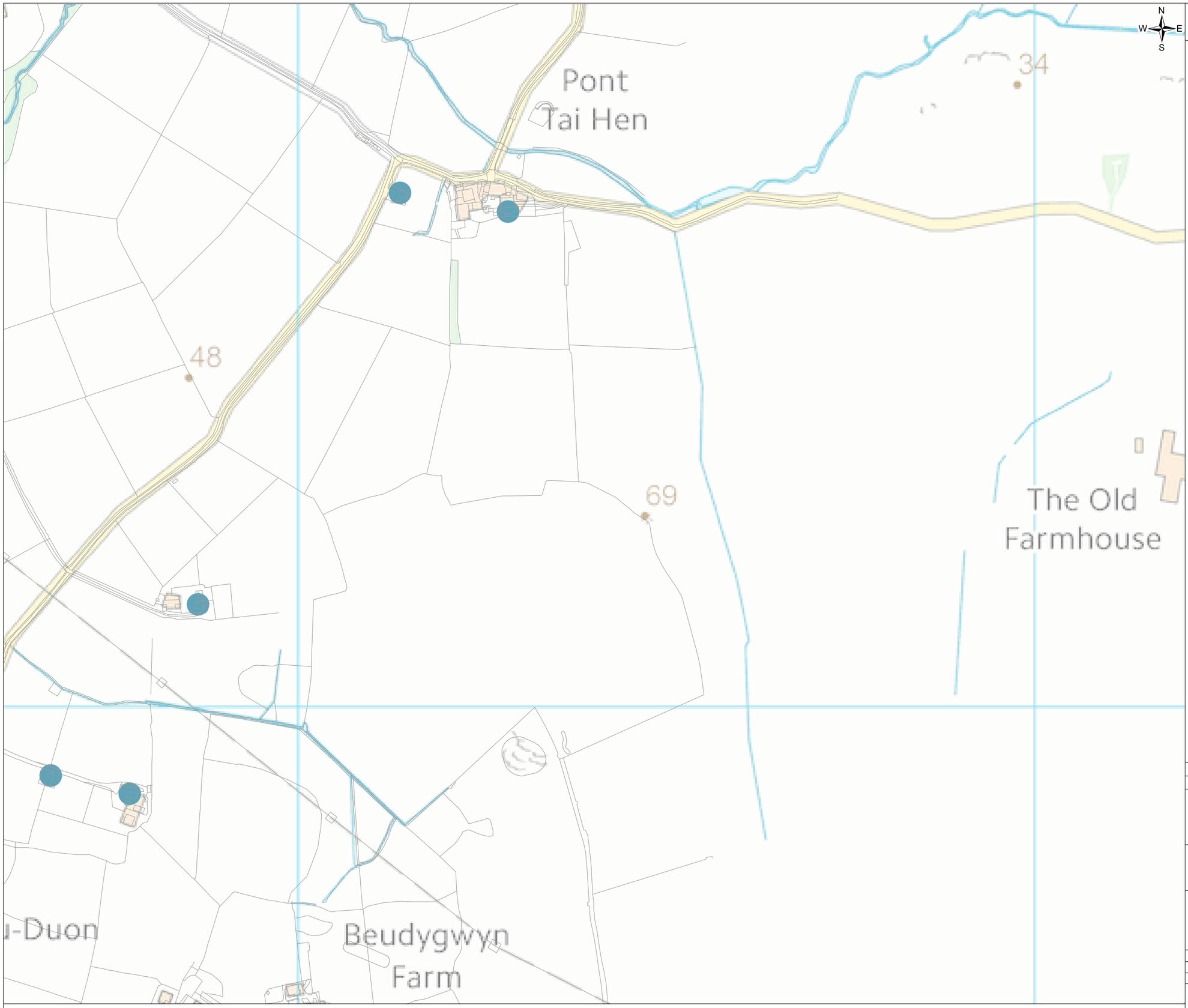
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0 125 250 500 metres

FIGURE 15



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
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Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 58 TO 60 (NIGHT-TIME)

SHEET 15 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS58TO60_NIGHTTIME

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0 125 250 500 metres

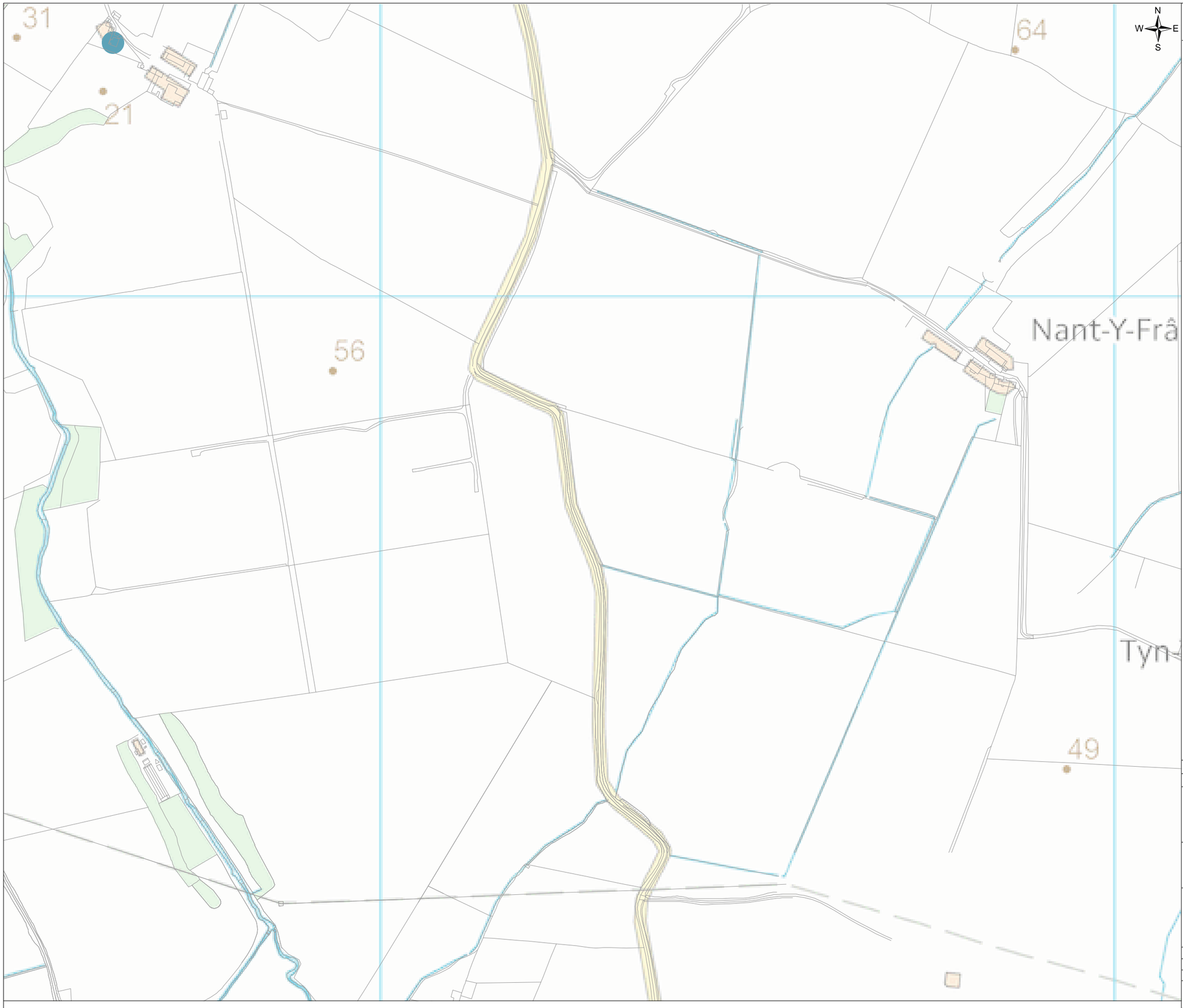


FIGURE 15

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (NIGHT-TIME)

SHEET 16 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS58TO60_NIGHTTIME

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0 125 250 500 metres

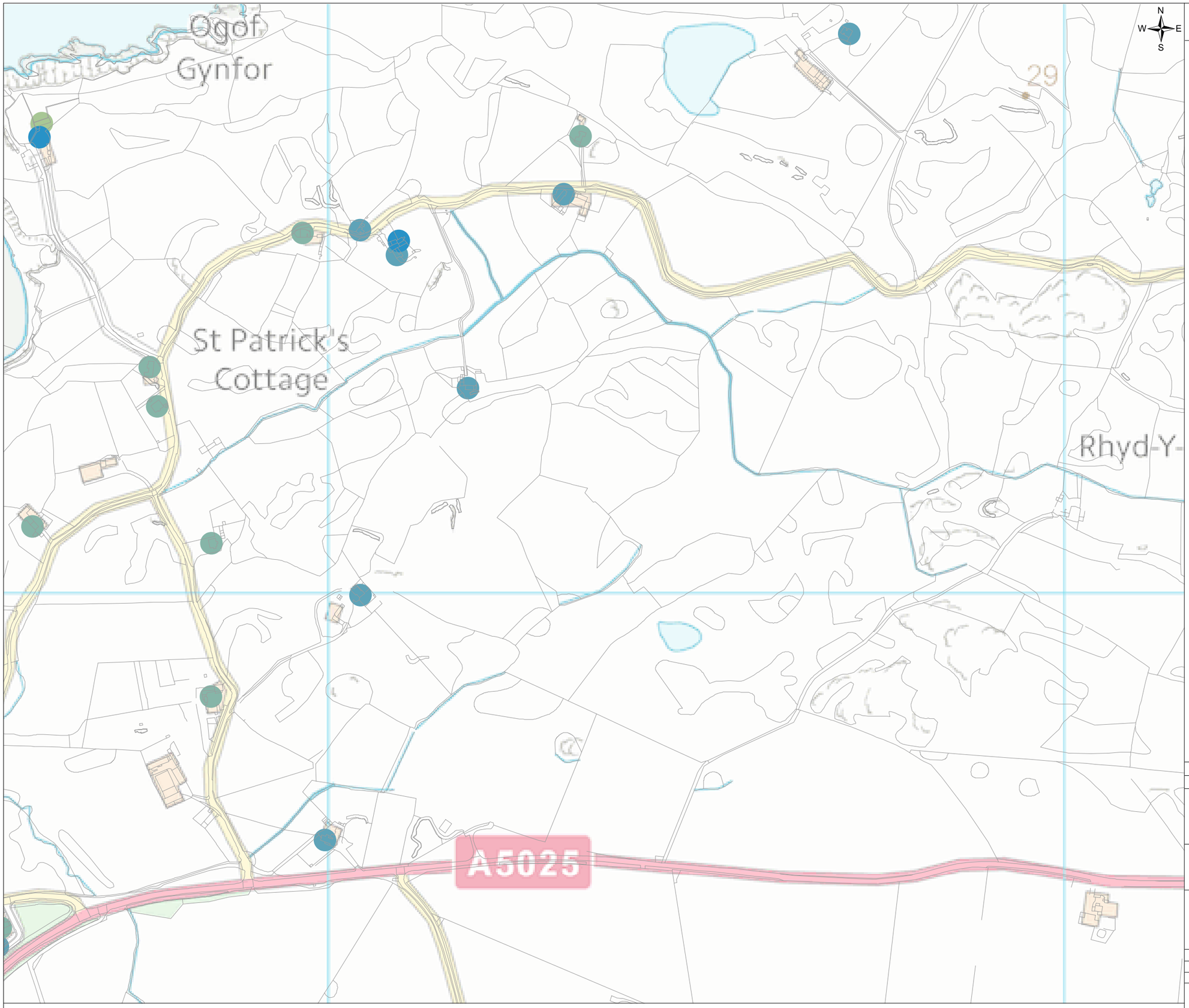


FIGURE 15

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 58 TO 60 (NIGHT-TIME)

SHEET 17 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

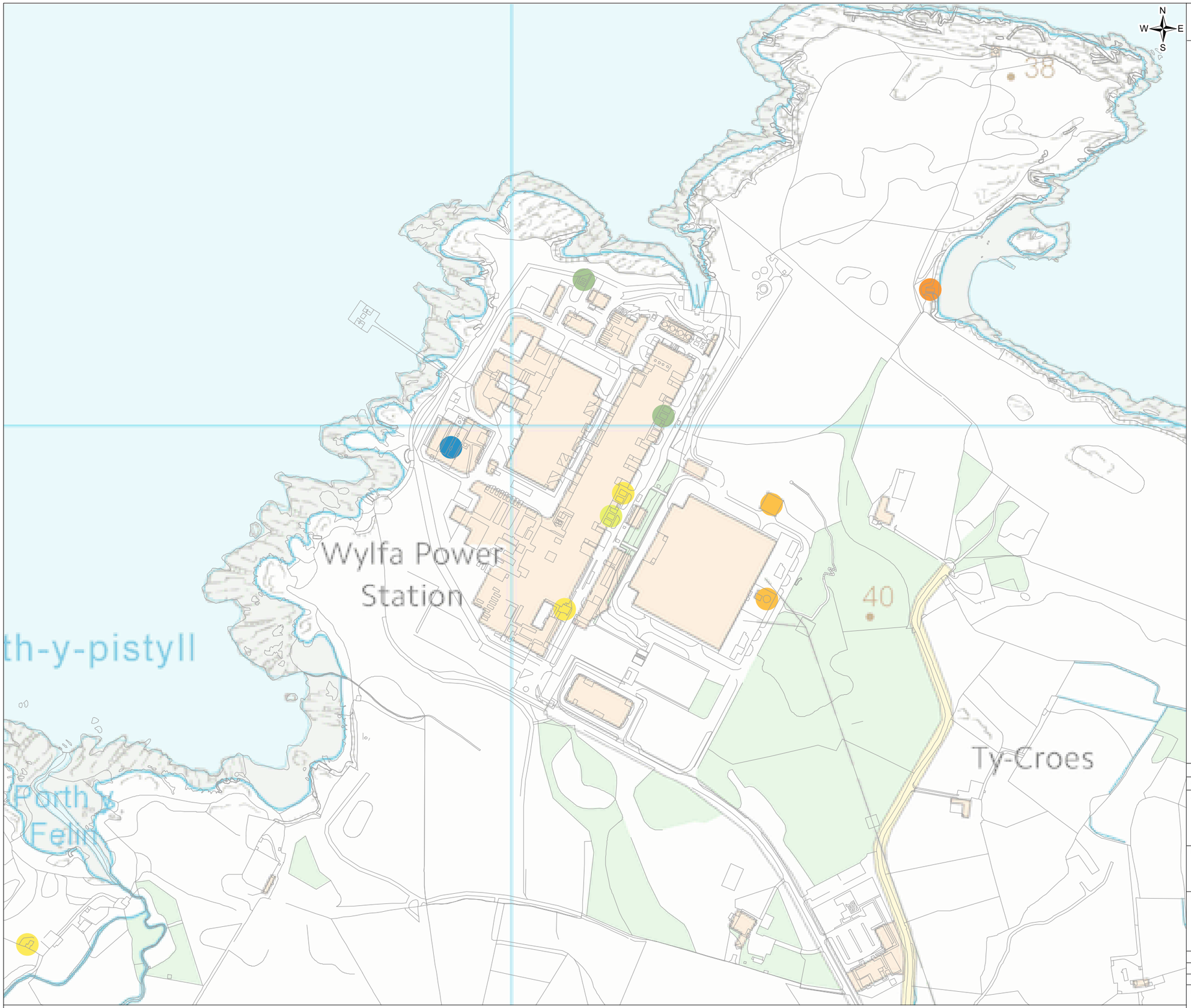
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS58TO60_NIGHTTIME

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0 125 250 500 metres

FIGURE 16



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (DAYTIME)
SHEET 1 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS100TO102_DAYTIME

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0 125 250 500 metres

FIGURE 16



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (DAYTIME)

SHEET 2 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

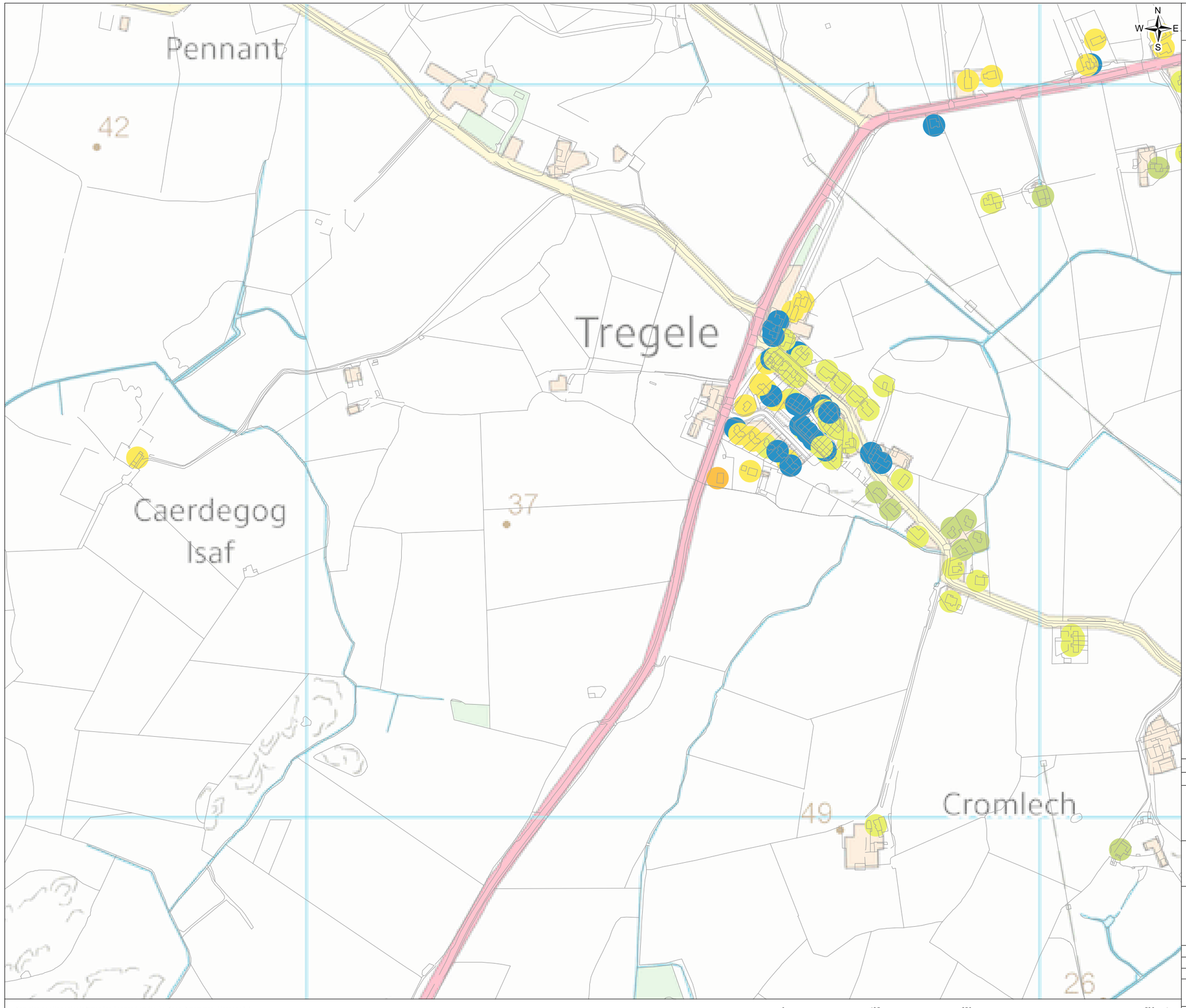
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS100TO102_DAYTIME

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0 125 250 500 metres

FIGURE 16



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (DAYTIME)

SHEET 3 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

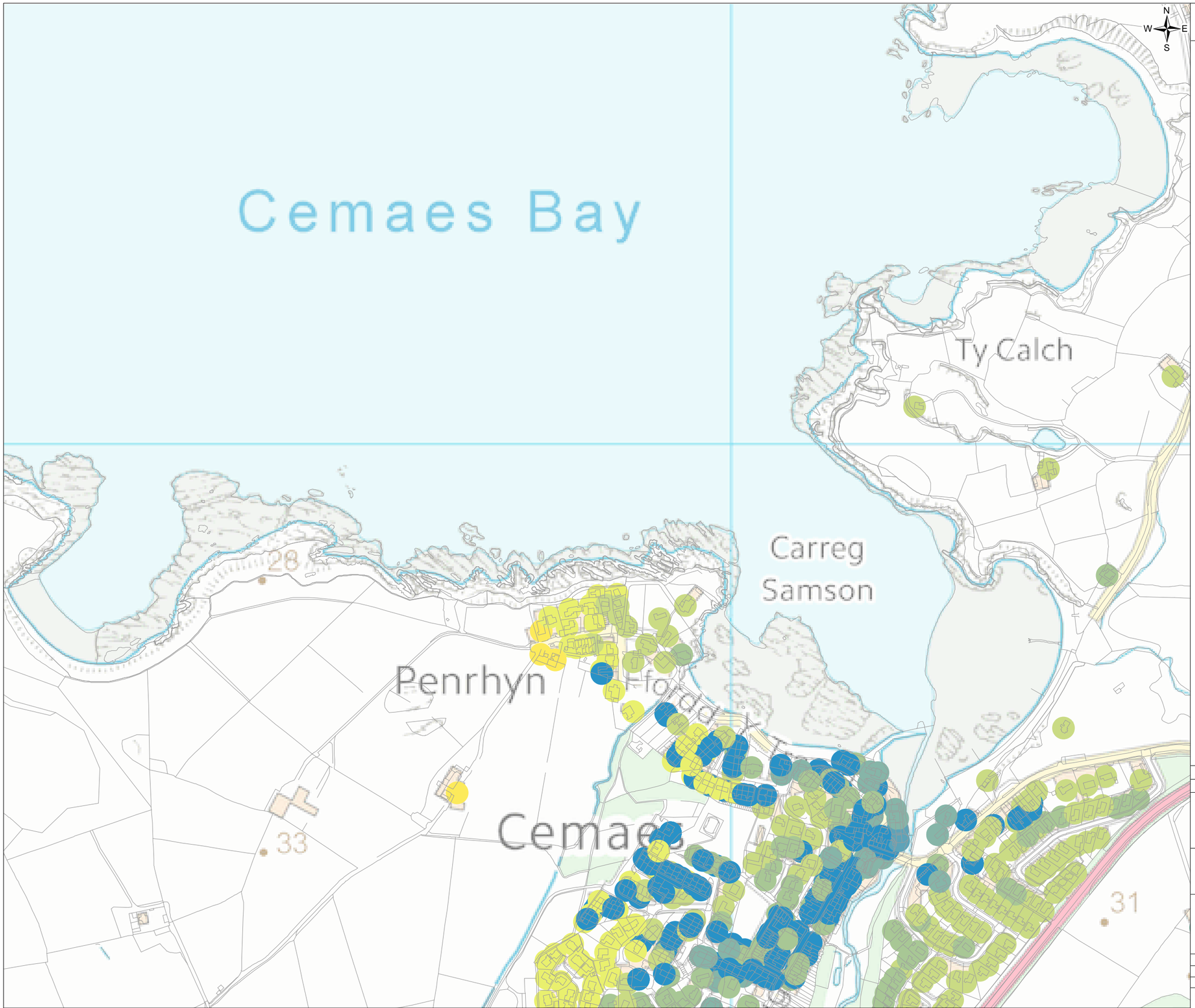
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_DAYTIME

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0 125 250 500 metres

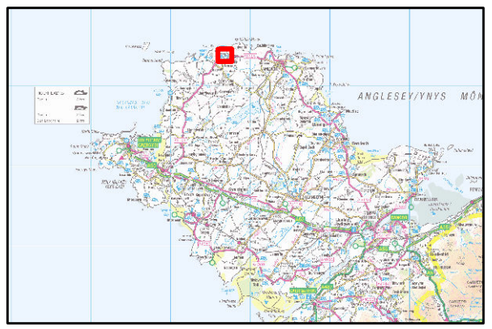
FIGURE 16



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (DAYTIME)
SHEET 4 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

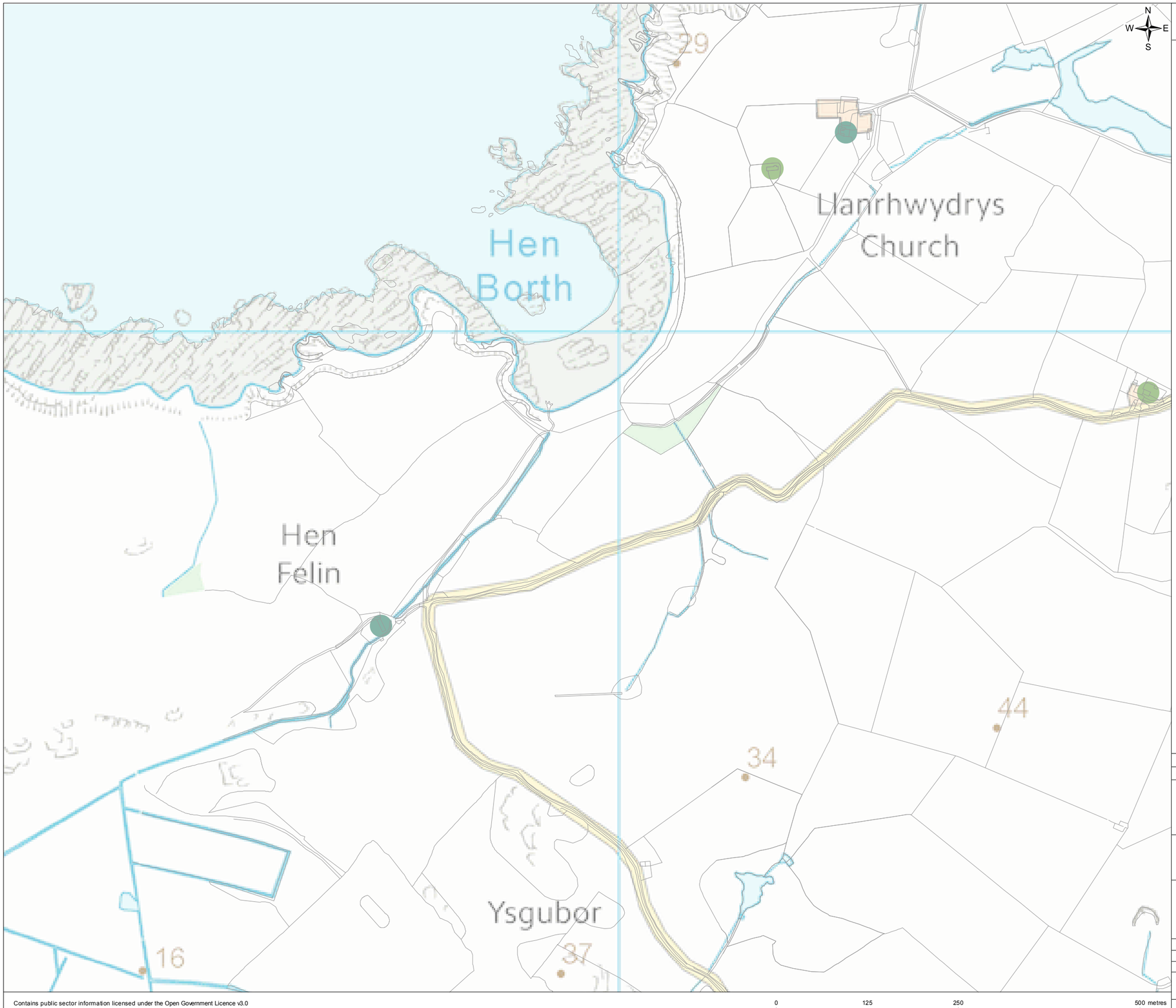
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS100TO102_DAYTIME

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0 125 250 500 metres

FIGURE 16



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (DAYTIME)

SHEET 5 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

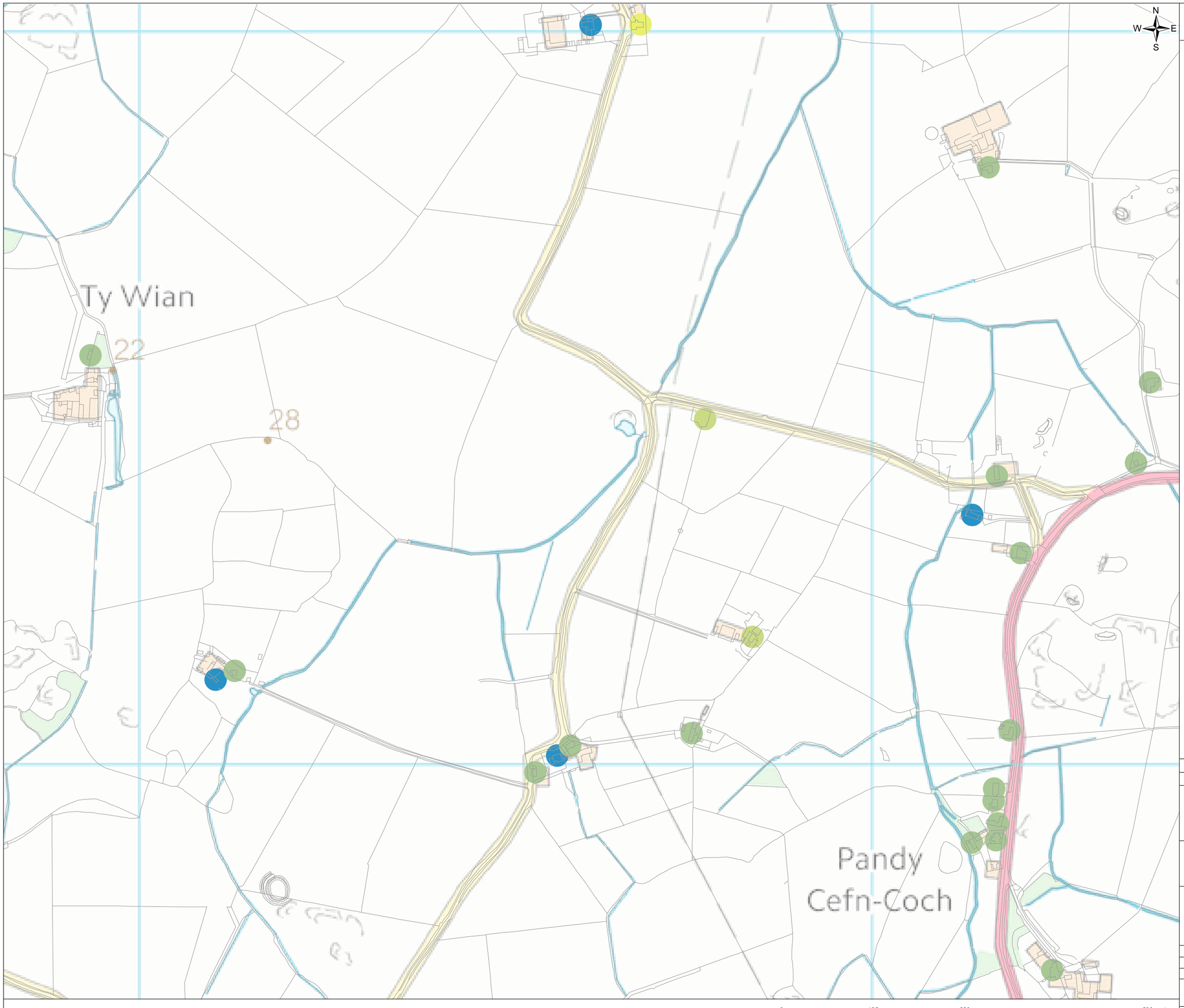
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_DAYTIME

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0 125 250 500 metres

FIGURE 16



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (DAYTIME)

SHEET 6 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_DAYTIME

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0 125 250 500 metres

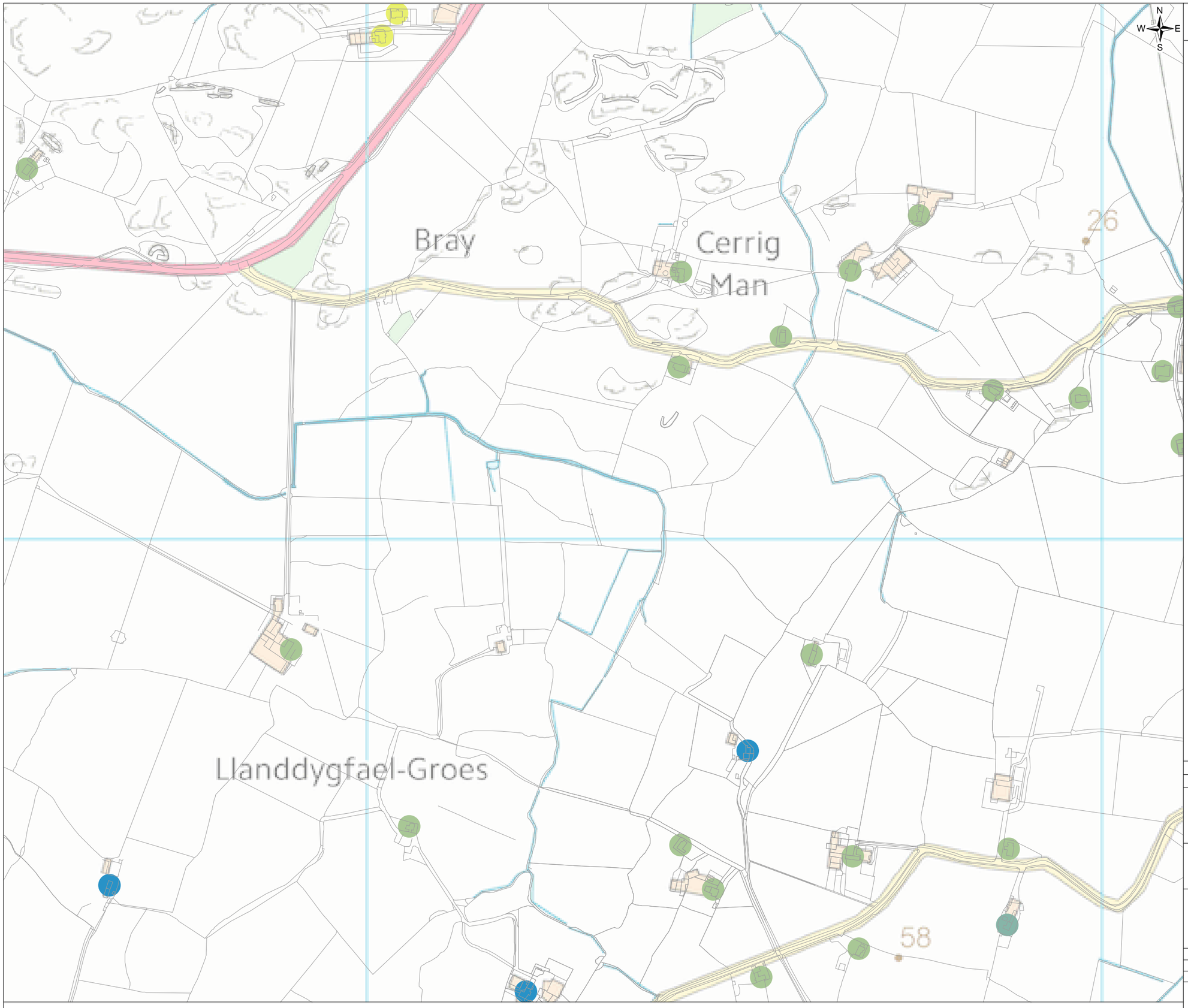


FIGURE 16

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (DAYTIME)

SHEET 7 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

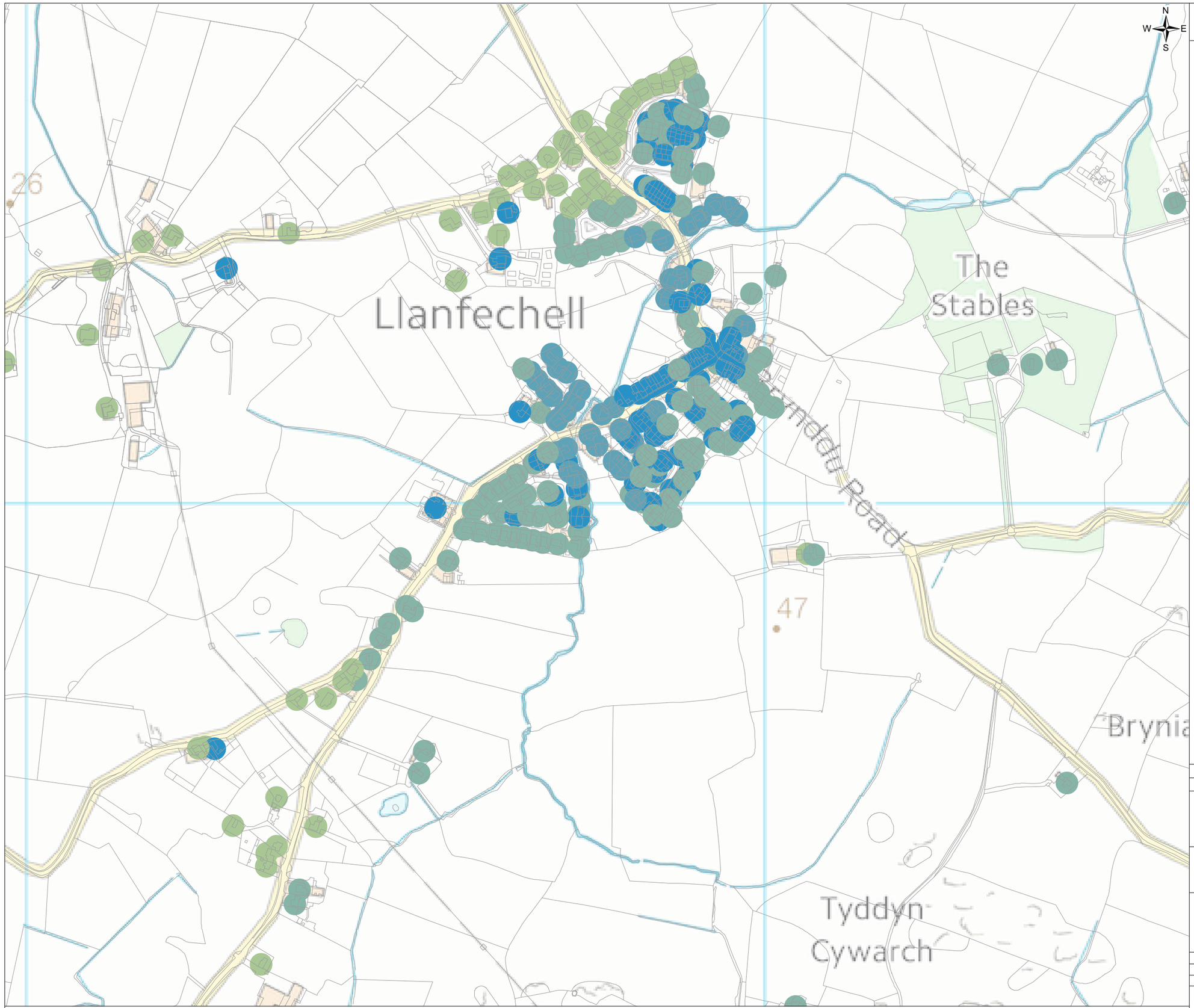
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_DAYTIME

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0 125 250 500 metres

FIGURE 16



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (DAYTIME)
SHEET 8 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS100TO102_DAYTIME

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0 125 250 500 metres

FIGURE 16

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (DAYTIME)

SHEET 9 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS100TO102_DAYTIME

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0 125 250 500 metres

FIGURE 16

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (DAYTIME)

SHEET 10 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

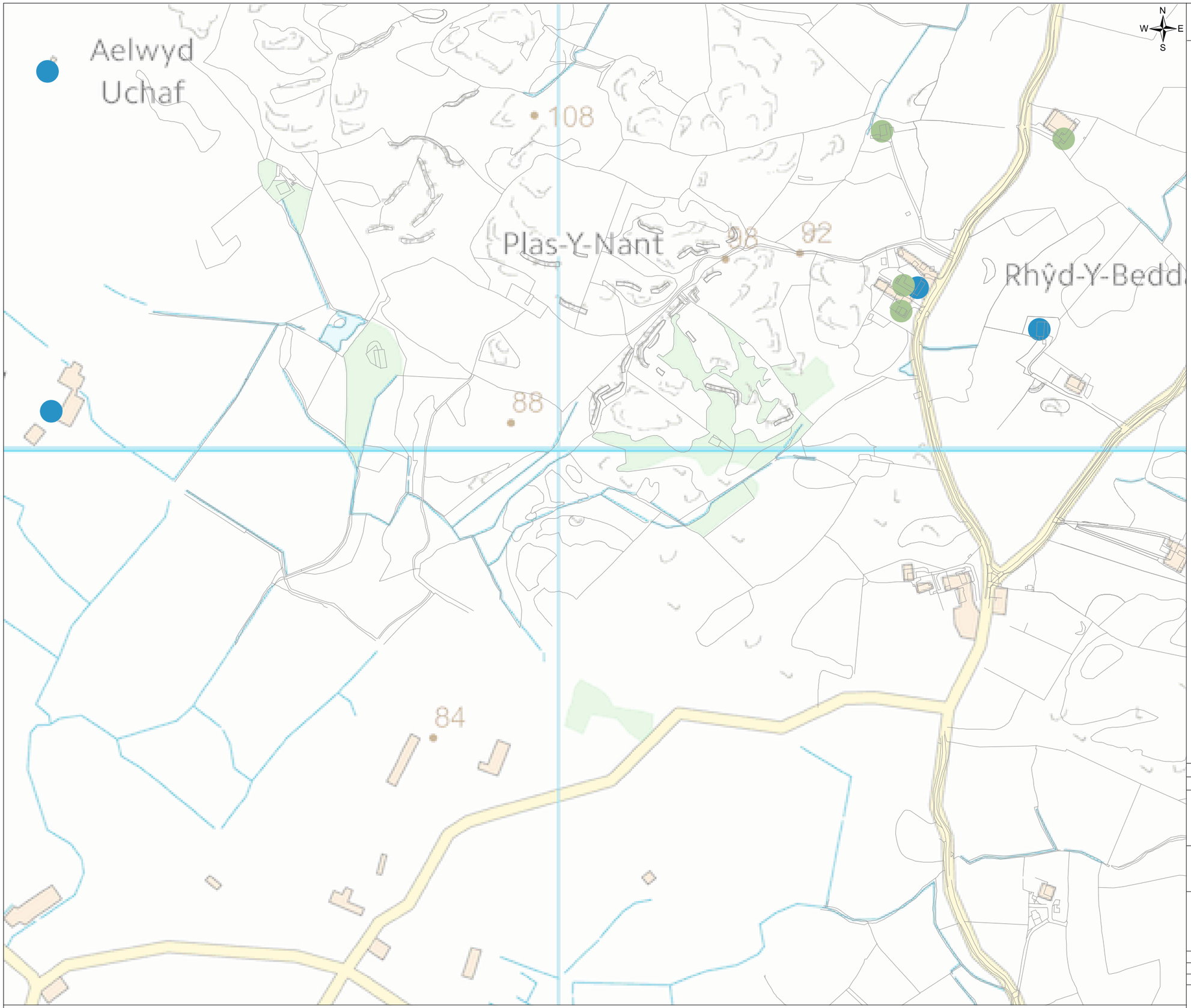
60PO80AS_NOISE_RfNMC_MONTHS100TO102_DAYTIME

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0 125 250 500 metres

FIGURE 16



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 100 TO 102 (DAYTIME)

SHEET 11 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

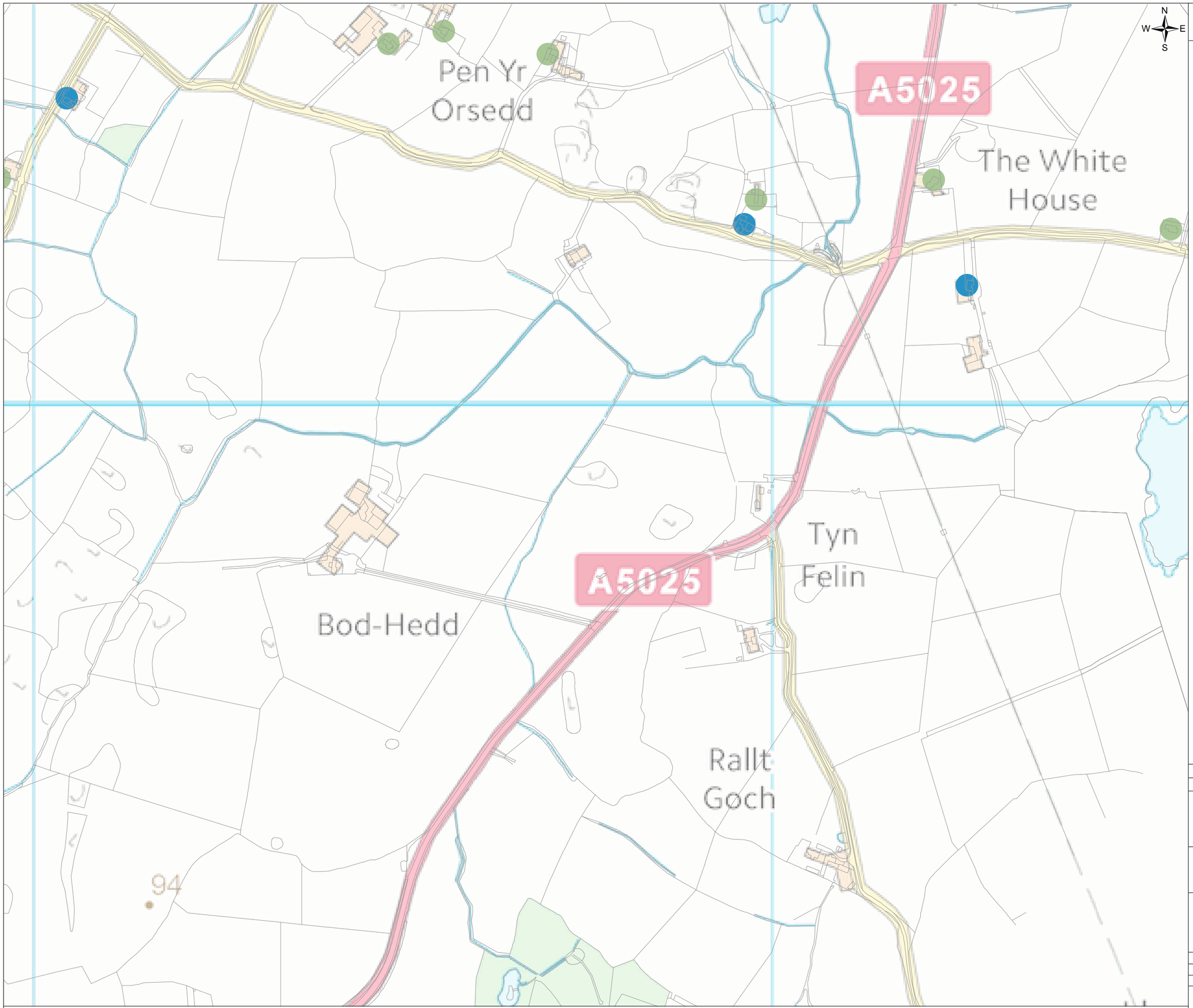
60PO80AS_NOISE_RfNMC_MONTHS100TO102_DAYTIME

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0 125 250 500 metres

FIGURE 16



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (DAYTIME)
SHEET 12 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

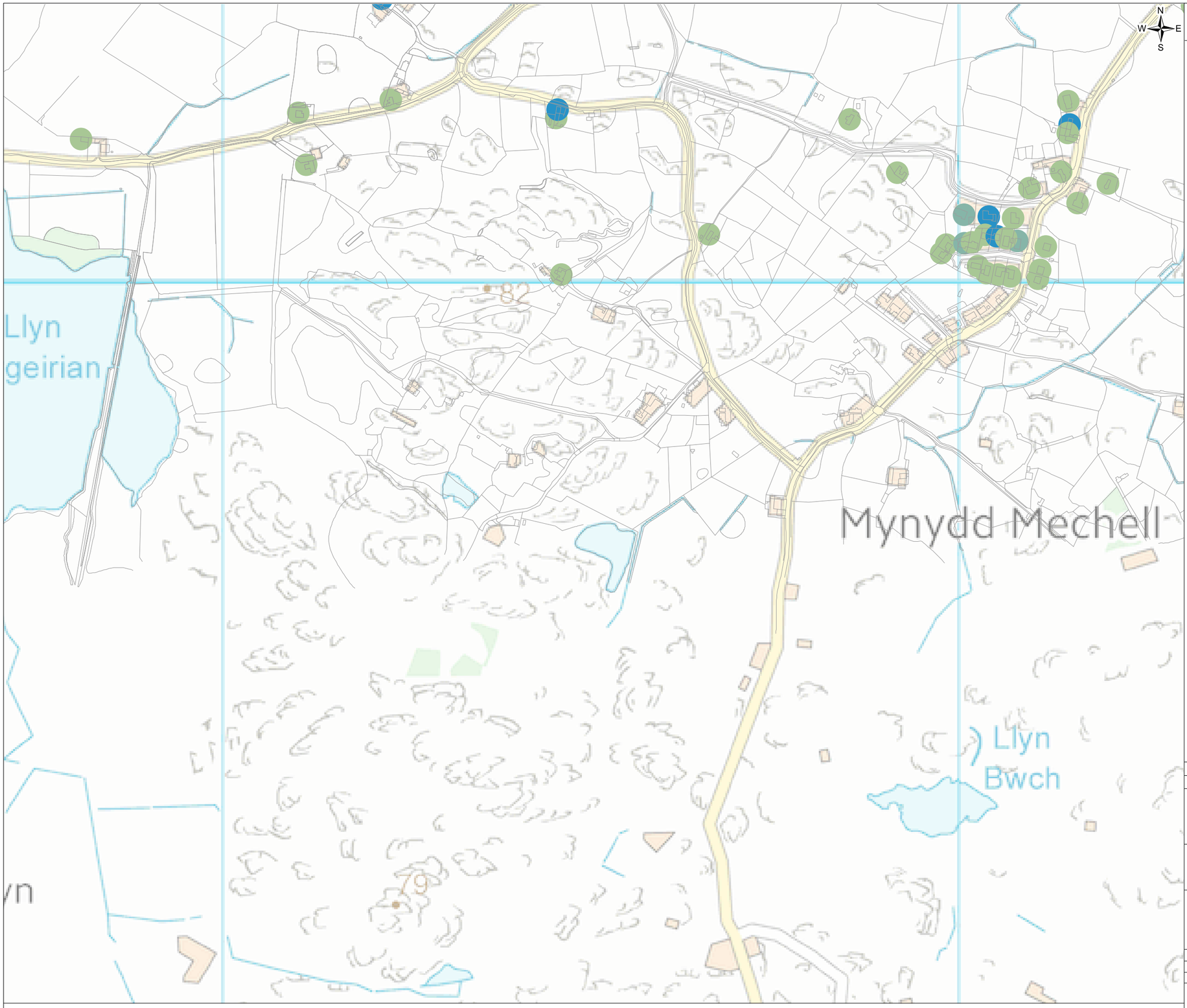
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS100TO102_DAYTIME

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0 125 250 500 metres

FIGURE 16



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (DAYTIME)

SHEET 13 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_DAYTIME

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0 125 250 500 metres

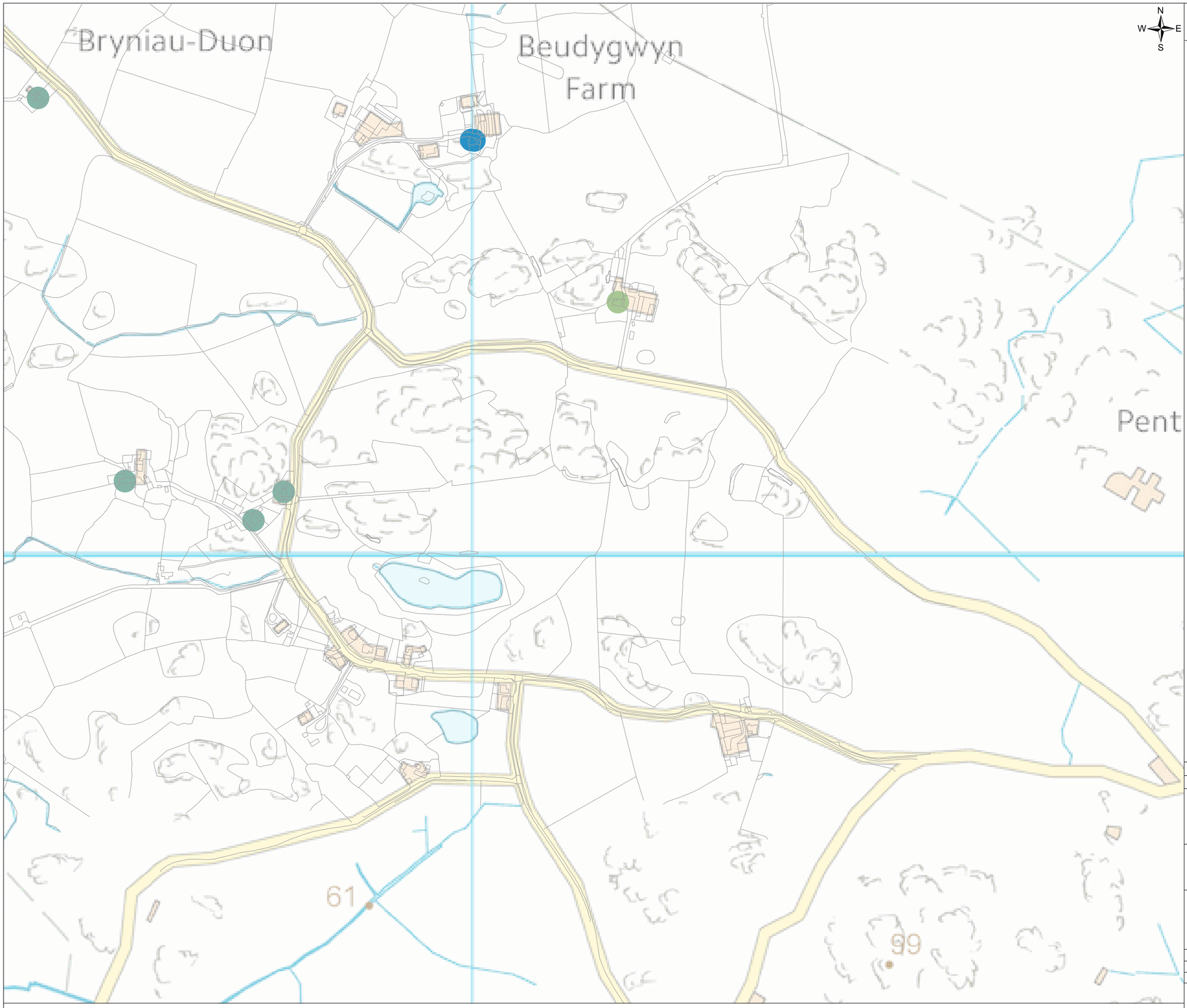


FIGURE 16

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (DAYTIME)

SHEET 14 OF 17

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Client No.		

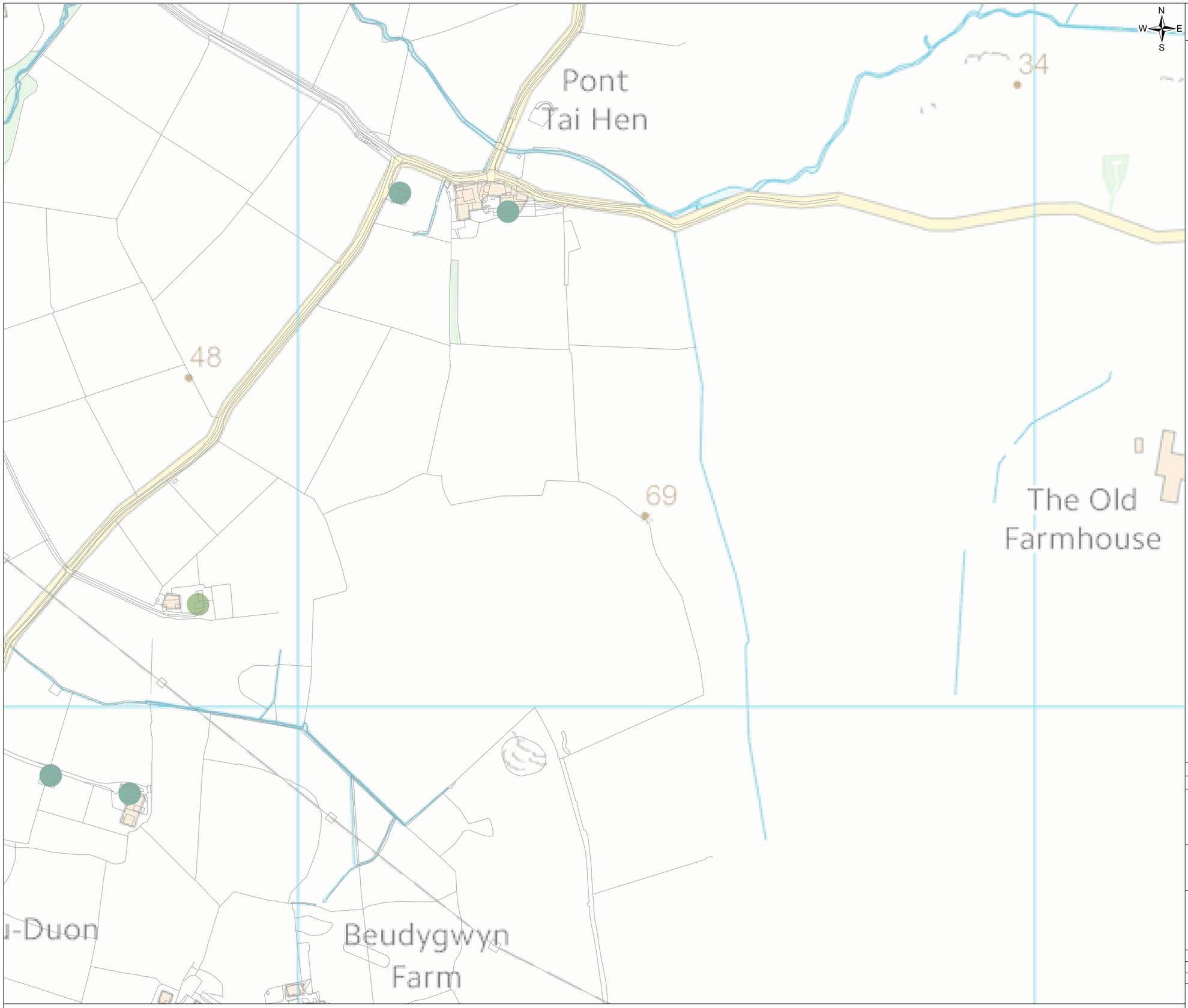
Drawing No.

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FIGURE 16



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (DAYTIME)

SHEET 15 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS100TO102_DAYTIME

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0 125 250 500 metres

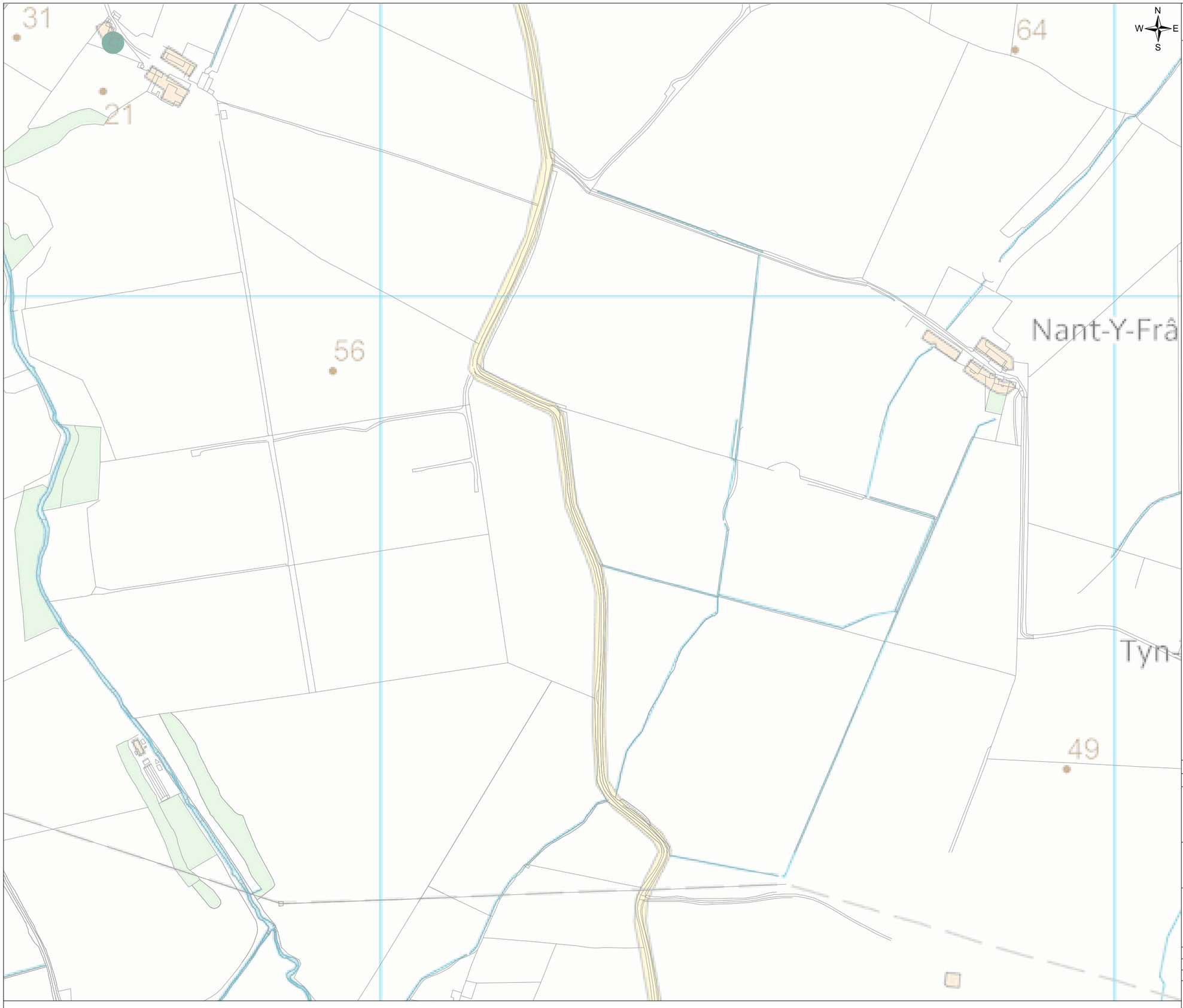


FIGURE 16

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (DAYTIME)

SHEET 16 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_DAYTIME

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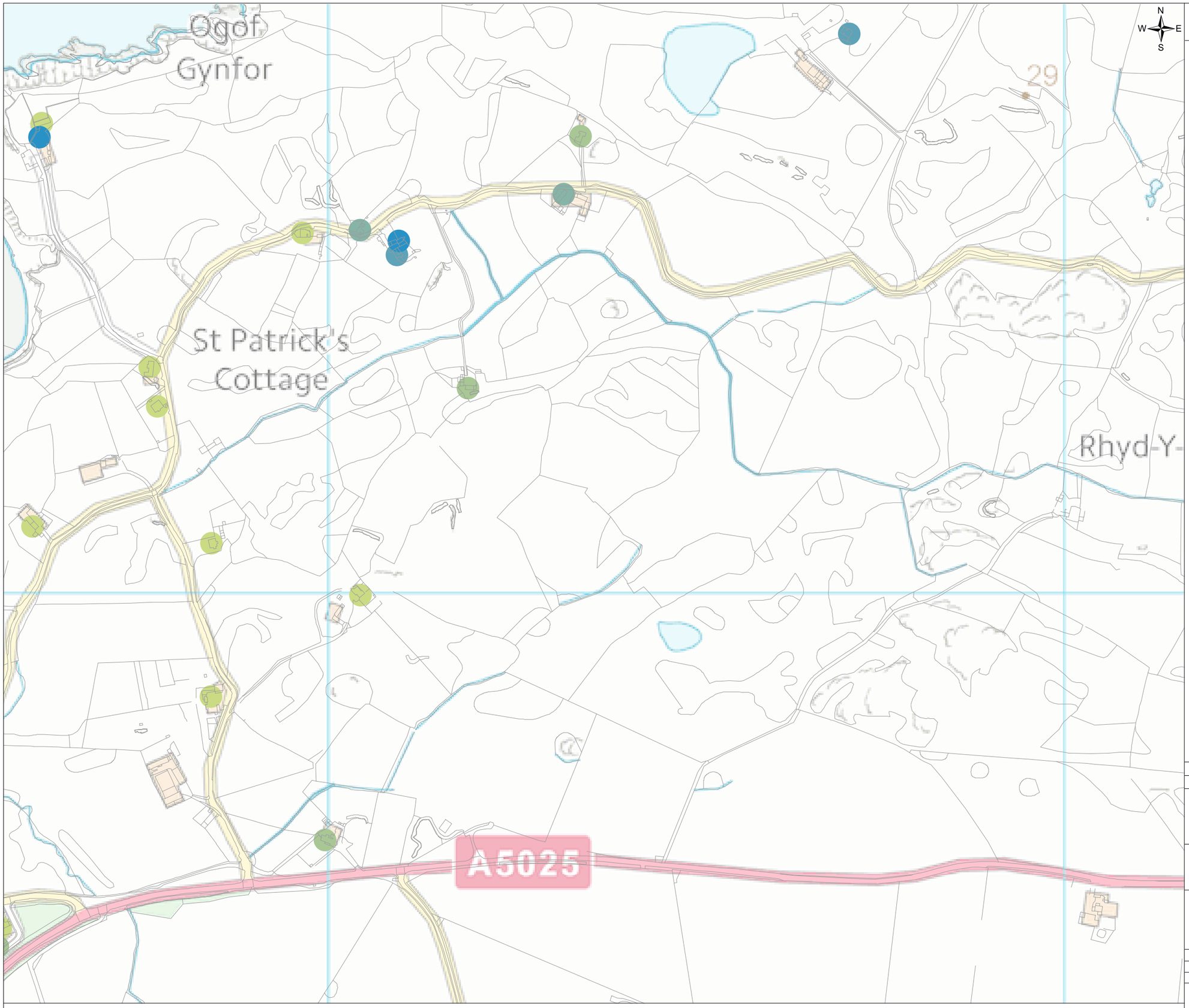


FIGURE 16

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (DAYTIME)

SHEET 17 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

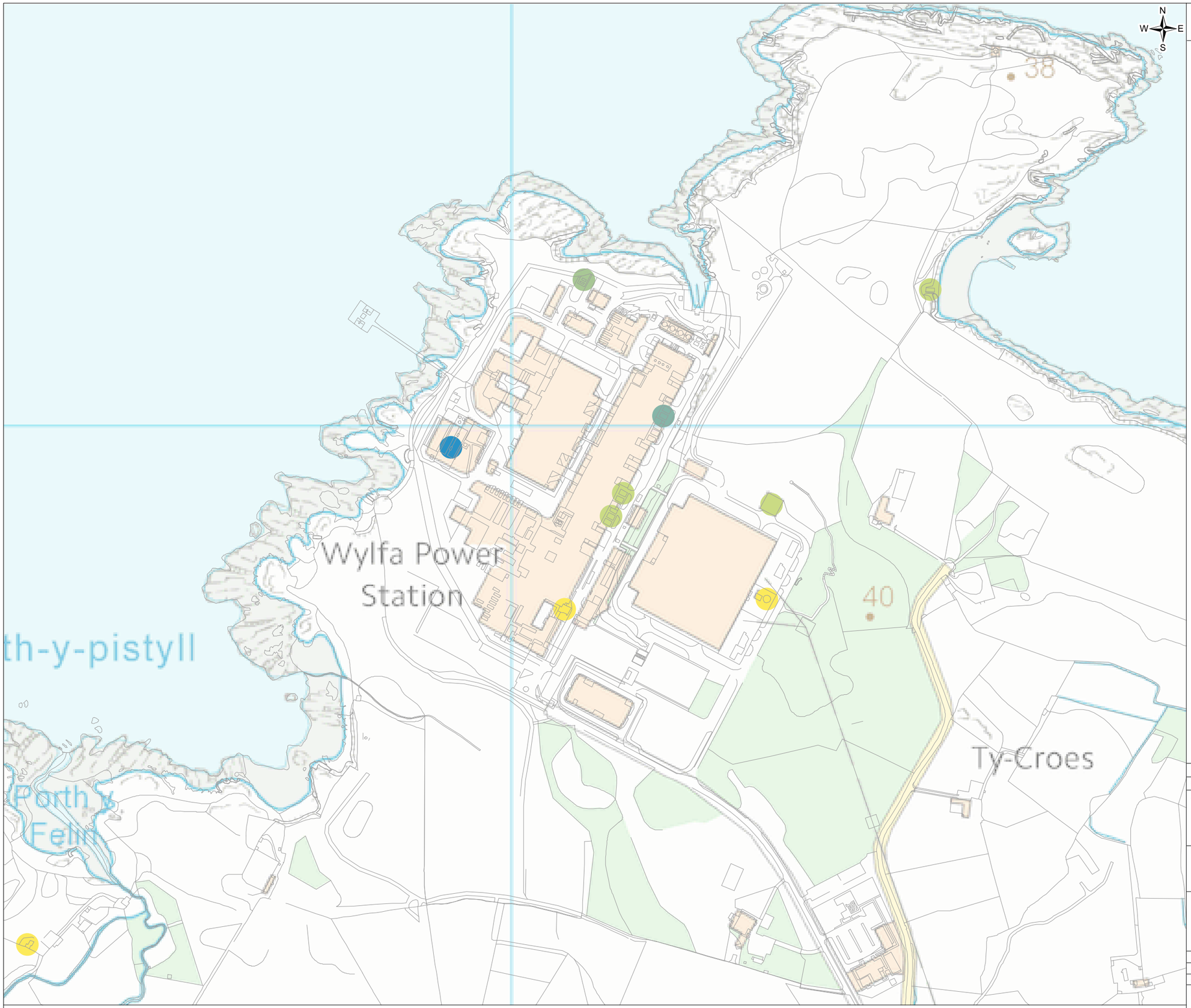
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_DAYTIME

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0 125 250 500 metres

FIGURE 17



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (EVENING)

SHEET 1 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS100TO102_EVENING

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0 125 250 500 metres

FIGURE 17



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (EVENING)

SHEET 2 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_EVENING

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0 125 250 500 metres

FIGURE 17



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (EVENING)

SHEET 3 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

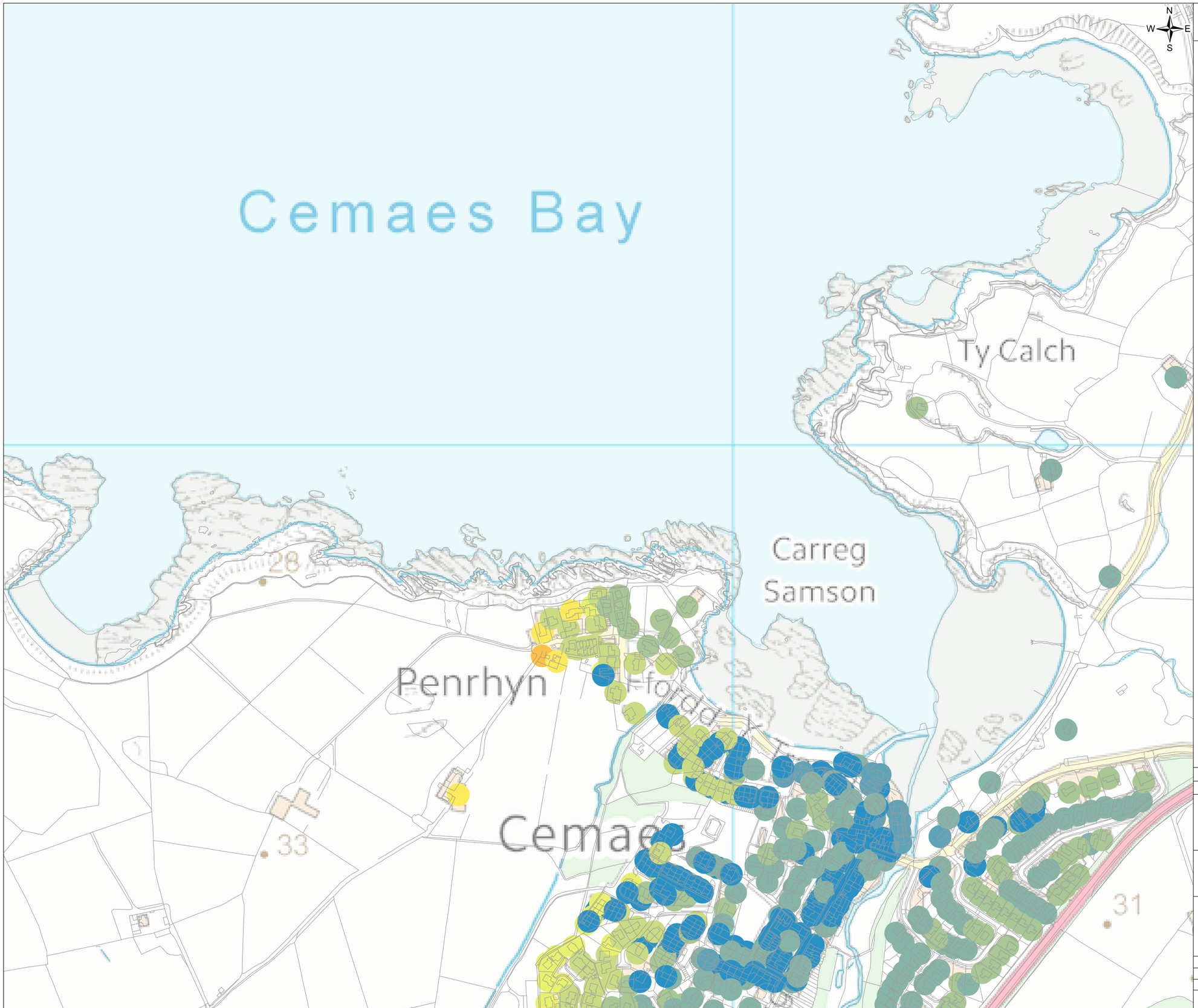
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_EVENING

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0 125 250 500 metres

FIGURE 17



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (EVENING)

SHEET 4 OF 17

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Client No.		

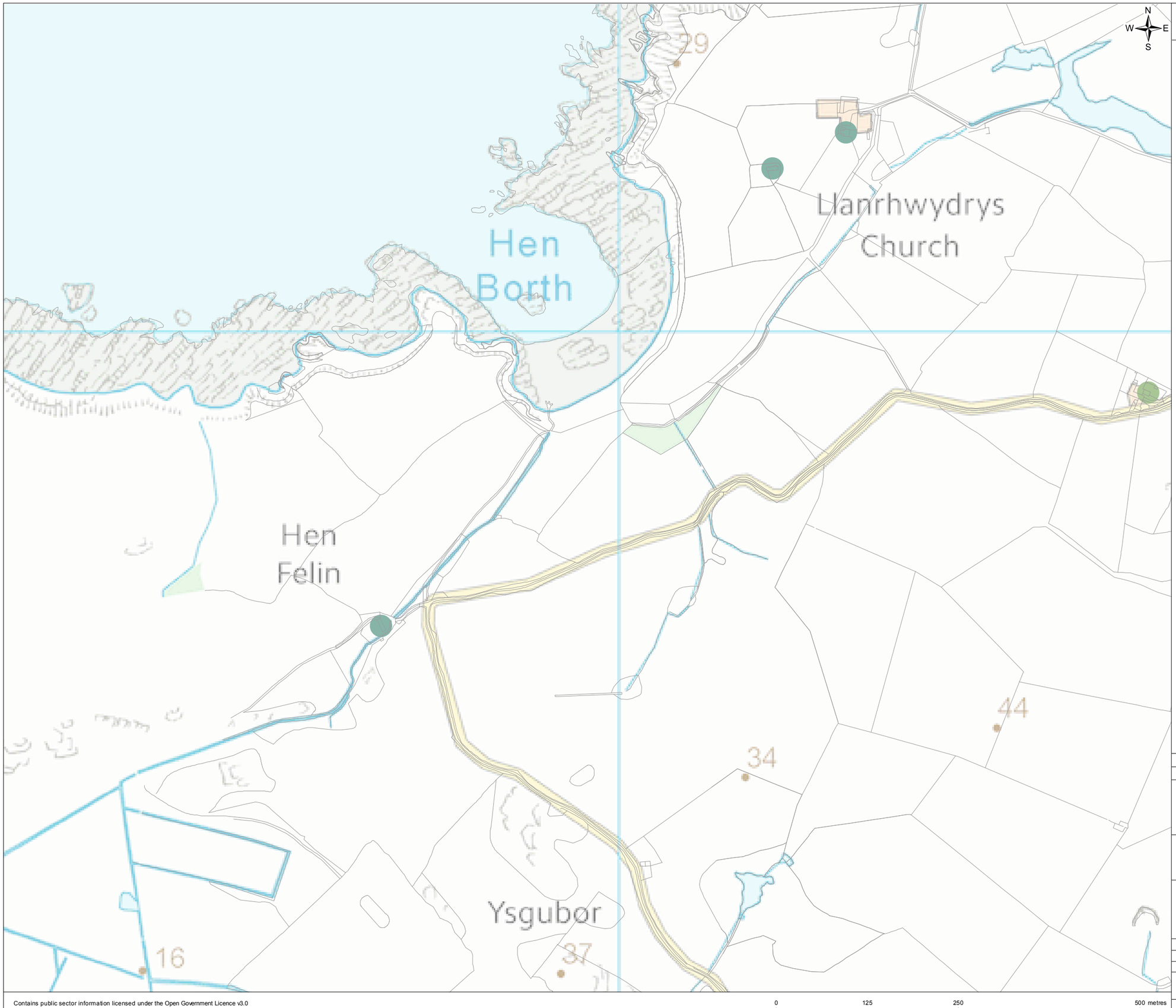
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_EVENING

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0 125 250 500 metres

FIGURE 17



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (EVENING)

SHEET 5 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

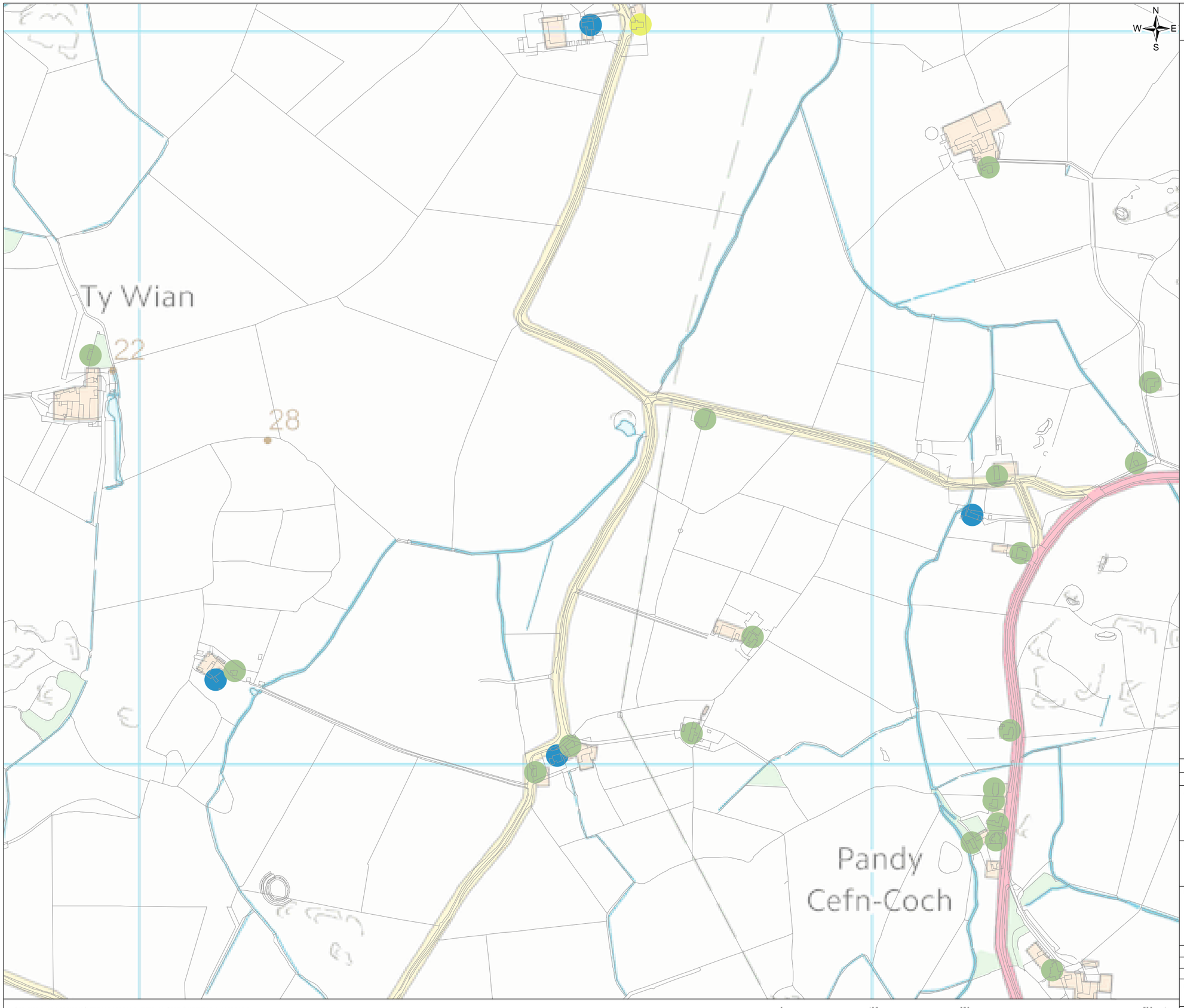
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_EVENING

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0 125 250 500 metres

FIGURE 17



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (EVENING)

SHEET 6 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

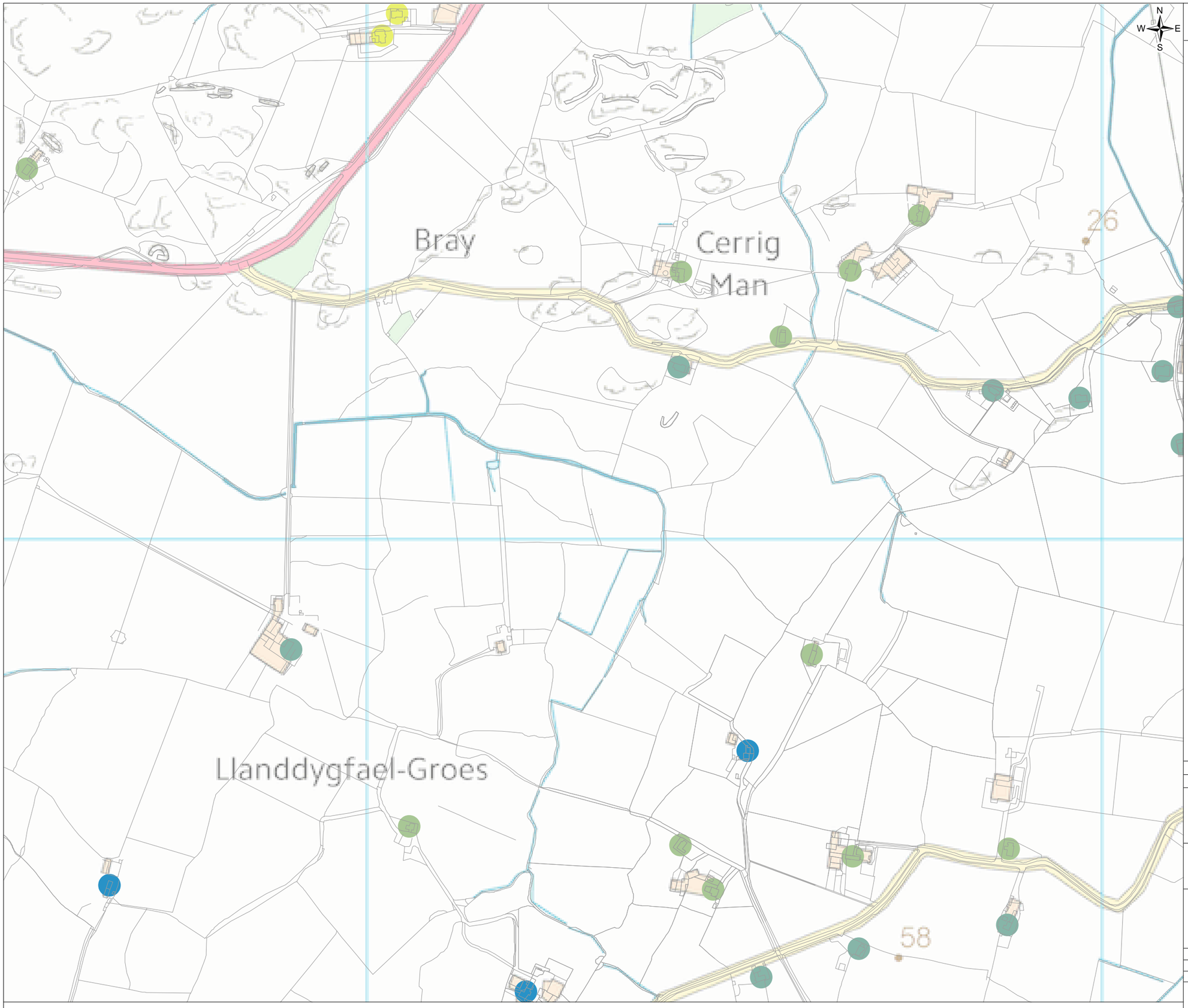
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_EVENING

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0 125 250 500 metres

FIGURE 17



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (EVENING)

SHEET 7 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

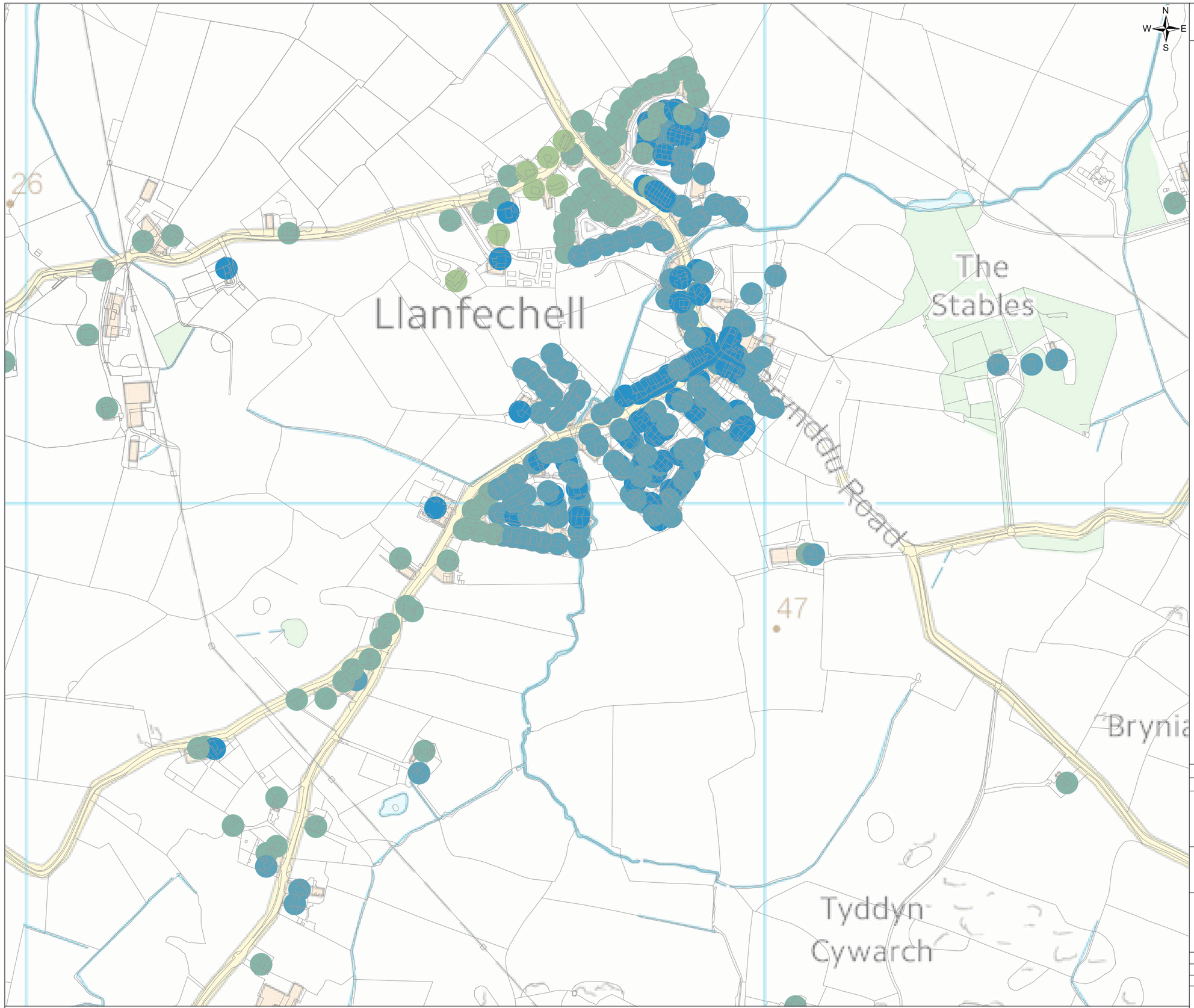
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_EVENING

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0 125 250 500 metres

FIGURE 17



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (EVENING)

SHEET 8 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

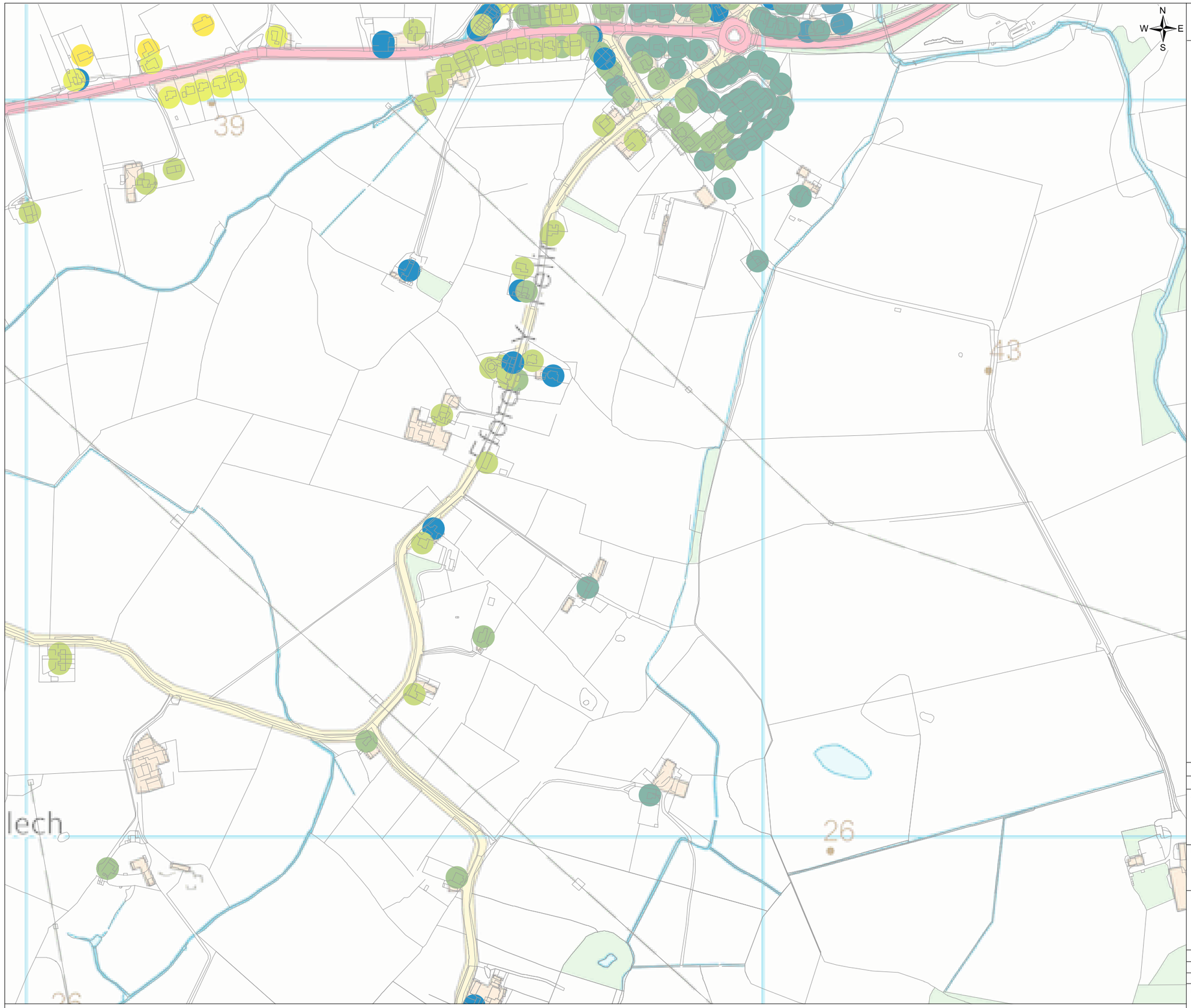
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_EVENING

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0 125 250 500 metres

FIGURE 17



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (EVENING)

SHEET 9 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS100TO102_EVENING

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0 125 250 500 metres

FIGURE 17

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (EVENING)

SHEET 10 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

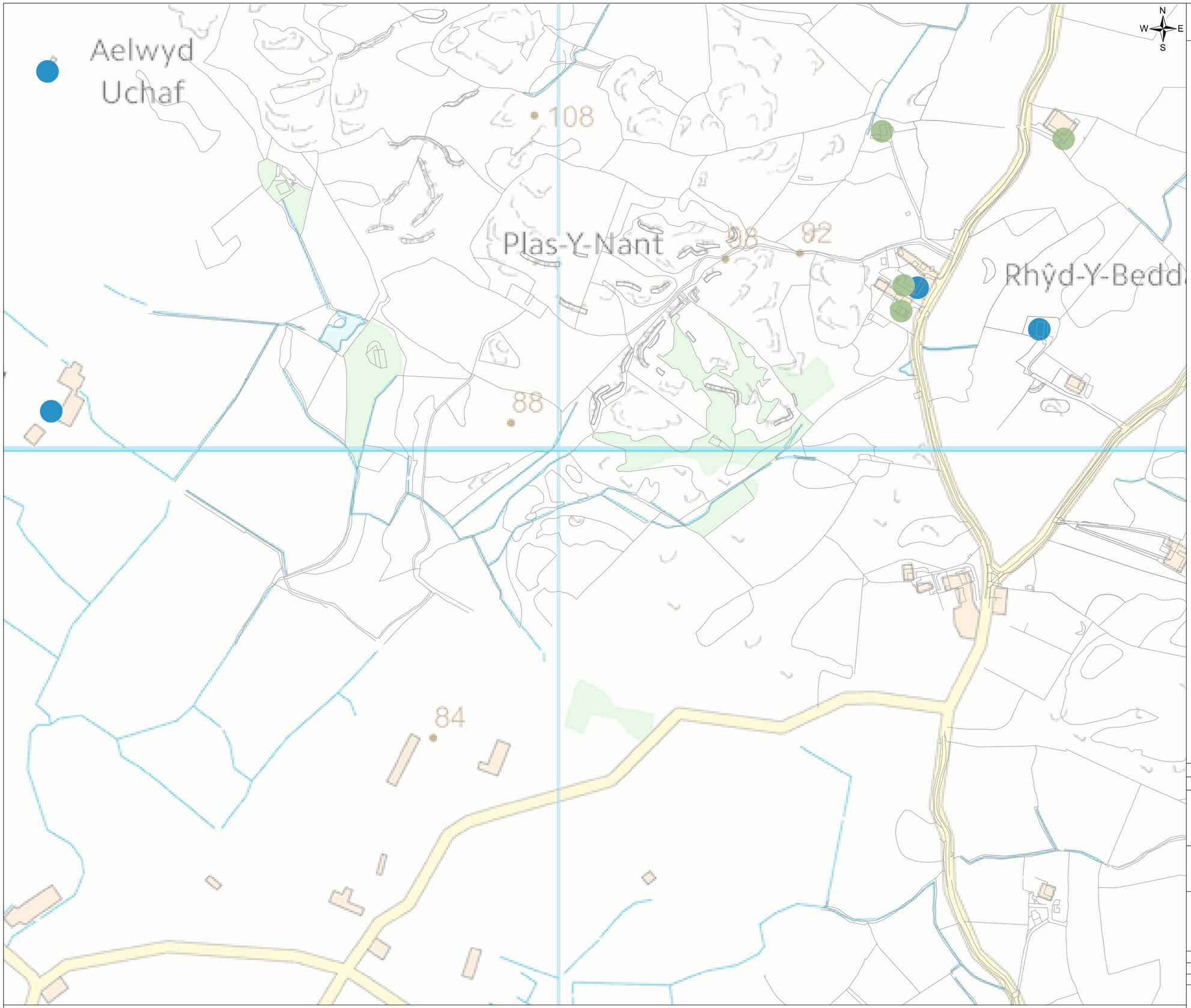
60PO80AS_NOISE_RfNMC_MONTHS100TO102_EVENING

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0 125 250 500 metres

FIGURE 17



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (EVENING)

SHEET 11 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

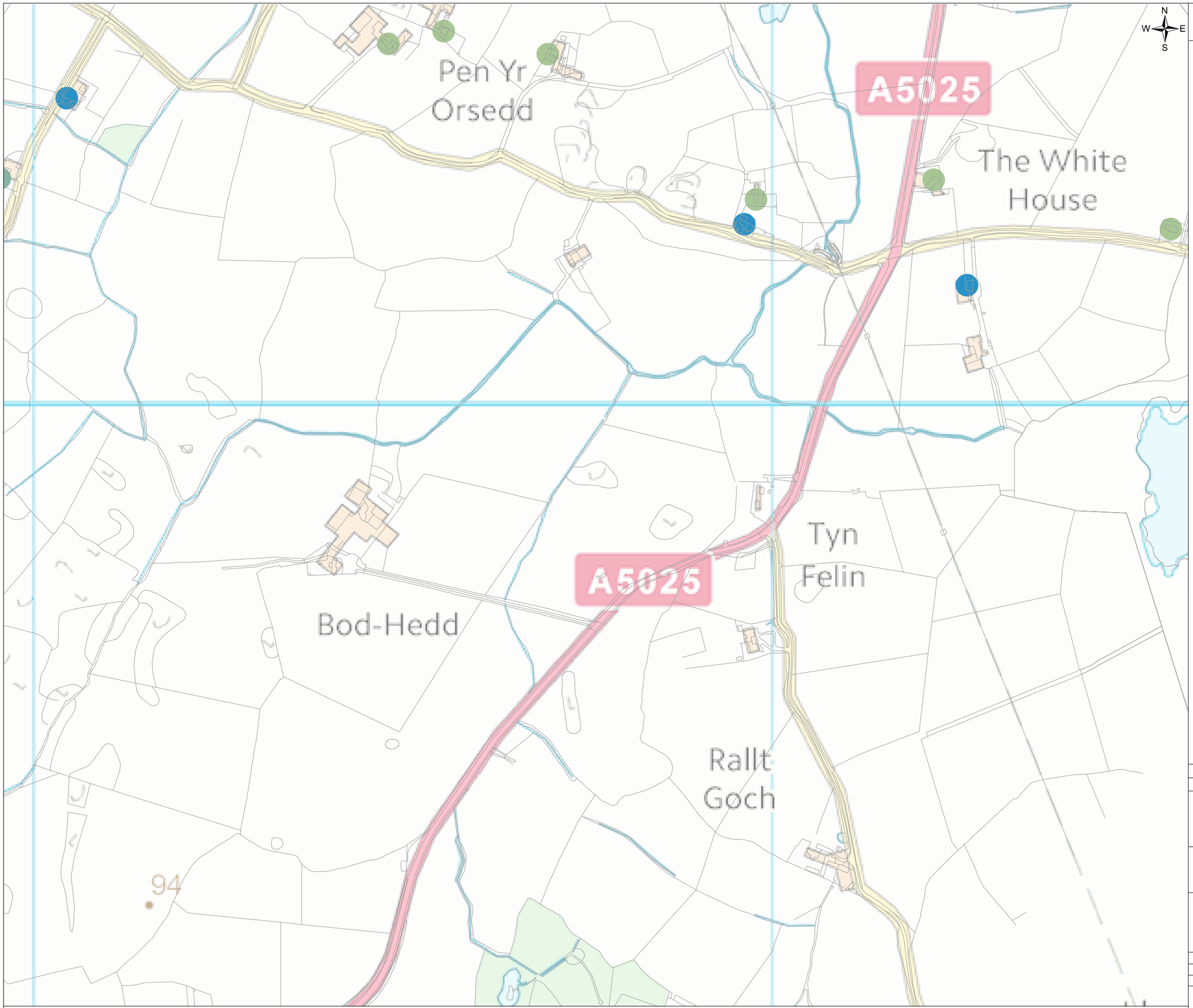
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_EVENING

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0 125 250 500 metres

FIGURE 17



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (EVENING)

SHEET 12 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

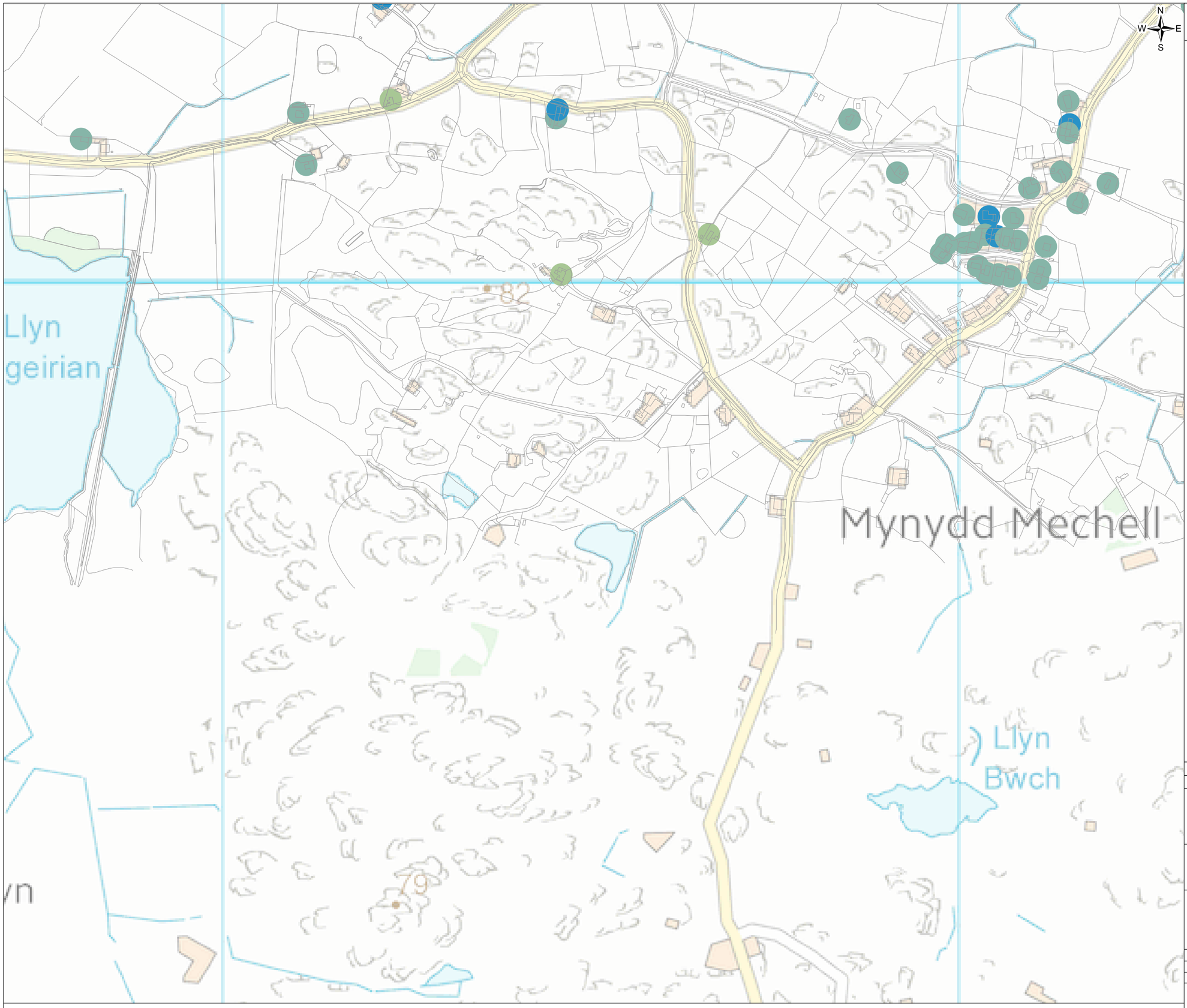
Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS100TO102_EVENING

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0 125 250 500 metres

FIGURE 17



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (EVENING)

SHEET 13 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_EVENING

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0 125 250 500 metres

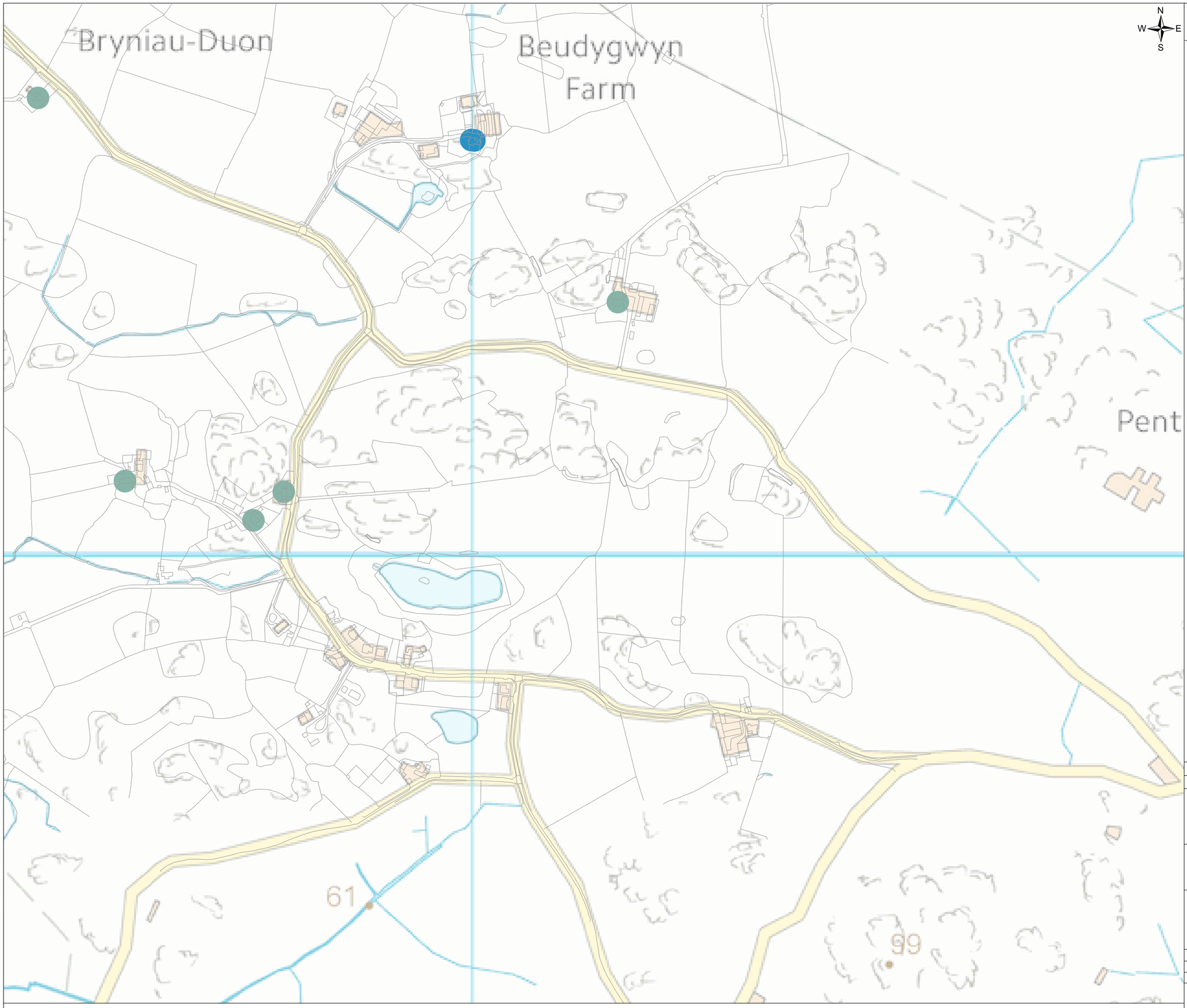


FIGURE 17

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (EVENING)

SHEET 14 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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Client No.		

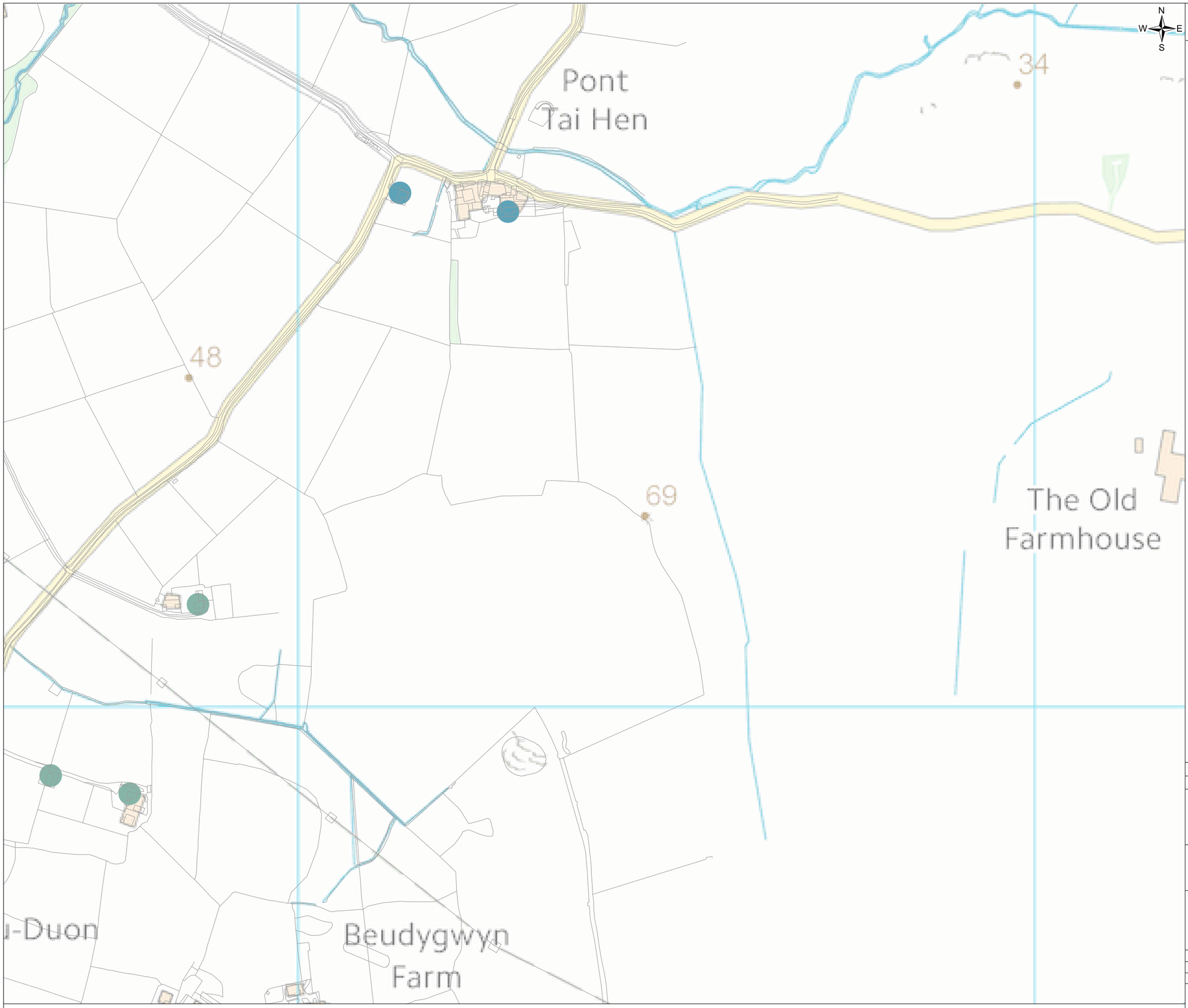
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0 125 250 500 metres

FIGURE 17



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 100 TO 102 (EVENING)

SHEET 15 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS100TO102_EVENING

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0 125 250 500 metres

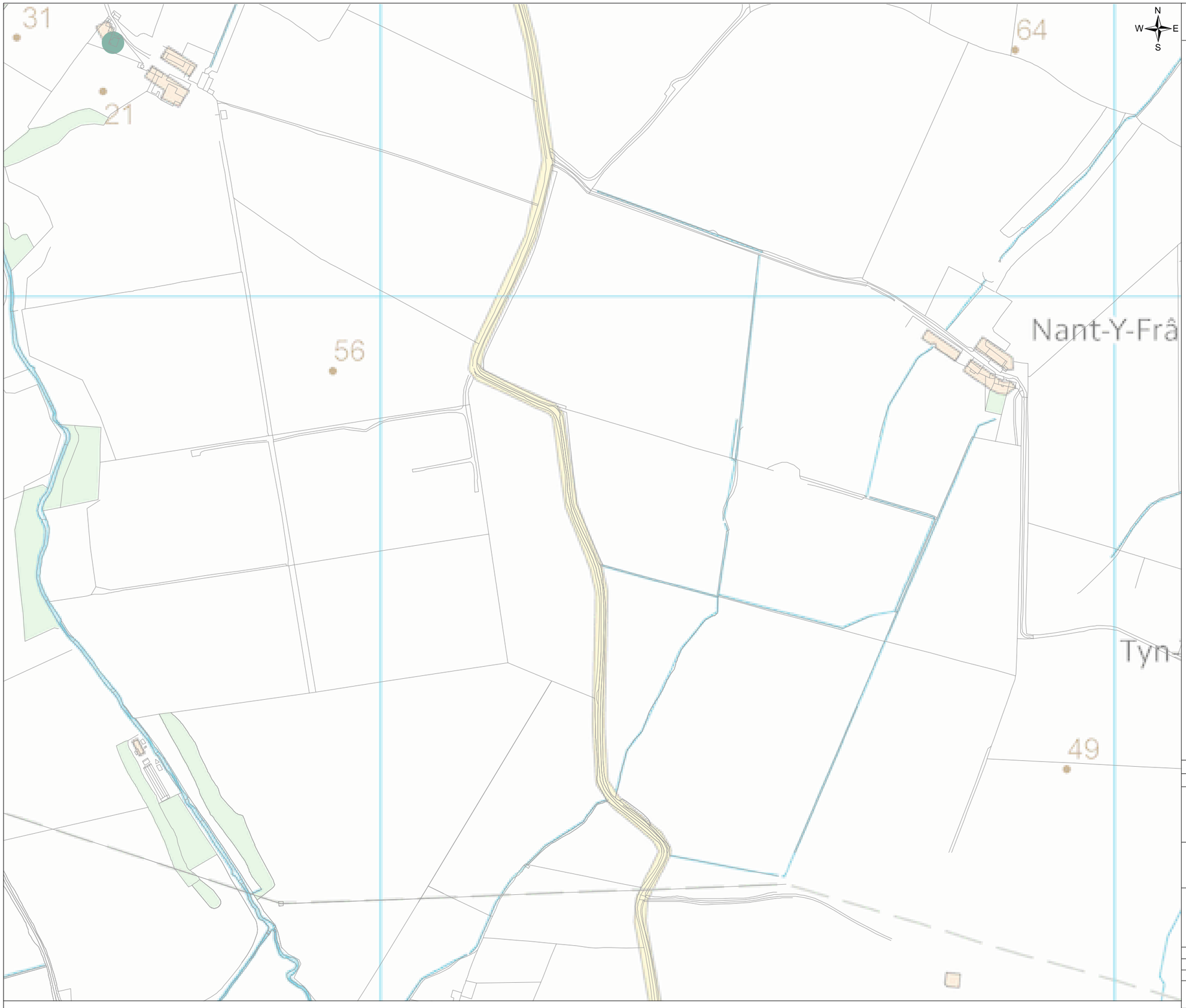


FIGURE 17

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (EVENING)

SHEET 16 OF 17

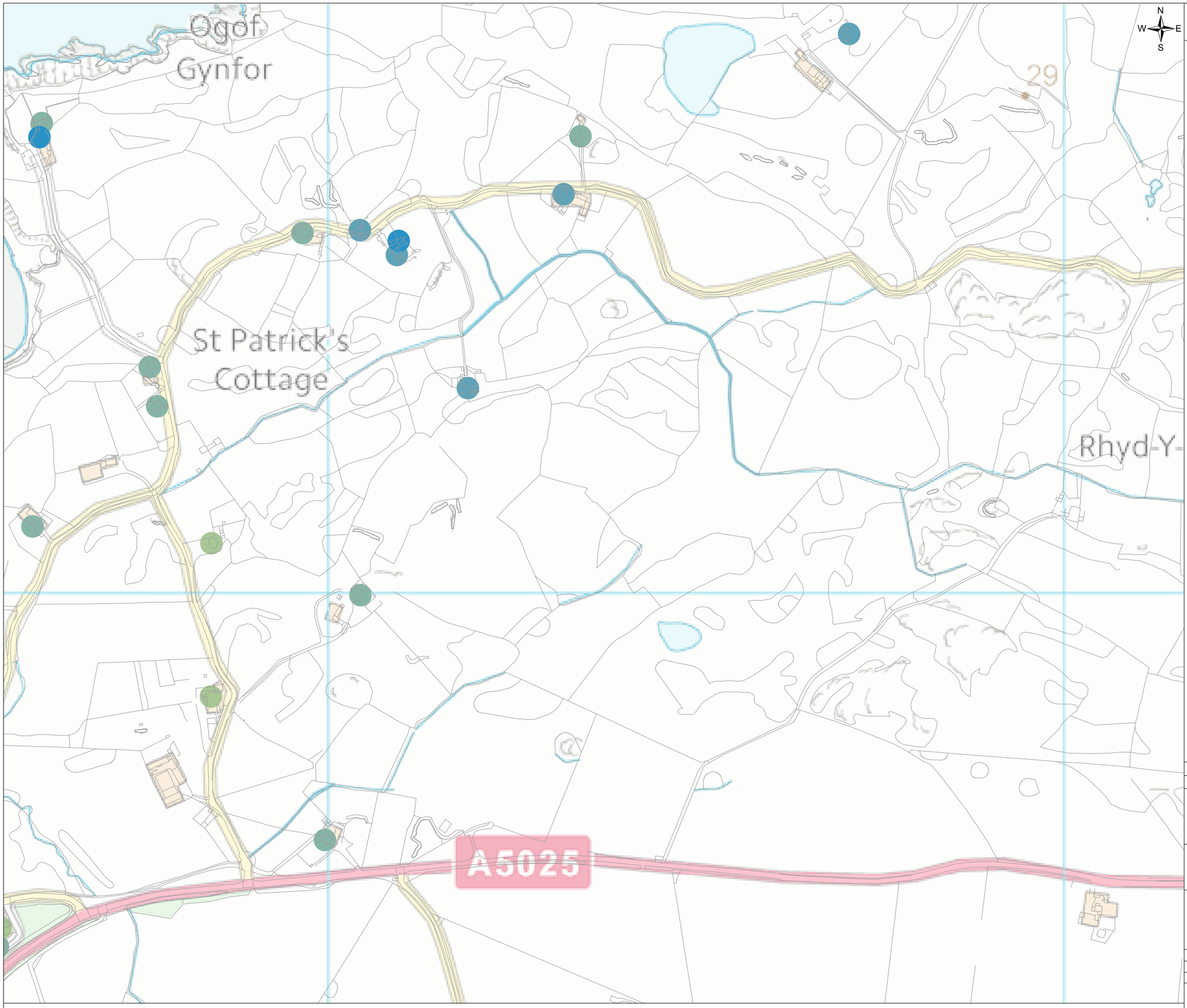
Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_EVENING

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0 125 250 500 metres



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0 125 250 500 metres

FIGURE 17

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (EVENING)

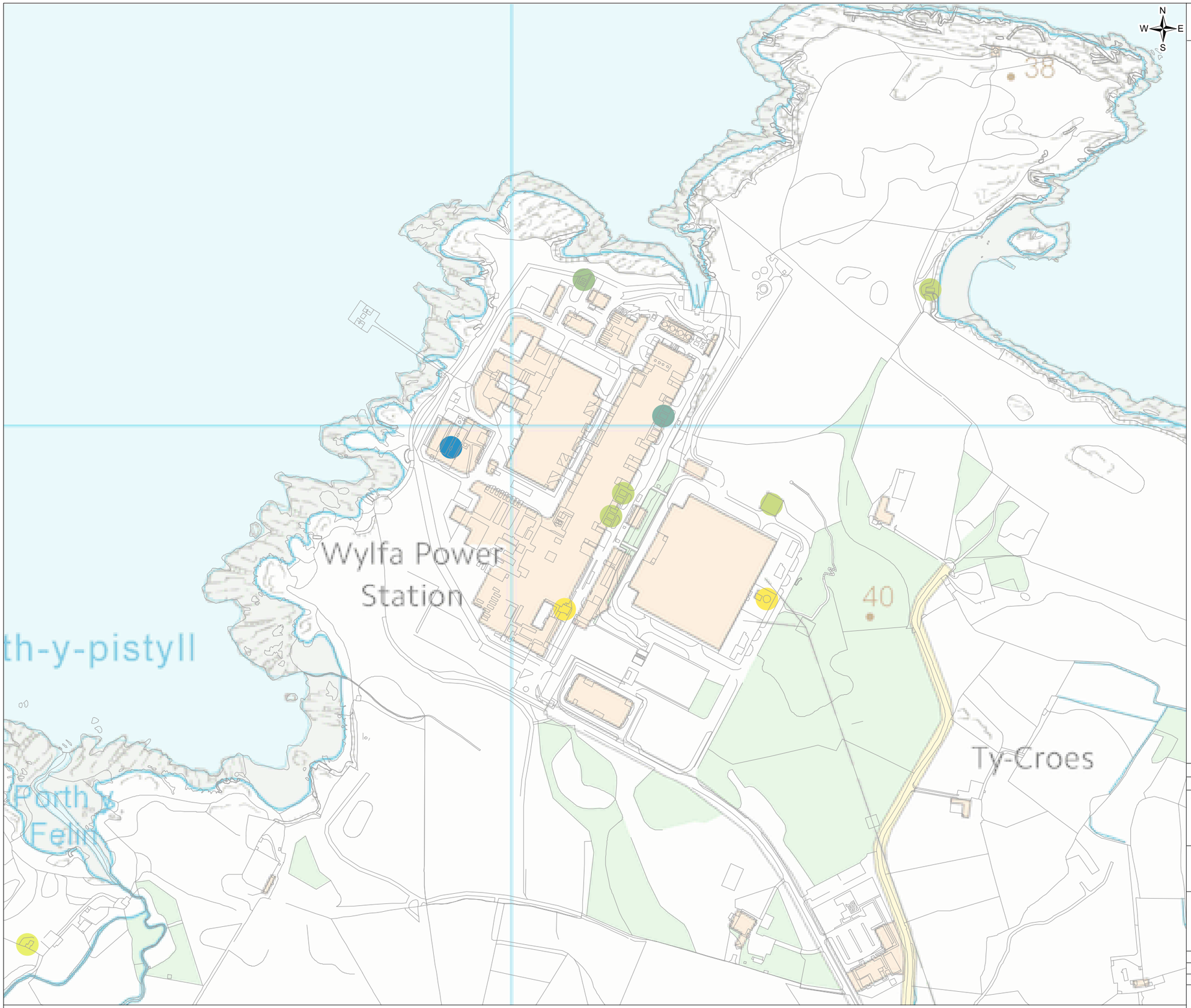
SHEET 17 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS100TO102_EVENING

This drawing is not to be used in whole or in part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

FIGURE 18



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (NIGHT-TIME)

SHEET 1 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.: 60PO80AS_NOISE_RfNMC_MONTHS100TO102_NIGHTTIME

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0 125 250 500 metres

FIGURE 18



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 100 TO 102 (NIGHT-TIME)

SHEET 2 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

60PO80AS_NOISE_RfNMC_MONTHS100TO102_NIGHTTIME

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0 125 250 500 metres

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FIGURE 18



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (NIGHT-TIME)

SHEET 3 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

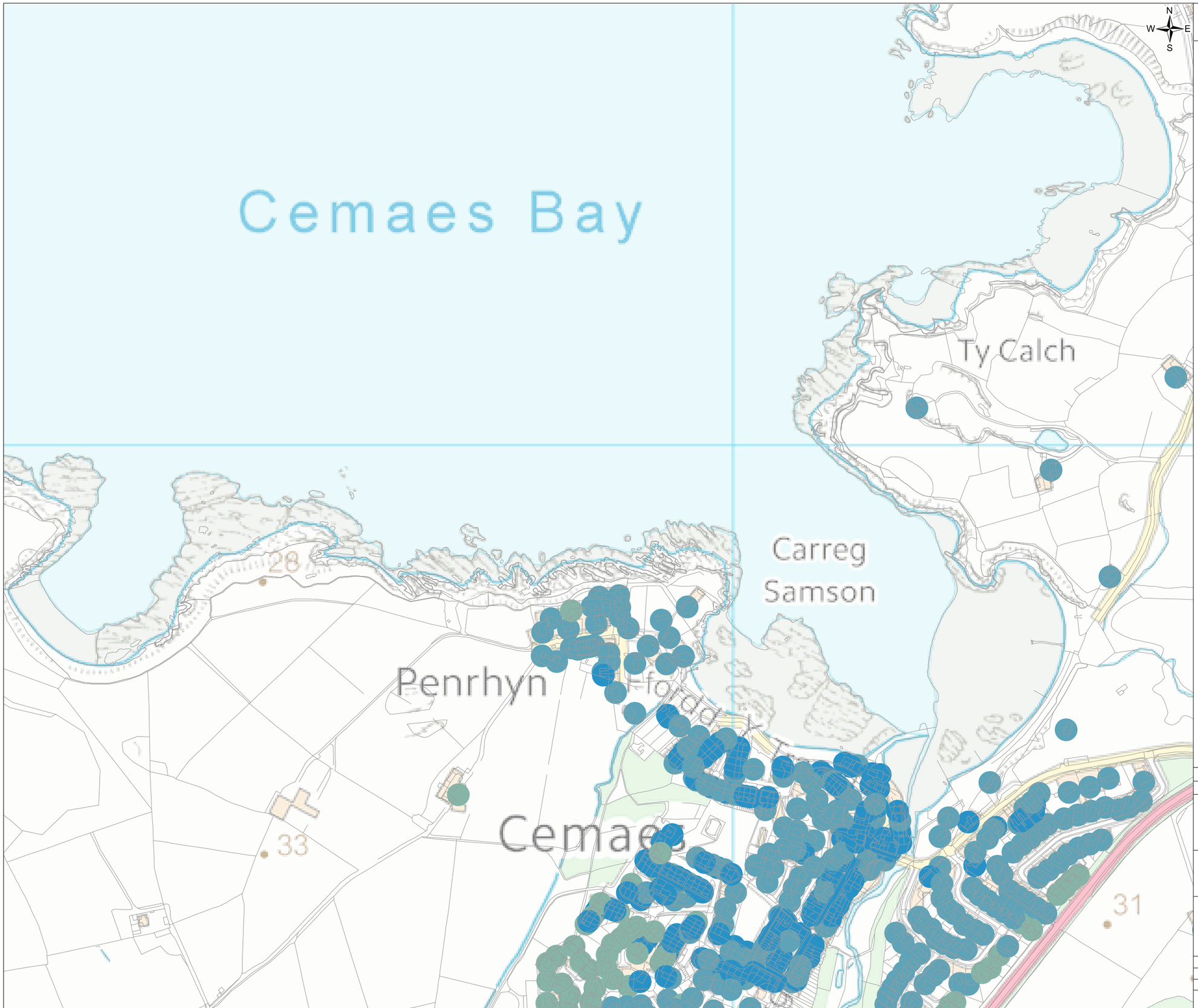
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_NIGHTTIME

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0 125 250 500 metres

FIGURE 18



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (NIGHT-TIME)
SHEET 4 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

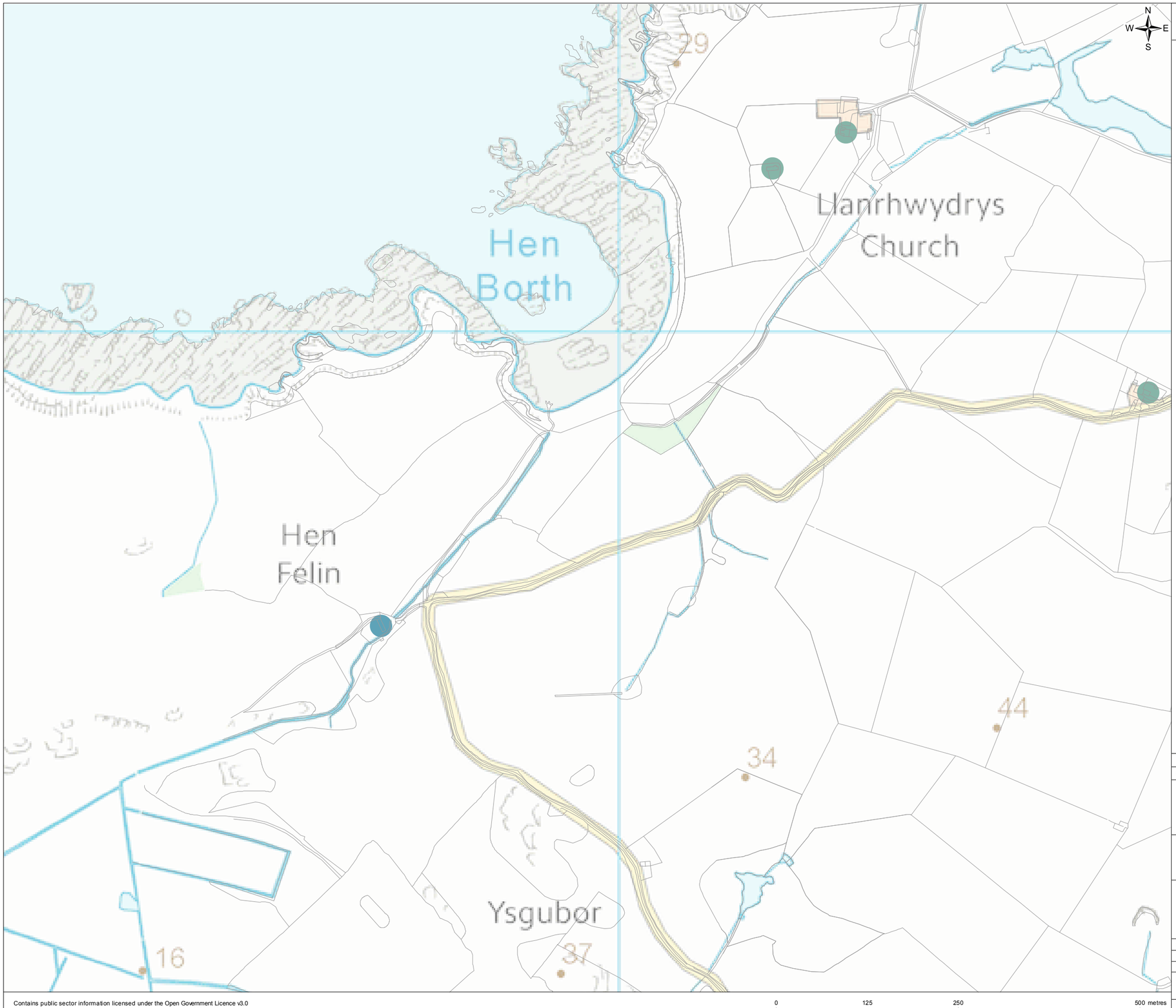
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_NIGHTTIME

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0 125 250 500 metres

FIGURE 18



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (NIGHT-TIME)
SHEET 5 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_NIGHTTIME

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0 125 250 500 metres

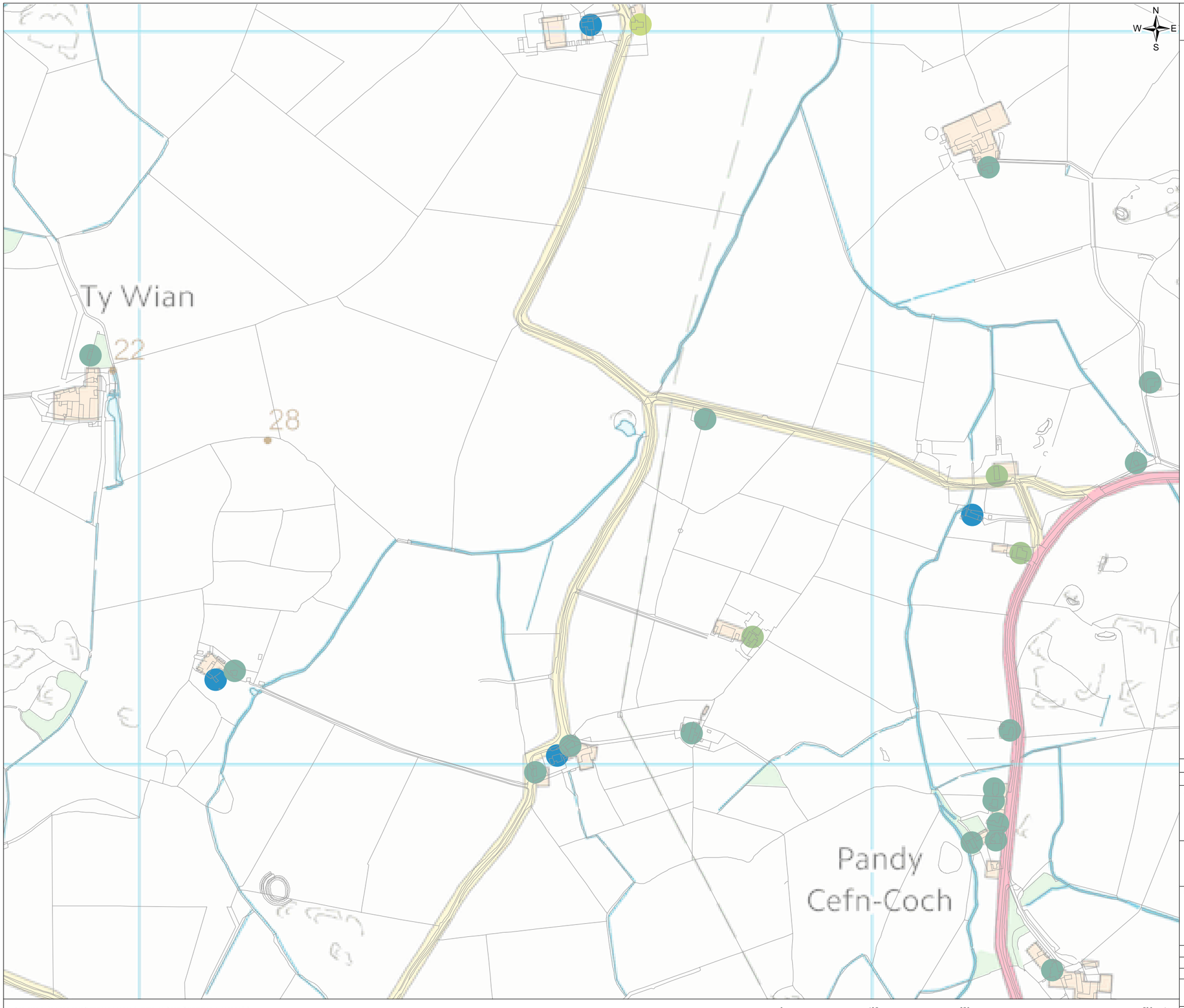


FIGURE 18

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (NIGHT-TIME)

SHEET 6 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_NIGHTTIME

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0 125 250 500 metres

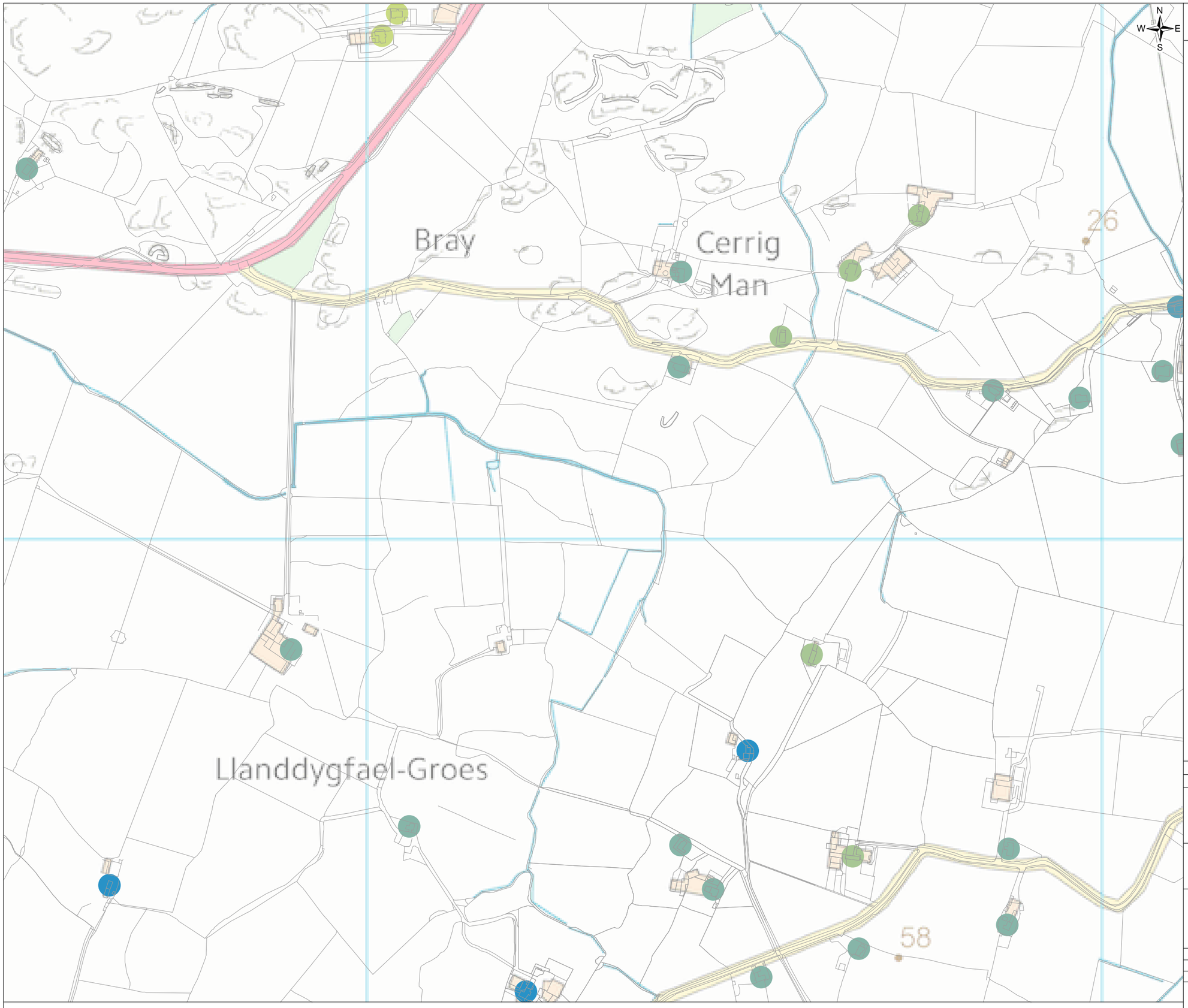


FIGURE 18

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (NIGHT-TIME)
SHEET 7 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

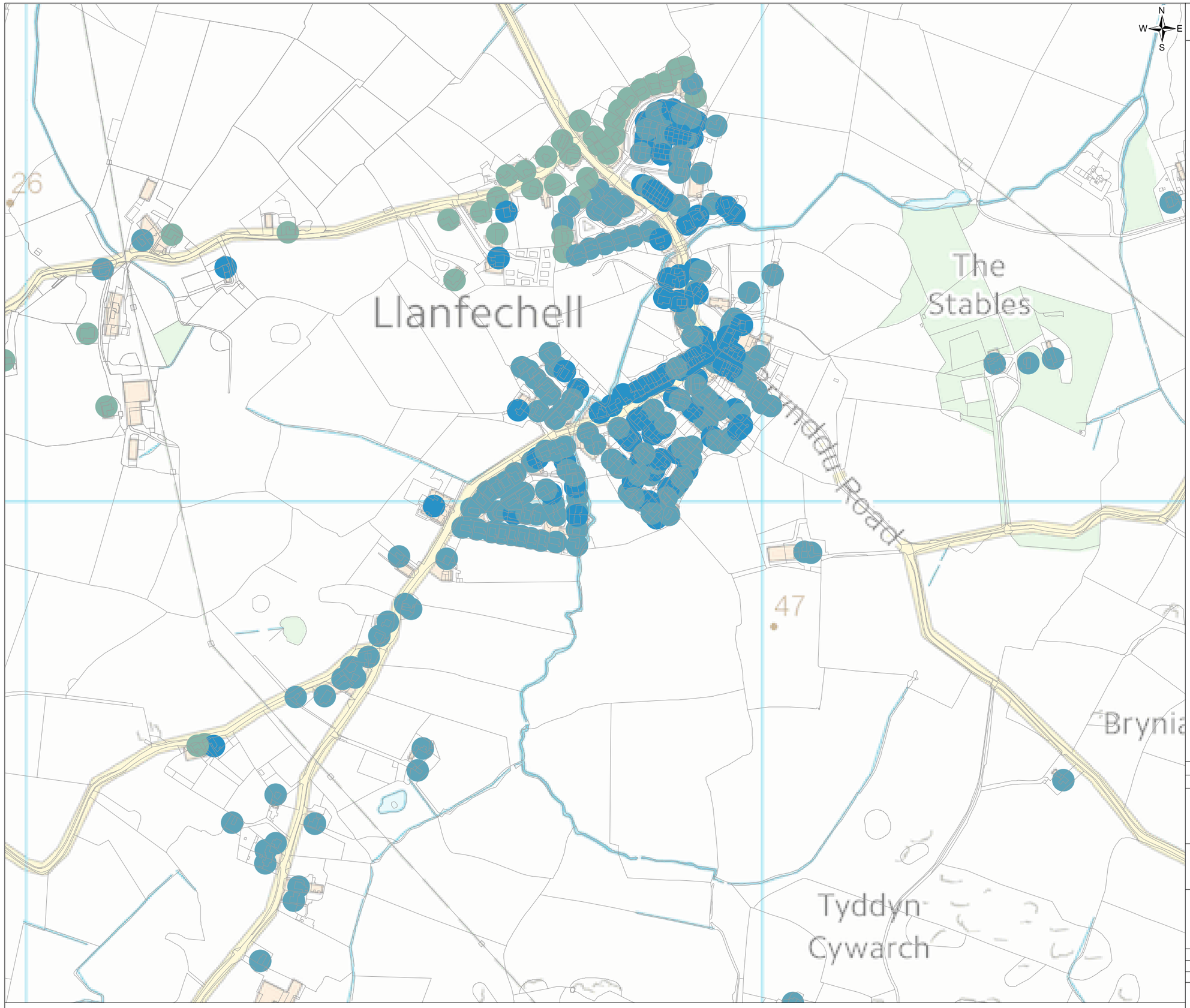
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_NIGHTTIME

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0 125 250 500 metres

FIGURE 18



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (NIGHT-TIME)

SHEET 8 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

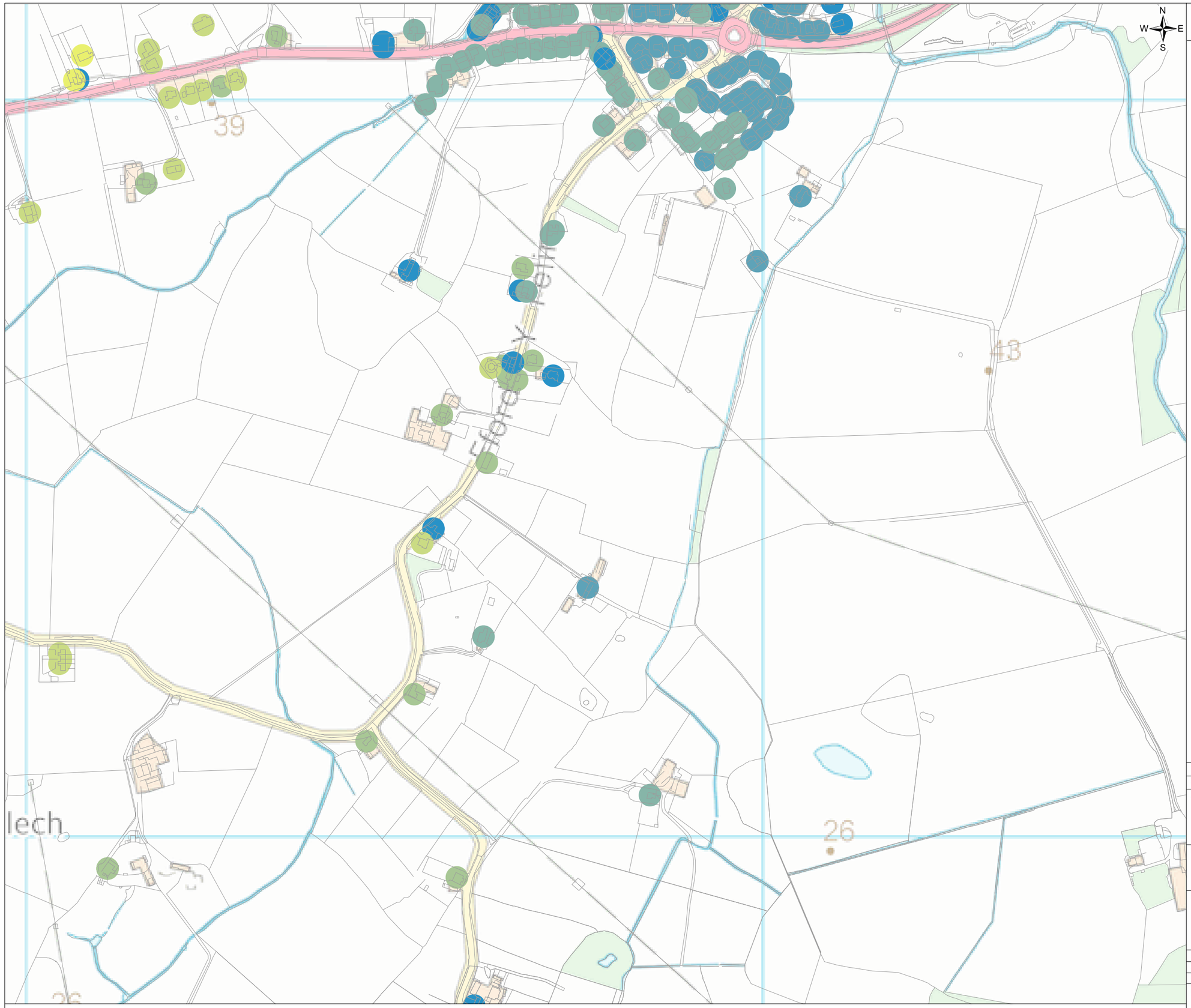
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_NIGHTTIME

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0 125 250 500 metres

FIGURE 18



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (NIGHT-TIME)

SHEET 9 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

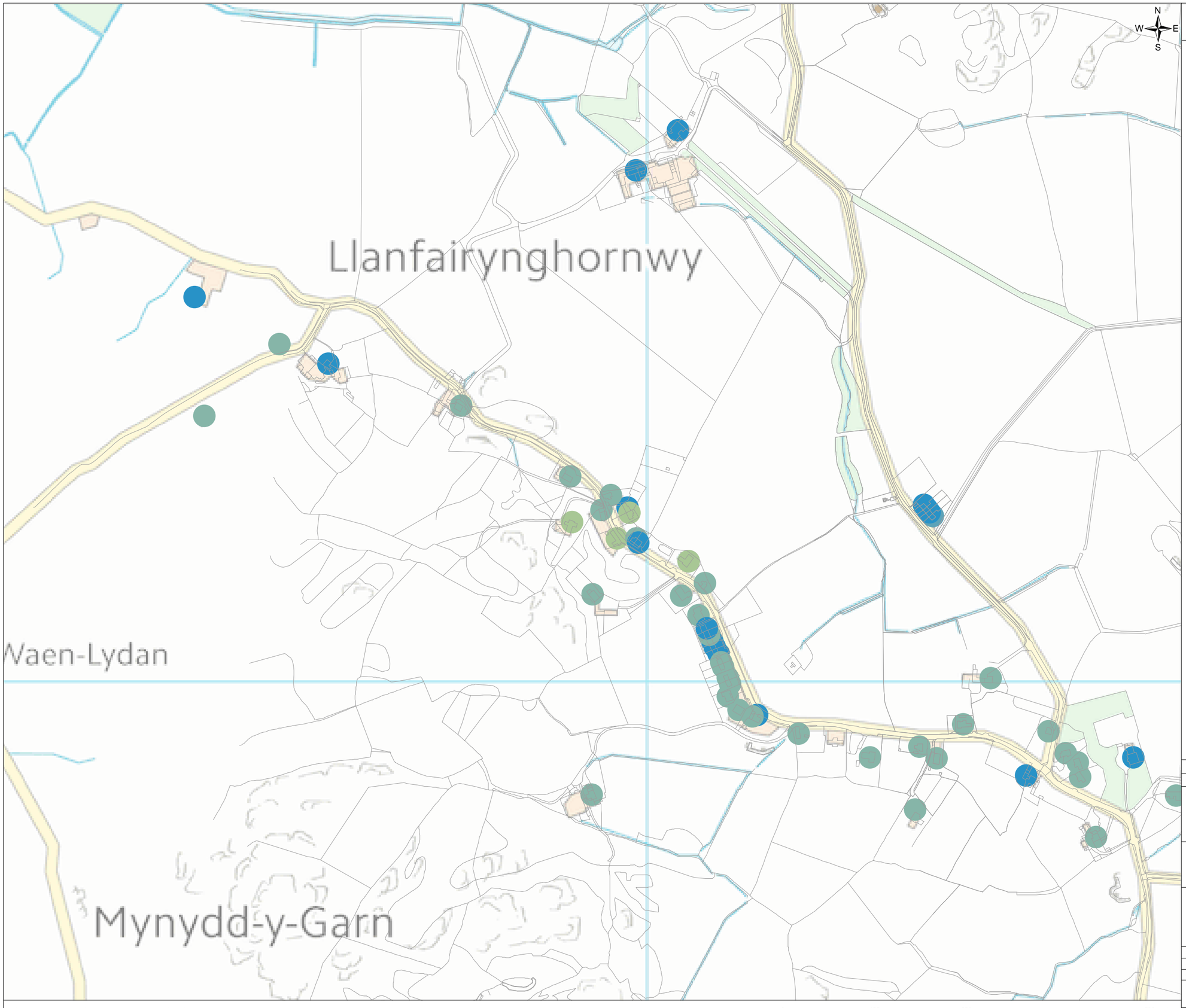
60PO80AS_NOISE_RfNMC_MONTHS100TO102_NIGHTTIME

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0 125 250 500 metres

FIGURE 18



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (NIGHT-TIME)

SHEET 10 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

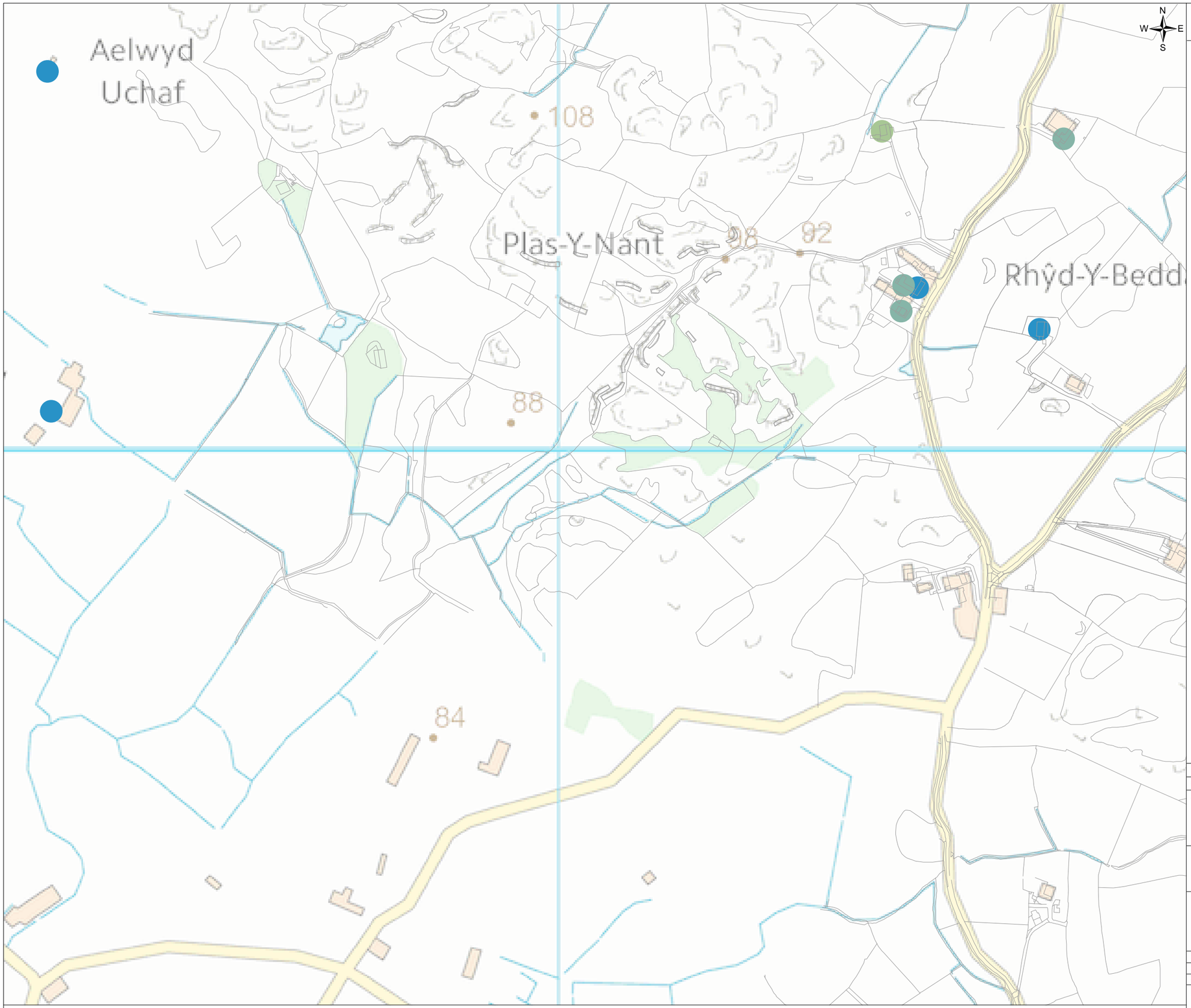
60PO80AS_NOISE_RfNMC_MONTHS100TO102_NIGHTTIME

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0 125 250 500 metres

FIGURE 18



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (NIGHT-TIME)

SHEET 11 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

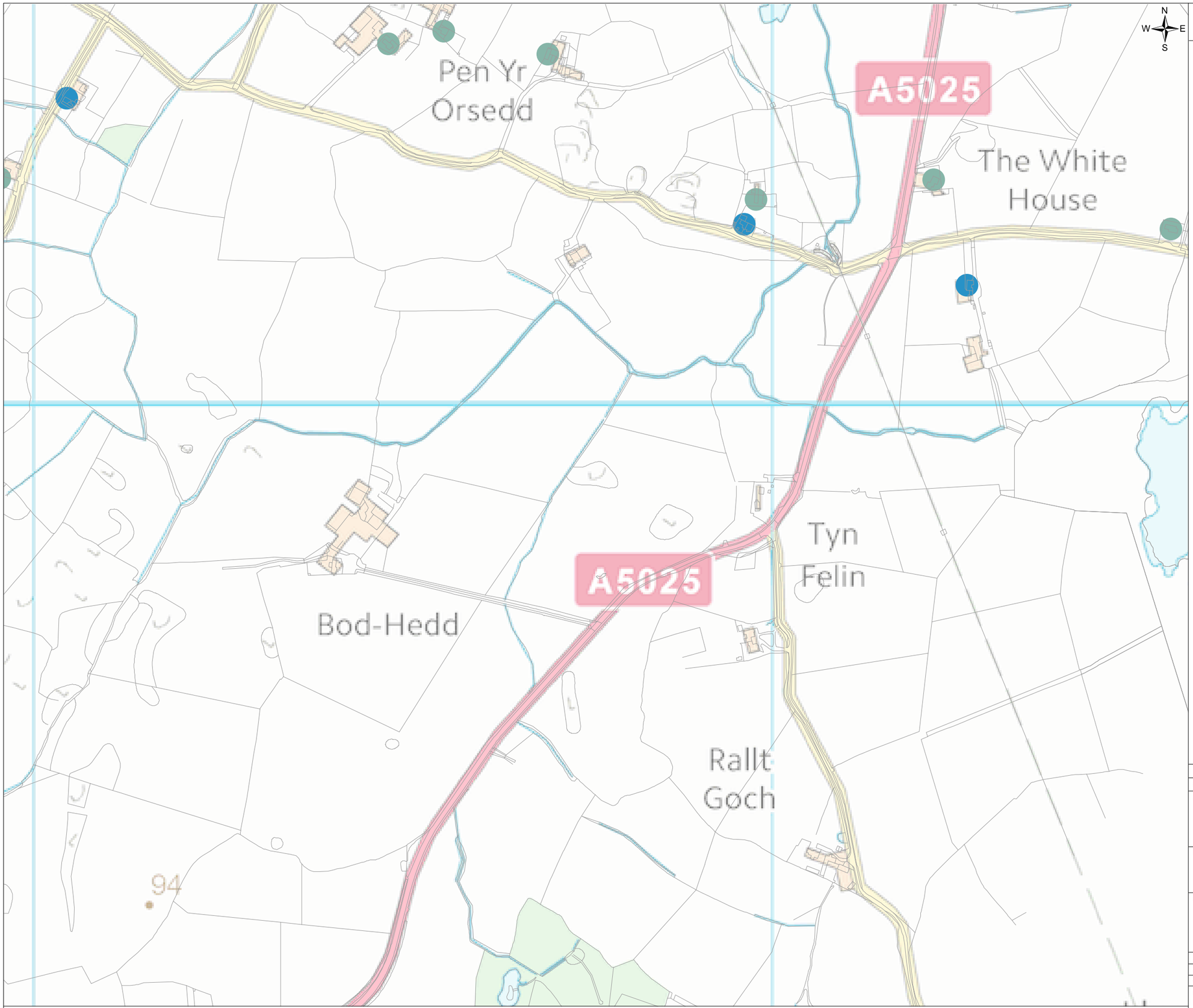
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_NIGHTTIME

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0 125 250 500 metres

FIGURE 18



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (NIGHT-TIME)
SHEET 12 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

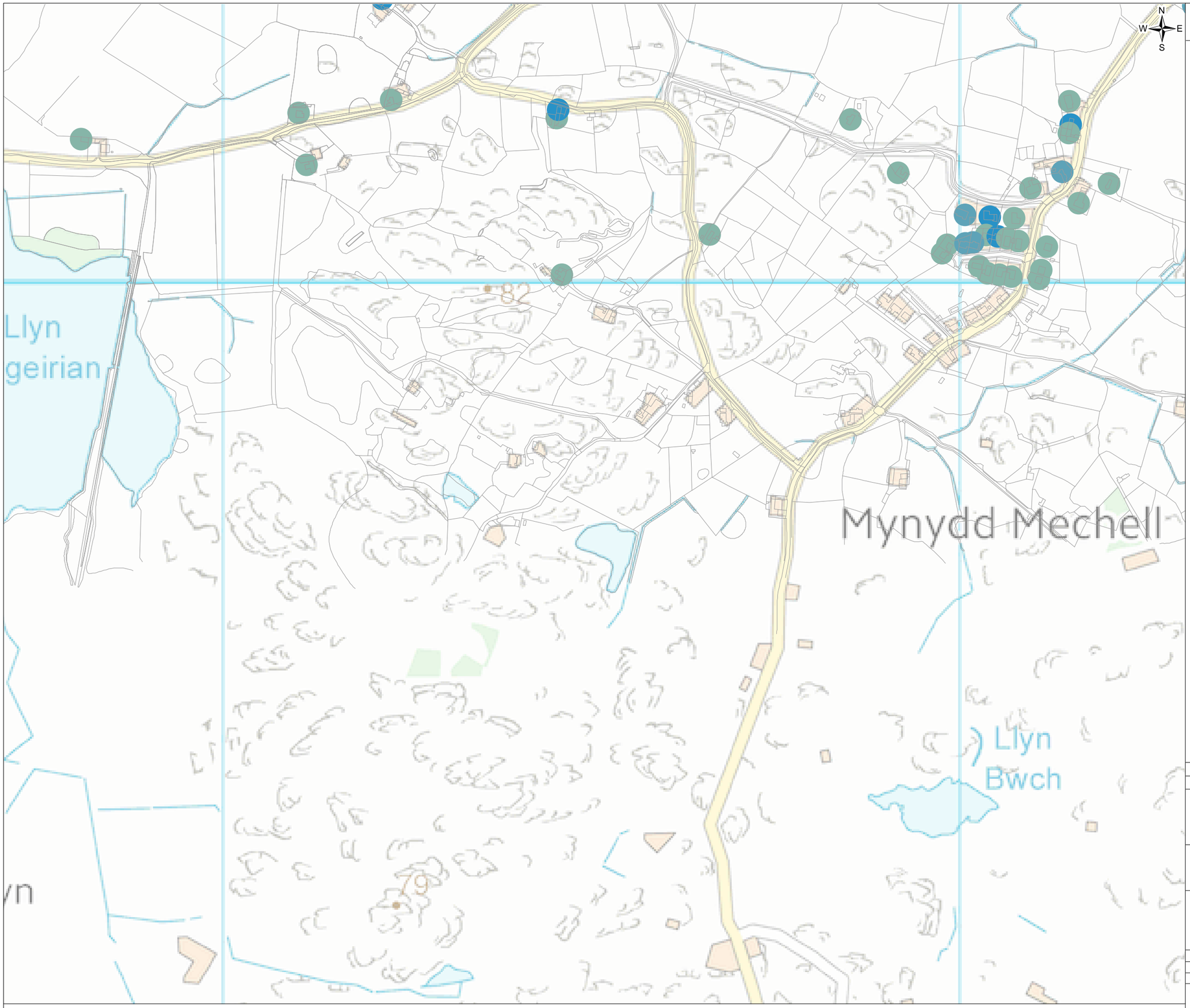
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_NIGHTTIME

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0 125 250 500 metres

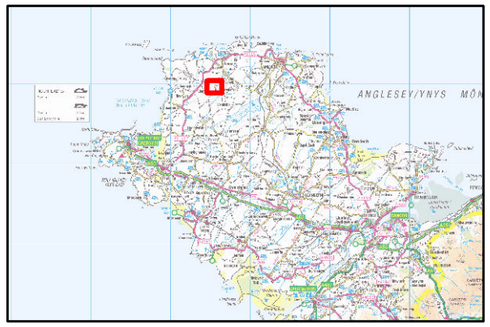
FIGURE 18



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (NIGHT-TIME)

SHEET 13 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_NIGHTTIME

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0 125 250 500 metres

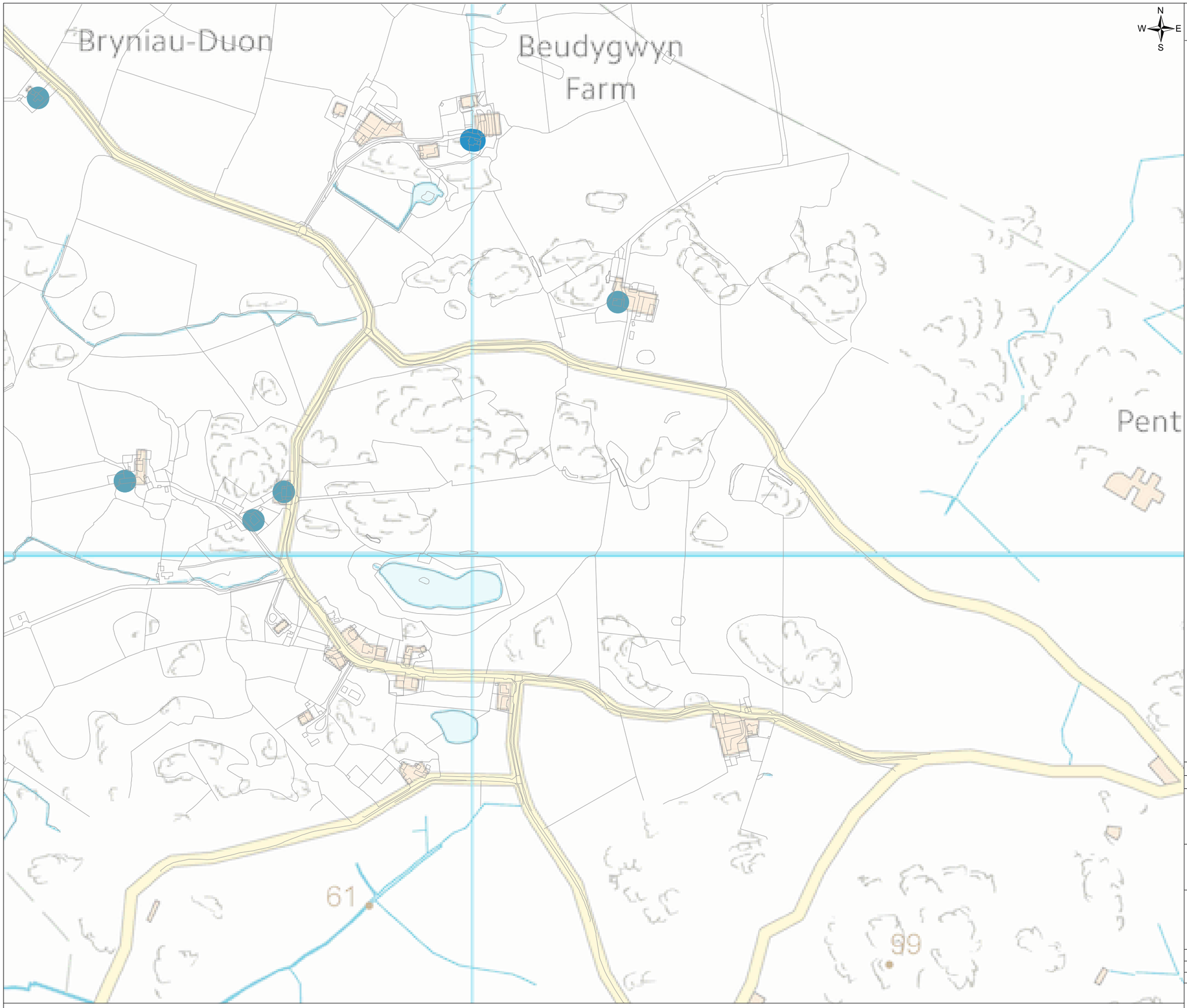


FIGURE 18

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (NIGHT-TIME)

SHEET 14 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

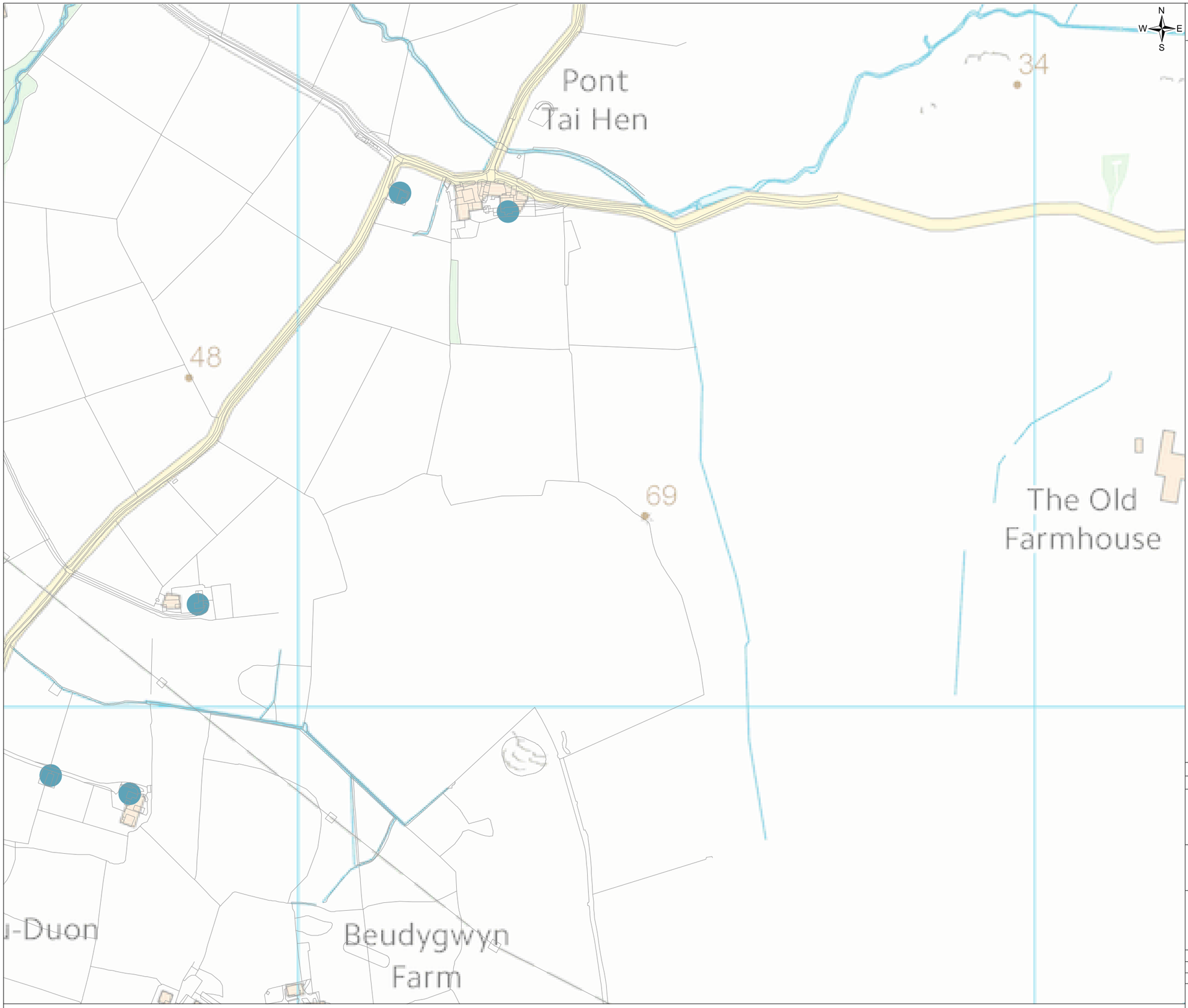
Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_NIGHTTIME

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0 125 250 500 metres

FIGURE 18



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client

HORIZON NUCLEAR POWER

Project

WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title

PREDICTED NOISE LEVELS WITH
EXTENSION TO WORKING HOURS
MONTHS 100 TO 102 (NIGHT-TIME)

SHEET 15 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
Client No.		

Drawing No.

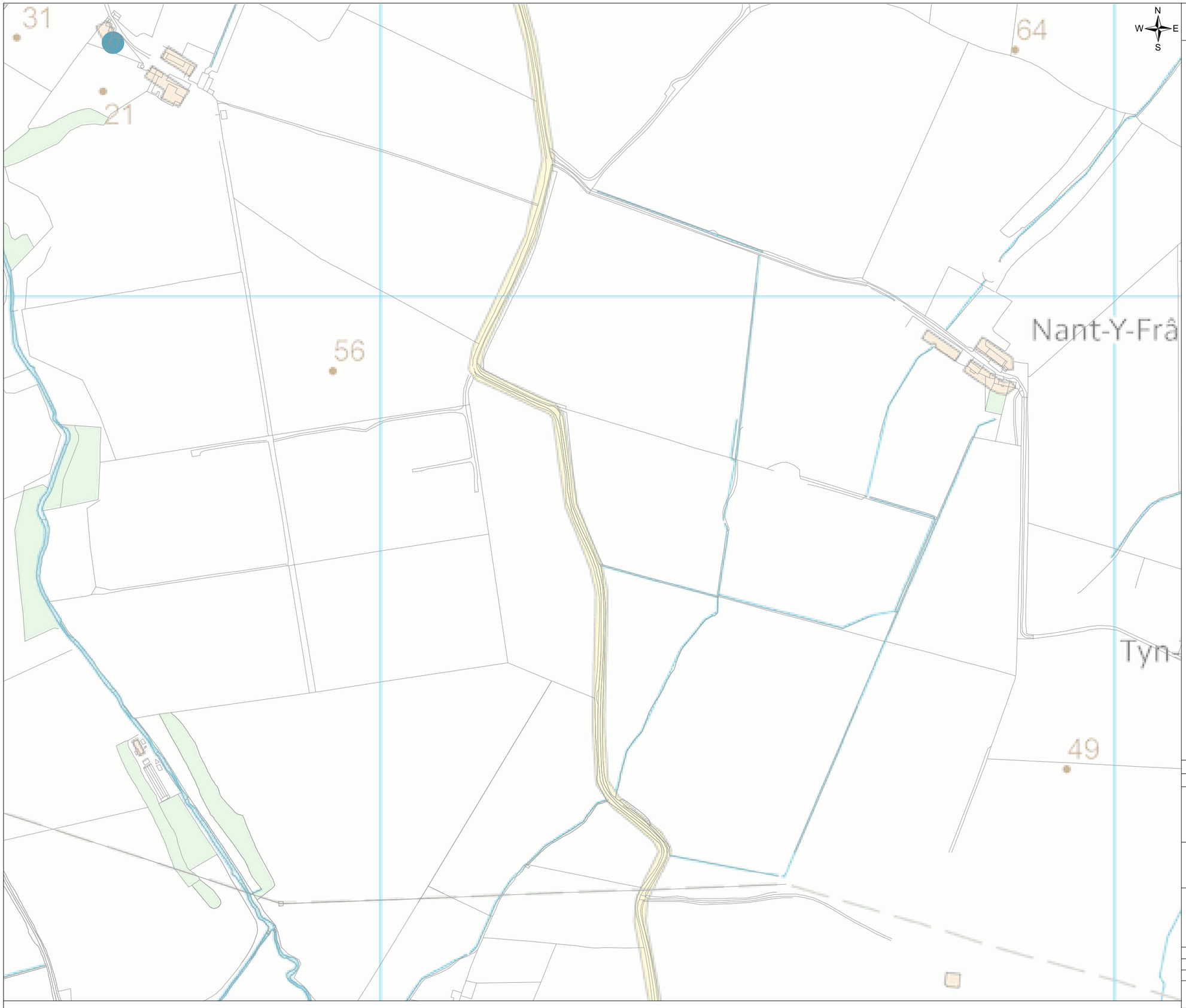
60PO80AS_NOISE_RfNMC_MONTHS100TO102_NIGHTTIME

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0 125 250 500 metres

FIGURE 18



Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (NIGHT-TIME)

SHEET 16 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
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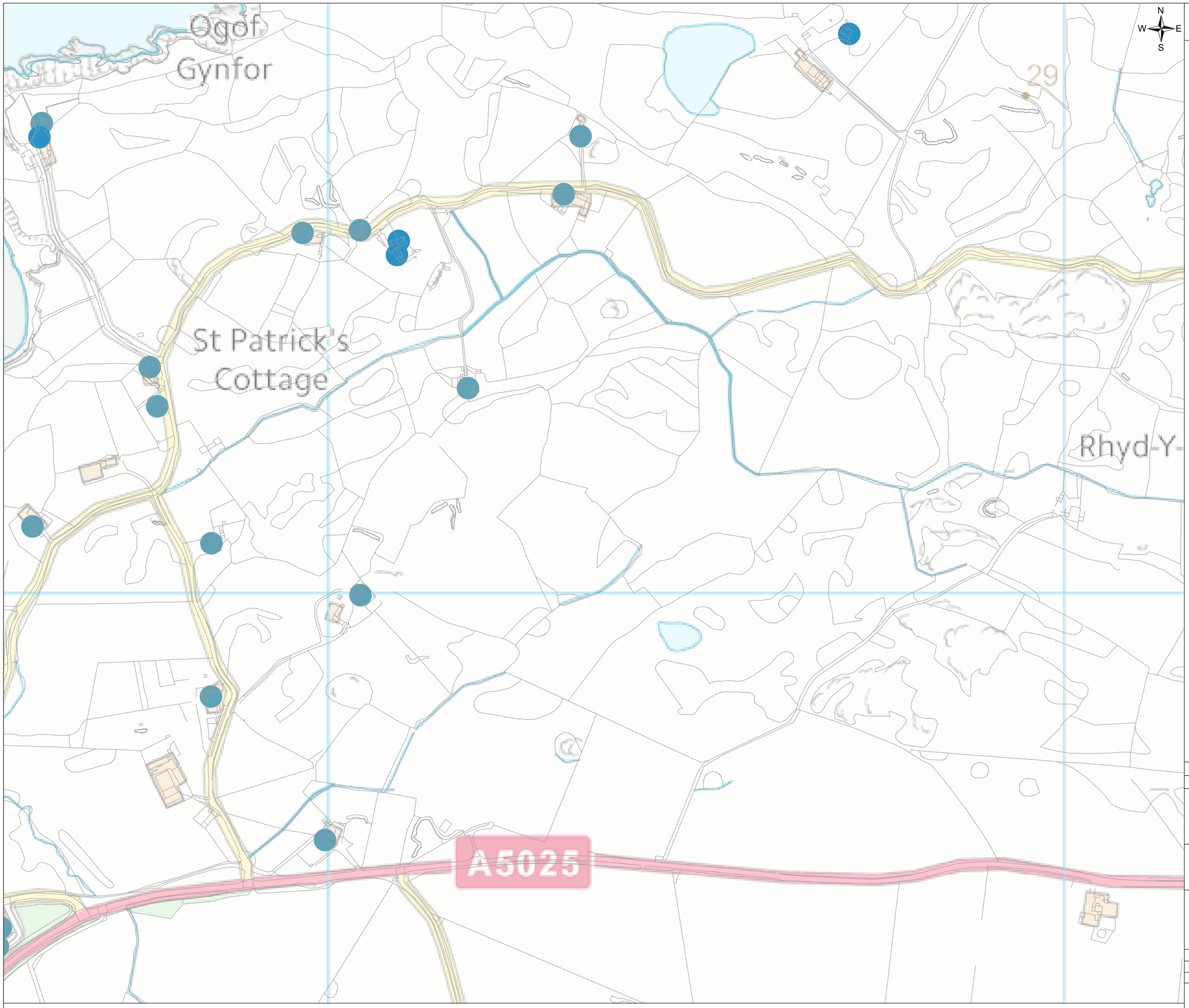


FIGURE 18

Legend

Predicted noise levels dB $L_{Aeq,1hour}$

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85
- 85 >



Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	JAN 19	FOR INFORMATION	HNPWL	HNPWL	HNPWL	HNPWL

Client: HORIZON NUCLEAR POWER

Project: WYLFA NEWYDD PROJECT
ENVIRONMENTAL STATEMENT

Drawing Title: PREDICTED NOISE LEVELS WITH EXTENSION TO WORKING HOURS MONTHS 100 TO 102 (NIGHT-TIME)

SHEET 17 OF 17

Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	60PO80AS	
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Drawing No. 60PO80AS_NOISE_RfNMC_MONTHS100TO102_NIGHTTIME

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0 125 250 500 metres

11 - Residential receptor - 0 Lux avg, 0 Lux min and 0.001 Lux max

12 - Residential receptor 2 - 0.003 Lux avg, 0.002 Lux min and 0.003 Lux max

13 - Residential receptor - 0.002 Lux avg, 0.002 Lux min and 0.002 Lux max

4/5 - Cemlyn Bay/Terns nesting area

13 - Residential receptor 3

9 - Gof Isaf Bat Barn

8 - Buffer zones along watercourses within the Wylfa Newydd Development Area

11 - Residential receptor 1

12 - Residential receptor 2

7 - Tregele Village

HR-001
HR-002
HR-003
HR-004
HR-005
HR-006
HR-007
HR-008
HR-010
HR-011
HR-012
HR-013
HR-014

8 - on top of the watercourse bridge - 0.035 Lux avg, 0.006 Lux min and 0.05 Lux max

8 - Side of the rivercourse bridge - 0.15 Lux avg, 0.024 Lux min and 1.63 Lux max

7 - Tregele Village - No mound - 0.018 Lux avg, 0.000 Lux min and 0.025 Lux max

Key:

Qty:	Sym:	Description:
574		Proposed 8m Holophane Europe VMAX VMX.L064.V2.L2.L4 luminaire 6.93klm LED C.6000LM - 4000K lamp.
		Vertical Grids locations facing towards haul roads
		DCO boundary
		Indicative earthworks haul routes
		Lux contours
		Vertical Grids showing Lux Levels

0 100 200 300 400 500 m

SCALE 1 : 5000

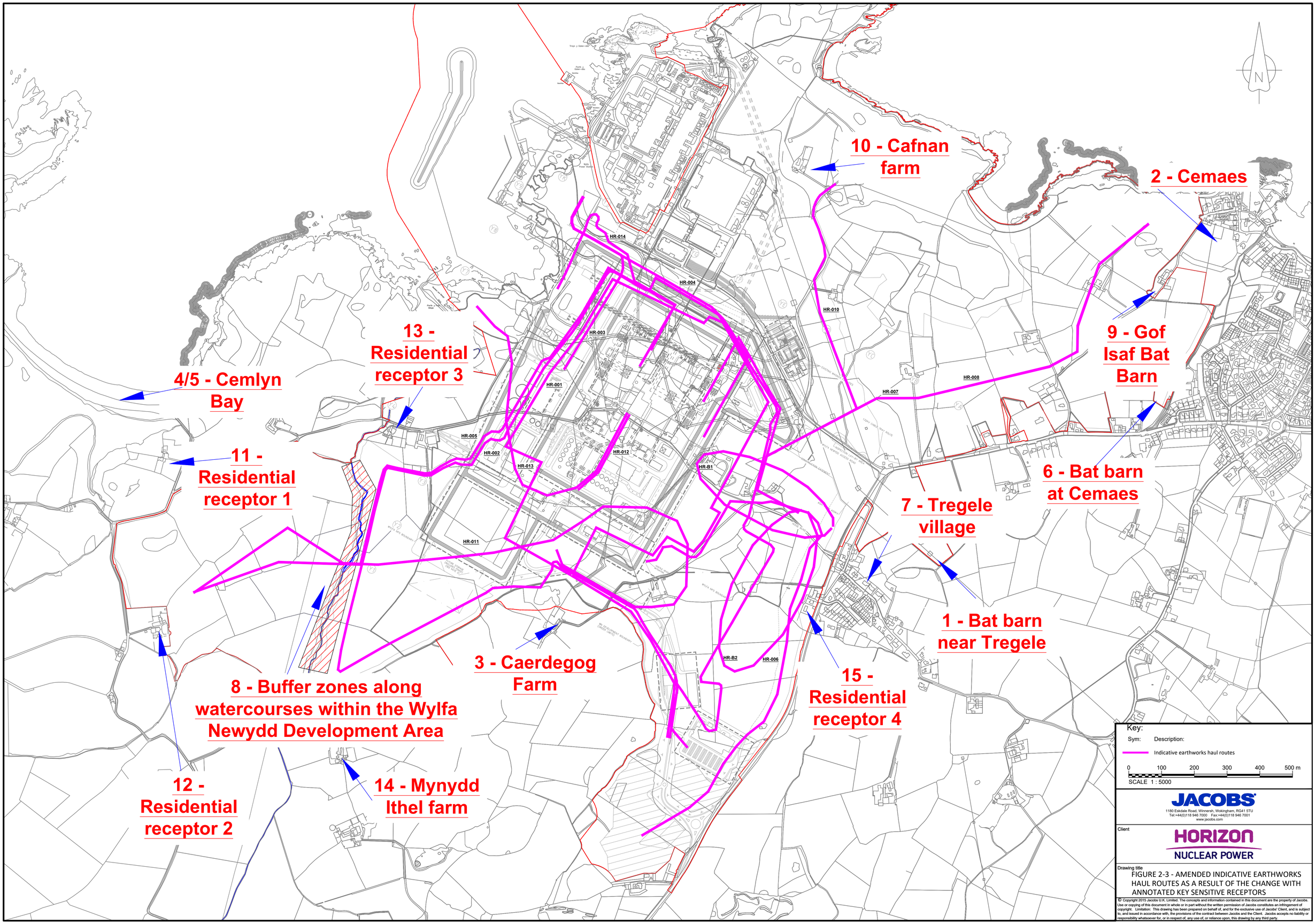
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Client: HORIZON NUCLEAR POWER

Drawing title

FIGURE 2-2 - VERTICAL GRIDS SHOWING LUX LEVELS

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HORIZON NUCLEAR POWER

WYLFA NEWYDD

ENERGY WORKING FOR BRITAIN

Wylfa Newydd Project

Environmental Statement Addendum
Appendix D5-A
Air Quality (Excluding Emissions from Traffic)

PINS Reference Number: EN010007

25 March 2019

Revision 2.0
Examination Deadline 8

Regulation Number: 5(2)(a)

Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Horizon Internal DCRM Number: WN0902-HZDCO-PAC-REP-00305

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Contents

1 Introduction 1
2 Results 3
2.1 Human receptors 3
Annual mean concentrations *3*
Short-term concentrations *3*
2.2 Ecological receptors 10

List of Tables

Table 2-1 Year 2 peak earthworks and Marine Works scenario – predicted annual mean air pollutant concentrations at key human receptors 4
Table 2-2 Year 5 peak construction scenario – predicted annual mean air pollutant concentrations at key human receptors 5
Table 2-3 Year 2 peak earthworks and Marine Works scenario – predicted short-term air pollutant concentrations at key human receptors 6
Table 2-4 Year 2 peak earthworks and Marine Works scenario – magnitude of short-term changes at key human receptors 7
Table 2-5 Year 5 peak construction scenario – predicted short-term air pollutant concentrations at key human receptors 8
Table 2-6 Year 5 peak construction scenario – magnitude of short-term changes at key human receptors 9
Table 2-7 Year 2 peak earthworks and Marine Works scenario – magnitude of annual mean NOx changes at ecological receptors 11
Table 2-8 Year 2 peak earthworks and Marine Works scenario – magnitude of 24-hour mean NOx changes at ecological receptors 13
Table 2-9 Year 2 peak earthworks and Marine Works scenario – magnitude of annual mean SO_2 changes at ecological receptors 15
Table 2-10 Year 2 peak earthworks and Marine Works scenario – change to nitrogen deposition rate at ecological receptors 17
Table 2-11 Year 2 peak earthworks and Marine Works scenario – change to acid deposition rate at ecological receptors 20
Table 2-12 Year 5 peak construction scenario – magnitude of annual mean NOx changes at ecological receptors 23
Table 2-13 Year 5 peak construction scenario – magnitude of 24-hour mean NOx changes at ecological receptors 25
Table 2-14 Year 5 peak construction scenario – magnitude of annual mean SO_2 changes at ecological receptors 27
Table 2-15 Year 5 peak construction scenario – change to nitrogen deposition rate at ecological receptors 29
Table 2-16 Year 5 peak construction scenario – change to acid deposition rate at ecological receptors 32

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1 Introduction

1.1.1 This document provides the full results tables for the dispersion modelling of pollutant emissions to air from construction plant, machinery and marine vessels. It represents the residual effects for air quality having taken into account the embedded, good practice and additional mitigation set out in the various control documents including the Wylfa Newydd Code of Construction Practice (CoCP) [REP5-020], Main Power Station Site sub-CoCP [REP-022] and the Marine Works sub-CoCP [REP5-024].

1.1.2 The results presented in this document also include the effects of the changes to marine vessel movements and working hours at the Wylfa Newydd Development Area requested by Horizon. The changes requested by Horizon in relation to the blasting strategy, worker shift patterns and heavy goods vehicle (HGV) delivery windows do not have any direct impact on emissions from construction plant, machinery and marine vessels.

1.1.3 The magnitude of the changes in pollutant concentrations or deposition rates and significance of the residual air quality effects are described in chapter 5 of the ES Addendum.

1.1.4 The dispersion modelling of emissions to air from construction plant, machinery and marine vessels during construction (as presented in chapter D5 [APP-124] of the Environmental Statement) was undertaken for two scenarios.

- Peak of activities associated with the site grading and bulk earthworks, deep excavations, landscape formation, cooling water tunnels and outfall construction and construction of the Marine Off-Loading Facility (MOLF). The scenario represents a 12-month period during which the highest number of diesel-engine plant items and site vehicles are forecast to be operating at the Wylfa Newydd Development Area at any time during Main Construction (hereafter referred to as the 'year 2 peak earthworks and Marine Works scenario'). This scenario is used to determine the highest potential air quality effects during approximately the first two years of the construction programme.
- Peak of activities associated with the construction of the Power Station buildings and structures, including (but not limited to) concrete production, distribution and placing, steel reinforcing works, craneage, access to structures and related site logistics, such as the transportation of construction workers and materials. The scenario represents a 12-month period during which the highest number of diesel-engine plant items and site vehicles are forecast to be operating at the Wylfa Newydd Development Area after completion of the earthworks and Marine Works earlier in the construction schedule (hereafter referred to as the 'year 5 peak construction scenario'). This scenario is used to determine the highest potential air quality effects once the earthworks and Marine Works are completed (i.e. from approximately year 3 to year 9 of the construction programme).

1.1.5 The number of plant items, types, sizes, working locations and diurnal and monthly working patterns specified for the assessment were based on information developed by Horizon and its construction contractors for the Wylfa Newydd Project. Full details of the methodology used to quantify the magnitude of changes in air pollutant concentrations and deposition rates as a result of emissions to air from construction plant, machinery and marine vessels, are set out in appendix D5-2-A of the ES Addendum. This includes all the relevant study inputs and assumptions for all modelled plant items.

2 Results

2.1 Human receptors

Annual mean concentrations

2.1.2 The predicted changes in annual mean concentrations of air pollutants (nitrogen dioxide (NO_2), PM_{10} and $PM_{2.5}$) for the year 2 peak earthworks and Marine Works scenario are reported in Table 2-1 for the key human receptor locations. Figure D5-7 in Appendix D-A of this Addendum illustrates the spatial pattern of annual mean NO_2 concentration changes at all receptors representing relevant long-term exposure locations.

2.1.3 The predicted changes in annual mean concentrations of NO_2, PM_{10} and $PM_{2.5}$ for the year 5 peak construction scenario are reported in Table 2-2 for the key human receptor locations. The predicted changes in annual mean NO_2 concentrations at all long-term receptors are illustrated in Figure D5-8 in Appendix D-A of this Addendum.

Short-term concentrations

2.1.4 The predicted change in short-term concentrations of NO_2, PM_{10}, sulphur dioxide (SO_2) and carbon monoxide (CO) are summarised in Table 2-3 and Table 2-4 for the year 2 peak earthworks and Marine Works scenario and in Table 2-5 and Table 2-6 for the year 5 peak construction scenario.

2.1.5 The short-term concentrations presented in Table 2-3 and Table 2-5 are based on the relevant percentiles for direct comparison to the air quality objectives (AQOs) and Environmental Assessment Levels (EALs) as set out in table B5-14 of chapter B5 [APP-070] of the Environmental Statement. The table column headers in Table 2-3 to Table 2-6 for each pollutant have been shortened for ease and clarity of reporting as follows:

- 8-hour CO = 100th percentile (i.e. maximum) of eight-hour rolling means;
- 1-hour CO = 100th percentile (i.e. maximum) of one-hour means;
- 1-hour NO_2 = 99.8th percentile of one-hour means;
- 24-hour PM_{10} = 90.4th percentile of 24-hour means;
- 24-hour SO_2 = 99.2nd percentile of 24-hour means;
- 1-hour SO_2 = 99.7th percentile of one-hour means; and
- 15-min SO_2 = 99.9th percentile of 15-minute means

2.1.6 Figure D5-9 and Figure D5-10 in Appendix D-A of this Addendum illustrate the spatial pattern of 99.8th percentile of one-hour mean NO_2 concentration changes at all receptors representing relevant long-term exposure locations for the year 2 and year 5 scenario, respectively.

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Table 2-1 Year 2 peak earthworks and Marine Works scenario – predicted annual mean air pollutant concentrations at key human receptors

Receptor	Year 2 baseline			Year 2 peak earthworks and Marine Works			Magnitude of change as percentage of AQO value[1,2,3]		
	NO_2 ($\mu g/m^3$)	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	NO_2 (AQO = 40$\mu g/m^3$)	PM_{10} (AQO = 40$\mu g/m^3$)	$PM_{2.5}$ (AQO = 25$\mu g/m^3$)
R1	5.1	14.9	7.8	≤7.2	≤15.0	≤7.9	+5% (n)	0% (n)	+1% (n)
R2	5.1	14.9	7.8	≤8.0	≤15.1	≤8.0	+7% (s)	0% (n)	+1% (n)
R3	5.1	14.9	7.8	≤6.5	≤15.0	≤7.9	+3% (n)	0% (n)	0% (n)
R4	10.4	15.6	8.2	≤11.9	≤15.7	≤8.3	+4% (n)	0% (n)	0% (n)
R5	6.9	15.2	8.0	≤10.0	≤15.4	≤8.2	+8% (s)	0% (n)	+1% (n)
R6	8.4	15.4	8.1	≤12.5	≤15.7	≤8.4	+10% (s)	+1% (n)	+1% (n)
R7	6.1	15.1	7.9	≤11.5	≤15.5	≤8.3	+14% (m)	+1% (n)	+1% (n)
R8	5.1	15.0	7.9	≤6.3	≤15.1	≤7.9	+3% (n)	0% (n)	0% (n)
R9	4.8	14.9	7.8	≤6.3	≤15.0	≤7.9	+4% (n)	0% (n)	0% (n)
R10	4.4	14.9	7.8	≤7.5	≤15.1	≤8.0	+8% (s)	0% (n)	+1% (n)
R11	4.4	14.9	7.8	≤5.6	≤15.0	≤7.9	+3% (n)	0% (n)	0% (n)
R12	4.3	14.9	7.8	≤5.6	≤15.0	≤7.9	+3% (n)	0% (n)	0% (n)
R13	4.1	14.9	7.8	≤6.8	≤15.1	≤8.0	+7% (s)	0% (n)	+1% (n)
R14	4.4	14.9	7.8	≤8.7	≤15.2	≤8.1	+11% (m)	+1% (n)	+1% (n)
R15	4.4	14.9	7.8	≤10.2	≤15.3	≤8.2	+15% (m)	+1% (n)	+2% (n)
R16	4.4	14.9	7.8	≤5.3	≤15.0	≤7.9	+2% (n)	0% (n)	0% (n)
R17	4.4	14.9	7.8	≤5.1	≤14.9	≤7.8	+2% (n)	0% (n)	0% (n)

Note 1: Impact magnitude rounded to whole numbers and reported as a percentage of the respective AQO value.
Note 2: Descriptors of effects at individual receptors in parentheses as per table B5-15 of chapter B5 [APP-070]: ‘n’ is negligible, ‘s’ is small, ‘m’ is medium and ‘l’ is large.
Note 3: Any changes of 0% (i.e. less than 0.5%) are described as negligible (‘n’) regardless of the total concentration.

Table 2-2 Year 5 peak construction scenario – predicted annual mean air pollutant concentrations at key human receptors

Receptor	Year 5 baseline			Year 5 peak construction			Magnitude of change as percentage of AQO value[1,2,3]		
	NO_2 ($\mu g/m^3$)	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	NO_2 (AQO = 40$\mu g/m^3$)	PM_{10} (AQO = 40$\mu g/m^3$)	$PM_{2.5}$ (AQO = 25$\mu g/m^3$)
R1	5.1	14.9	7.8	≤5.8	≤14.9	≤7.8	+2% (n)	0% (n)	0% (n)
R2	5.1	14.9	7.8	≤5.9	≤14.9	≤7.8	+2% (n)	0% (n)	0% (n)
R3	5.1	14.9	7.8	≤5.7	≤14.9	≤7.8	+1% (n)	0% (n)	0% (n)
R4	9.7	15.6	8.2	≤10.3	≤15.6	≤8.2	+2% (n)	0% (n)	0% (n)
R5	6.6	15.2	8.0	≤8.0	≤15.3	≤8.1	+4% (n)	0% (n)	0% (n)
R6	7.8	15.4	8.1	≤9.7	≤15.5	≤8.2	+5% (n)	0% (n)	0% (n)
R7	5.8	15.1	7.9	≤8.0	≤15.2	≤8.0	+5% (n)	0% (n)	0% (n)
R8	5.0	15.0	7.9	≤5.7	≤15.0	≤7.9	+2% (n)	0% (n)	0% (n)
R9	4.8	14.9	7.8	≤5.7	≤14.9	≤7.8	+2% (n)	0% (n)	0% (n)
R10	4.4	14.9	7.8	≤8.2	≤15.0	≤7.9	+10% (s)	0% (n)	+1% (n)
R11	4.4	14.9	7.8	≤5.4	≤14.9	≤7.8	+2% (n)	0% (n)	0% (n)
R12	4.3	14.9	7.8	≤5.1	≤14.9	≤7.8	+2% (n)	0% (n)	0% (n)
R13	4.1	14.9	7.8	≤5.5	≤15.0	≤7.9	+3% (n)	0% (n)	0% (n)
R14	4.4	14.9	7.8	≤7.4	≤15.0	≤7.9	+8% (s)	0% (n)	0% (n)
R15	4.4	14.9	7.8	≤6.9	≤15.0	≤7.9	+6% (s)	0% (n)	+1% (n)
R16	4.4	14.9	7.8	≤4.8	≤14.9	≤7.8	+1% (n)	0% (n)	0% (n)
R17	4.4	14.9	7.8	≤4.7	≤14.9	≤7.8	+1% (n)	0% (n)	0% (n)

Note 1: Impact magnitude rounded to whole numbers and reported as a percentage of the respective AQO value.
Note 2: Descriptors of effects at individual receptors in parentheses as per table B5-15 of chapter B5 [APP-070]: ‘n’ is negligible, ‘s’ is small, ‘m’ is medium and ‘l’ is large.
Note 3: Any changes of 0% (i.e. less than 0.5%) are described as negligible (‘n’) regardless of the total concentration.

Table 2-3 Year 2 peak earthworks and Marine Works scenario – predicted short-term air pollutant concentrations at key human receptors

Receptor	Year 2 baseline							Year 2 peak earthworks and Marine Works						
	8-hour CO ($\mu g/m^3$)	1-hour CO ($\mu g/m^3$)	1-hour NO_2 ($\mu g/m^3$)	24-hour PM_{10} ($\mu g/m^3$)	24-hour SO_2 ($\mu g/m^3$)	1-hour SO_2 ($\mu g/m^3$)	15-min SO_2 ($\mu g/m^3$)	8-hour CO ($\mu g/m^3$)	1-hour CO ($\mu g/m^3$)	1-hour NO_2 ($\mu g/m^3$)	24-hour PM_{10} ($\mu g/m^3$)	24-hour SO_2 ($\mu g/m^3$)	1-hour SO_2 ($\mu g/m^3$)	15-min SO_2 ($\mu g/m^3$)
R1	278.0	278.0	10.3	29.8	6.7	6.7	6.7	≤681	≤1,196	≤30.9	≤30.1	≤6.9	≤7.3	≤7.8
R2	278.0	278.0	10.3	29.8	6.7	6.7	6.7	≤830	≤1,542	≤34.5	≤30.2	≤6.9	≤7.4	≤7.8
R3	278.0	278.0	10.3	29.8	6.7	6.7	6.7	≤586	≤1,235	≤27.8	≤30.0	≤6.9	≤7.3	≤7.7
R4	278.0	278.0	20.7	31.2	6.7	6.7	6.7	≤591	≤1,171	≤39.5	≤31.5	≤6.9	≤7.4	≤8.0
R5	278.0	278.0	13.8	30.5	4.1	4.1	4.1	≤719	≤1,658	≤41.2	≤31.0	≤4.4	≤5.2	≤6.1
R6	278.0	278.0	16.7	30.8	4.1	4.1	4.1	≤1,018	≤2,268	≤55.8	≤31.5	≤4.5	≤5.4	≤6.2
R7	278.0	278.0	12.2	30.2	4.1	4.1	4.1	≤1,107	≤2,216	≤57.4	≤31.0	≤4.6	≤5.3	≤6.1
R8	280.0	280.0	10.3	30.0	3.3	3.3	3.3	≤622	≤1,426	≤26.7	≤30.3	≤3.6	≤4.2	≤4.8
R9	278.0	278.0	9.7	29.8	4.1	4.1	4.1	≤631	≤1,800	≤31.5	≤30.1	≤4.3	≤5.1	≤5.6
R10	276.0	276.0	8.8	29.8	3.3	3.3	3.3	≤827	≤2,158	≤37.6	≤30.4	≤3.8	≤4.6	≤5.5
R11	276.0	276.0	8.8	29.8	3.3	3.3	3.3	≤559	≤1,279	≤27.1	≤30.1	≤3.7	≤4.1	≤4.9
R12	274.0	274.0	8.5	29.8	2.9	2.9	2.9	≤602	≤1,701	≤30.8	≤30.1	≤3.2	≤3.8	≤4.5
R13	276.0	276.0	8.3	29.8	3.8	3.8	3.8	≤701	≤1,385	≤38.1	≤30.4	≤4.3	≤5.2	≤6.2
R14	276.0	276.0	8.8	29.8	3.8	3.8	3.8	≤812	≤1,553	≤44.3	≤30.6	≤4.4	≤5.5	≤6.2
R15	276.0	276.0	8.8	29.8	3.8	3.8	3.8	≤1,009	≤2,260	≤57.4	≤31.0	≤4.8	≤6.1	≤6.8
R16	276.0	276.0	8.9	29.8	3.7	3.7	3.7	≤541	≤1,158	≤22.4	≤30.0	≤3.8	≤4.2	≤4.7
R17	276.0	276.0	8.9	29.8	3.7	3.7	3.7	≤487	≤982	≤20.7	≤29.9	≤3.8	≤4.2	≤4.6
R18	274.0	274.0	9.0	29.8	5.2	5.2	5.2	≤1,027	≤2,208	≤66.4	≤30.9	≤5.8	≤6.8	≤7.6
R19	274.0	274.0	9.0	29.8	5.2	5.2	5.2	≤2,206	≤4,500	≤149.1	≤33.0	≤6.5	≤8.2	≤9.1
R20	278.0	278.0	13.5	29.8	4.2	4.2	4.2	≤984	≤2,827	≤69.4	≤30.9	≤5.1	≤6.3	≤7.0
R22	278.0	278.0	13.5	29.8	4.2	4.2	4.2	≤1,867	≤4,230	≤111.0	≤32.1	≤5.5	≤7.1	≤7.8
R25	276.0	276.0	8.8	29.8	3.8	3.8	3.8	≤1,499	≤3,455	≤83.4	≤31.7	≤5.2	≤6.6	≤7.4

Table 2-4 Year 2 peak earthworks and Marine Works scenario – magnitude of short-term changes at key human receptors

Receptor	Magnitude of change as percentage of AQO value[1,2]						
	8-hour CO (AQO = 10,000µg/m^3)	1-hour CO (EAL = 30,000µg/m^3)	1-hour NO_2 (AQO = 200µg/m^3)	24-hour PM_{10} (AQO = 50µg/m^3)	24-hour SO_2 (AQO = 125µg/m^3)	1-hour SO_2 (AQO = 350µg/m^3)	15-min SO_2 (AQO = 266µg/m^3)
R1	+4% (n)	+3% (n)	+10% (n)	+1% (n)	0% (n)	0% (n)	0% (n)
R2	+6% (n)	+4% (n)	+12% (s)	+1% (n)	0% (n)	0% (n)	0% (n)
R3	+3% (n)	+3% (n)	+9% (n)	0% (n)	0% (n)	0% (n)	0% (n)
R4	+3% (n)	+3% (n)	+9% (n)	+1% (n)	0% (n)	0% (n)	0% (n)
R5	+4% (n)	+5% (n)	+14% (s)	+1% (n)	0% (n)	0% (n)	+1% (n)
R6	+7% (n)	+7% (n)	+20% (s)	+1% (n)	0% (n)	0% (n)	+1% (n)
R7	+8% (n)	+6% (n)	+23% (m)	+2% (n)	0% (n)	0% (n)	+1% (n)
R8	+3% (n)	+4% (n)	+8% (n)	+1% (n)	0% (n)	0% (n)	+1% (n)
R9	+4% (n)	+5% (n)	+11% (s)	+1% (n)	0% (n)	0% (n)	+1% (n)
R10	+6% (n)	+6% (n)	+14% (s)	+1% (n)	0% (n)	0% (n)	+1% (n)
R11	+3% (n)	+3% (n)	+9% (n)	+1% (n)	0% (n)	0% (n)	+1% (n)
R12	+3% (n)	+5% (n)	+11% (s)	+1% (n)	0% (n)	0% (n)	+1% (n)
R13	+4% (n)	+4% (n)	+15% (s)	+1% (n)	0% (n)	0% (n)	+1% (n)
R14	+5% (n)	+4% (n)	+18% (s)	+2% (n)	0% (n)	0% (n)	+1% (n)
R15	+7% (n)	+7% (n)	+24% (m)	+2% (n)	+1% (n)	+1% (n)	+1% (n)
R16	+3% (n)	+3% (n)	+7% (n)	0% (n)	0% (n)	0% (n)	0% (n)
R17	+2% (n)	+2% (n)	+6% (n)	0% (n)	0% (n)	0% (n)	0% (n)
R18	+8% (n)	+6% (n)	+29% (m)	+2% (n)	+1% (n)	0% (n)	+1% (n)
R19	+19% (s)	+14% (s)	+70% (l)	+6% (n)	+1% (n)	+1% (n)	+1% (n)
R20	+7% (n)	+8% (n)	+28% (m)	+2% (n)	+1% (n)	+1% (n)	+1% (n)
R22	+16% (s)	+13% (s)	+49% (m)	+5% (n)	+1% (n)	+1% (n)	+1% (n)
R25	+12% (s)	+11% (s)	+37% (m)	+4% (n)	+1% (n)	+1% (n)	+1% (n)

Note 1: Impact magnitude rounded to whole numbers and reported as a percentage of the respective AQO value.
Note 2: Descriptors of effects at individual receptors in parentheses as per table B5-16 of chapter B5 [APP-070]: ‘n’ is negligible, ‘s’ is small, ‘m’ is medium and ‘l’ is large.

Table 2-5 Year 5 peak construction scenario – predicted short-term air pollutant concentrations at key human receptors

Receptor	Year 5 baseline							Year 5 peak construction scenario						
	8-hour CO ($\mu g/m^3$)	1-hour CO ($\mu g/m^3$)	1-hour NO_2 ($\mu g/m^3$)	24-hour PM_{10} ($\mu g/m^3$)	24-hour SO_2 ($\mu g/m^3$)	1-hour SO_2 ($\mu g/m^3$)	15-min SO_2 ($\mu g/m^3$)	8-hour CO ($\mu g/m^3$)	1-hour CO ($\mu g/m^3$)	1-hour NO_2 ($\mu g/m^3$)	24-hour PM_{10} ($\mu g/m^3$)	24-hour SO_2 ($\mu g/m^3$)	1-hour SO_2 ($\mu g/m^3$)	15-min SO_2 ($\mu g/m^3$)
R1	278	278	10.3	29.8	6.7	6.7	6.7	≤362	≤515	≤17.6	≤29.9	≤7.8	≤10.2	≤13.1
R2	278	278	10.3	29.8	6.7	6.7	6.7	≤357	≤525	≤18.2	≤29.9	≤8.0	≤10.3	≤13.3
R3	278	278	10.3	29.8	6.7	6.7	6.7	≤348	≤509	≤16.8	≤29.9	≤7.5	≤10.4	≤13.0
R4	278	278	19.4	31.2	6.7	6.7	6.7	≤360	≤528	≤26.7	≤31.3	≤7.8	≤10.4	≤13.4
R5	278	278	13.1	30.4	4.1	4.1	4.1	≤415	≤853	≤27.0	≤30.6	≤5.7	≤9.7	≤15.3
R6	278	278	15.6	30.8	4.1	4.1	4.1	≤485	≤803	≤30.5	≤31.0	≤5.6	≤9.5	≤13.8
R7	278	278	11.6	30.2	4.1	4.1	4.1	≤483	≤797	≤27.3	≤30.5	≤5.7	≤9.3	≤12.2
R8	280	280	9.9	30.0	3.3	3.3	3.3	≤366	≤584	≤19.9	≤30.1	≤4.7	≤7.6	≤11.1
R9	278	278	9.7	29.8	4.1	4.1	4.1	≤394	≤585	≤19.4	≤29.9	≤5.2	≤8.5	≤11.7
R10	276	276	8.8	29.8	3.3	3.3	3.3	≤572	≤1,251	≤32.5	≤30.2	≤6.0	≤10.5	≤15.8
R11	276	276	8.8	29.8	3.3	3.3	3.3	≤362	≤594	≤20.5	≤29.9	≤5.1	≤7.9	≤13.8
R12	274	274	8.5	29.8	2.9	2.9	2.9	≤391	≤550	≤19.3	≤29.9	≤4.4	≤8.5	≤13.1
R13	276	276	8.3	29.8	3.8	3.8	3.8	≤398	≤545	≤22.3	≤30.0	≤6.7	≤12.7	≤18.6
R14	276	276	8.8	29.8	3.8	3.8	3.8	≤486	≤663	≤28.4	≤30.1	≤7.6	≤14.4	≤19.6
R15	276	276	8.8	29.8	3.8	3.8	3.8	≤459	≤800	≤29.1	≤30.2	≤10.1	≤18.0	≤23.2
R16	276	276	8.9	29.8	3.7	3.7	3.7	≤345	≤528	≤14.9	≤29.9	≤4.5	≤6.5	≤9.3
R17	276	276	8.9	29.8	3.7	3.7	3.7	≤337	≤529	≤14.4	≤29.8	≤4.2	≤6.3	≤9.1
R18	274	274	9.0	29.8	5.2	5.2	5.2	≤622	≤1,164	≤33.6	≤30.1	≤8.2	≤14.0	≤18.9
R19	274	274	9.0	29.8	5.2	5.2	5.2	≤483	≤890	≤32.7	≤30.2	≤10.1	≤18.6	≤26.2
R20	278	278	13.5	29.8	4.2	4.2	4.2	≤579	≤1,089	≤45.0	≤30.3	≤9.6	≤17.8	≤22.6
R22	278	278	13.5	29.8	4.2	4.2	4.2	≤811	≤1,481	≤62.8	≤30.6	≤11.5	≤22.5	≤27.2
R25	276	276	8.8	29.8	3.8	3.8	3.8	≤535	≤980	≤35.2	≤30.3	≤12.8	≤21.4	≤26.1

Table 2-6 Year 5 peak construction scenario – magnitude of short-term changes at key human receptors

Receptor	Magnitude of change as percentage of AQO value[1,2]						
	8-hour CO (AQO = 10,000µg/m^3)	1-hour CO (EAL = 30,000µg/m^3)	1-hour NO_2 (AQO = 200µg/m^3)	24-hour PM_{10} (AQO = 50µg/m^3)	24-hour SO_2 (AQO = 125µg/m^3)	1-hour SO_2 (AQO = 350µg/m^3)	15-min SO_2 (AQO = 266µg/m^3)
R1	+1% (n)	+1% (n)	+4% (n)	0% (n)	+1% (n)	+1% (n)	+2% (n)
R2	+1% (n)	+1% (n)	+4% (n)	0% (n)	+1% (n)	+1% (n)	+2% (n)
R3	+1% (n)	+1% (n)	+3% (n)	0% (n)	+1% (n)	+1% (n)	+2% (n)
R4	+1% (n)	+1% (n)	+4% (n)	0% (n)	+1% (n)	+1% (n)	+3% (n)
R5	+1% (n)	+2% (n)	+7% (n)	0% (n)	+1% (n)	+2% (n)	+4% (n)
R6	+2% (n)	+2% (n)	+7% (n)	0% (n)	+1% (n)	+2% (n)	+4% (n)
R7	+2% (n)	+2% (n)	+8% (n)	0% (n)	+1% (n)	+1% (n)	+3% (n)
R8	+1% (n)	+1% (n)	+5% (n)	0% (n)	+1% (n)	+1% (n)	+3% (n)
R9	+1% (n)	+1% (n)	+5% (n)	0% (n)	+1% (n)	+1% (n)	+3% (n)
R10	+3% (n)	+3% (n)	+12% (s)	+1% (n)	+2% (n)	+2% (n)	+5% (n)
R11	+1% (n)	+1% (n)	+6% (n)	0% (n)	+1% (n)	+1% (n)	+4% (n)
R12	+1% (n)	+1% (n)	+5% (n)	0% (n)	+1% (n)	+2% (n)	+4% (n)
R13	+1% (n)	+1% (n)	+7% (n)	0% (n)	+2% (n)	+3% (n)	+6% (n)
R14	+2% (n)	+1% (n)	+10% (n)	+1% (n)	+3% (n)	+3% (n)	+6% (n)
R15	+2% (n)	+2% (n)	+10% (n)	+1% (n)	+5% (n)	+4% (n)	+7% (n)
R16	+1% (n)	+1% (n)	+3% (n)	0% (n)	+1% (n)	+1% (n)	+2% (n)
R17	+1% (n)	+1% (n)	+3% (n)	0% (n)	0% (n)	+1% (n)	+2% (n)
R18	+3% (n)	+3% (n)	+12% (s)	+1% (n)	+2% (n)	+3% (n)	+5% (n)
R19	+2% (n)	+2% (n)	+12% (s)	+1% (n)	+4% (n)	+4% (n)	+8% (n)
R20	+3% (n)	+3% (n)	+16% (s)	+1% (n)	+4% (n)	+4% (n)	+7% (n)
R22	+5% (n)	+4% (n)	+25% (m)	+2% (n)	+6% (n)	+5% (n)	+9% (n)
R25	+3% (n)	+2% (n)	+13% (s)	+1% (n)	+7% (n)	+5% (n)	+8% (n)

Note 1: Impact magnitude rounded to whole numbers and reported as a percentage of the respective AQO value.
Note 2: Descriptors of effects at individual receptors in parentheses as per table B5-16 of chapter B5 [APP-070]: ‘n’ is negligible, ‘s’ is small, ‘m’ is medium and ‘l’ is large.

2.2 Ecological receptors

2.2.1 The predicted changes in oxides of nitrogen (NOx) and SO_2 concentrations at ecological receptors for the year 2 peak earthworks and Marine Works scenario are reported in Table 2-7 to Table 2-9. Corresponding predicted changes in nitrogen deposition rates are reported in Table 2-10 and predicted changes in acid deposition rates are reported in Table 2-11. Please note, the deposition rates reported in these tables and following nitrogen and acid deposition tables, are to one decimal place. The calculations and total deposition rates were based on the raw model outputs before rounding.

2.2.2 The predicted change in NOx and SO_2 concentrations at ecological receptors for the year 5 peak construction scenario are reported in Table 2-12 to Table 2-14. Corresponding predicted changes in nitrogen deposition rates are reported in Table 2-15 and predicted changes in acid deposition rates are reported in Table 2-16.

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Table 2-7 Year 2 peak earthworks and Marine Works scenario – magnitude of annual mean NOx changes at ecological receptors

Receptor	Critical level (AQO) (µg/m^3)	Total concentration for:		Change as a percentage of AQO	Total concentration as a percentage of AQO	Further consideration required?
		Year 2 baseline (µg/m^3)	Year 2 peak earthworks and Marine Works (µg/m^3)			
Anglesey and Llyn Fens SAC and Ramsar	30	5.7	≤5.8	≤0.2%	≤19%	No
Cae Gwyn SSSI	30	5.8	≤8.0	≤7.2%	≤27%	No
Cemlyn Bay SAC/SSSI and Anglesey Terns SPA	30	5.3	≤9.6	≤14.3%	≤32%	No
Holy Island Coast SPA and SAC	30	6.0	≤6.1	≤0.3%	≤20%	No
Llyn Dinam SAC	30	6.2	≤6.3	≤0.2%	≤21%	No
Llyn Llygeirian SSSI	30	5.8	≤6.3	≤1.6%	≤21%	No
Tre'r Gof SSSI	30	8.9	≤19.1	≤34.1%	≤64%	No
Afon Wygyr Wildlife Site	30	10.4	≤11.5	≤3.7%	≤38%	No
Arfordir Mynydd y Wylfa - Trwyn Penrhyn (Wylfa Head) Wildlife Site	30	5.8	≤21.6	≤52.5%	≤72%	No
Arfordir Trwyn y Buarth – Porth Wen Wildlife Site	30	5.7	≤7.0	≤4.1%	≤23%	No
Cors Cae-Owen Wildlife Site	30	5.6	≤6.2	≤2.1%	≤21%	No
Cors Cromlech Wildlife Site	30	6.0	≤7.2	≤4.0%	≤24%	No
Cors Mynachdy Wildlife Site	30	5.3	≤6.1	≤2.7%	≤20%	No

Receptor	Critical level (AQO) (µg/m^3)	Total concentration for:		Change as a percentage of AQO	Total concentration as a percentage of AQO	Further consideration required?
		Year 2 baseline (µg/m^3)	Year 2 peak earthworks and Marine Works (µg/m^3)			
Rhostir Mynydd Mechell Wildlife Site	30	5.7	≤6.1	≤1.4%	≤20%	No
Tir Gwlyb Teilia Neuadd Wildlife Site	30	5.6	≤6.2	≤1.8%	≤21%	No
Trwyn Pencarreg Wildlife Site	30	5.7	≤20.4	≤49.0%	≤68%	No
Ancient Woodland (ID 26076)	30	6.4	≤7.3	≤3.1%	≤24%	No
Ancient Woodland (ID 26058)	30	5.7	≤6.4	≤2.5%	≤21%	No
Ancient Woodland (ID 26074)	30	5.7	≤6.3	≤2.1%	≤21%	No
Ancient Woodland (ID 26057)	30	5.6	≤6.2	≤2.0%	≤21%	No
Ancient Woodland (ID 26073)	30	5.6	≤6.2	≤1.9%	≤21%	No
Ancient Woodland (ID 26072)	30	5.6	≤6.1	≤1.7%	≤20%	No
Ancient Woodland (ID 26053)	30	5.6	≤6.1	≤1.7%	≤20%	No
Ancient Woodland (ID 26051)	30	12.9	≤13.7	≤2.4%	≤46%	No
Ancient Woodland (ID 26052)	30	5.5	≤6.0	≤1.8%	≤20%	No
Ancient Woodland (ID 26054)	30	5.4	≤6.0	≤2.0%	≤20%	No
Ancient Woodland (ID 26055)	30	5.4	≤6.1	≤2.2%	≤20%	No
Ancient Woodland (ID 26056)	30	5.4	≤6.1	≤2.4%	≤20%	No
Ancient Woodland (ID 26060)	30	8.9	≤20.0	≤37.0%	≤67%	No
Cestyll Garden	30	5.7	≤20.5	≤49.4%	≤68%	No

Table 2-8 Year 2 peak earthworks and Marine Works scenario – magnitude of 24-hour mean NOx changes at ecological receptors

Receptor	Critical level (EAL) (µg/m^3)	Total concentration for:		Change as a percentage of EAL	Total concentration as a percentage of EAL	Further consideration required?
		Year 2 baseline (µg/m^3)	Year 2 peak earthworks and Marine Works (µg/m^3)			
Anglesey and Llyn Fens SAC and Ramsar	75	11.4	≤12.8	≤1.8%	≤17%	No
Cae Gwyn SSSI	75	11.6	≤33.2	≤28.8%	≤44%	No
Cemlyn Bay SAC/SSSI and Anglesey Terns SPA	200	10.6	≤57.2	≤23.3%	≤29%	No
Holy Island Coast SPA and SAC	75	12.0	≤15.1	≤4.2%	≤20%	No
Llyn Dinam SAC	200	12.5	≤15.3	≤1.4%	≤8%	No
Llyn Llygeirian SSSI	200	11.5	≤23.0	≤5.8%	≤12%	No
Tre'r Gof SSSI	75	17.7	≤73.7	≤74.6%	≤98%	No
Afon Wygyr Wildlife Site	200	20.8	≤35.9	≤7.6%	≤18%	No
Arfordir Mynydd y Wylfa - Trwyn Penrhyn (Wylfa Head) Wildlife Site	200	11.6	≤106.0	≤47.2%	≤53%	No
Arfordir Trwyn y Buarth – Porth Wen Wildlife Site	75	11.4	≤23.5	≤16.1%	≤31%	No
Cors Cae-Owen Wildlife Site	200	11.2	≤21.1	≤4.9%	≤11%	No
Cors Cromlech Wildlife Site	200	12.0	≤36.6	≤12.3%	≤18%	No
Cors Mynachdy Wildlife Site	200	10.5	≤27.1	≤8.3%	≤14%	No

Receptor	Critical level (EAL) (µg/m^3)	Total concentration for:		Change as a percentage of EAL	Total concentration as a percentage of EAL	Further consideration required?
		Year 2 baseline (µg/m^3)	Year 2 peak earthworks and Marine Works (µg/m^3)			
Rhostir Mynydd Mechell Wildlife Site	200	11.3	≤25.6	≤7.1%	≤13%	No
Tir Gwlyb Teilia Neuadd Wildlife Site	200	11.2	≤19.8	≤4.3%	≤10%	No
Trwyn Pencarreg Wildlife Site	200	11.3	≤114.6	≤51.6%	≤57%	No
Ancient Woodland (ID 26076)	200	12.7	≤25.6	≤6.4%	≤13%	No
Ancient Woodland (ID 26058)	200	11.4	≤24.3	≤6.5%	≤12%	No
Ancient Woodland (ID 26074)	200	11.4	≤23.7	≤6.2%	≤12%	No
Ancient Woodland (ID 26057)	200	11.3	≤24.4	≤6.6%	≤12%	No
Ancient Woodland (ID 26073)	200	11.3	≤22.0	≤5.4%	≤11%	No
Ancient Woodland (ID 26072)	200	11.3	≤22.7	≤5.7%	≤11%	No
Ancient Woodland (ID 26053)	200	11.3	≤23.1	≤5.9%	≤12%	No
Ancient Woodland (ID 26051)	200	25.8	≤38.7	≤6.4%	≤19%	No
Ancient Woodland (ID 26052)	200	11.0	≤23.7	≤6.3%	≤12%	No
Ancient Woodland (ID 26054)	200	10.9	≤23.9	≤6.5%	≤12%	No
Ancient Woodland (ID 26055)	200	10.9	≤26.9	≤8.0%	≤13%	No
Ancient Woodland (ID 26056)	200	10.7	≤28.8	≤9.0%	≤14%	No
Ancient Woodland (ID 26060)	200	17.7	≤73.1	≤27.7%	≤37%	No
Cestyll Garden	200	11.3	≤113.0	≤50.8%	≤56%	No

Table 2-9 Year 2 peak earthworks and Marine Works scenario – magnitude of annual mean SO_2 changes at ecological receptors

Receptor	Critical level (AQO or EAL) (µg/m^3)	Total concentration for:		Change as a percentage of AQO or EAL	Total concentration as a percentage of AQO or EAL	Further consideration required?
		Year 2 baseline (µg/m^3)	Year 2 peak earthworks and Marine Works (µg/m^3)			
Anglesey and Llyn Fens SAC and Ramsar	10	1.3	≤1.3	≤0.0%	≤13%	No
Cae Gwyn SSSI	10	1.7	≤1.7	≤0.3%	≤17%	No
Cemlyn Bay SAC/SSSI and Anglesey Terns SPA	20	1.9	≤2.0	≤0.4%	≤10%	No
Holy Island Coast SPA and SAC	10	2.2	≤2.2	≤0.0%	≤22%	No
Llyn Dinam SAC	20	1.5	≤1.5	≤0.0%	≤8%	No
Llyn Llygeirian SSSI	20	1.6	≤1.6	≤0.0%	≤8%	No
Tre'r Gof SSSI	10	2.1	≤2.2	≤1.3%	≤22%	No
Afon Wygyr Wildlife Site	20	2.1	≤2.1	≤0.1%	≤10%	No
Arfordir Mynydd y Wylfa - Trwyn Penrhyn (Wylfa Head) Wildlife Site	20	2.6	≤2.8	≤0.9%	≤14%	No
Arfordir Trwyn y Buarth – Porth Wen Wildlife Site	10	1.8	≤1.9	≤0.2%	≤19%	No
Cors Cae-Owen Wildlife Site	20	1.6	≤1.6	≤0.1%	≤8%	No
Cors Cromlech Wildlife Site	20	1.6	≤1.7	≤0.1%	≤8%	No
Cors Mynachdy Wildlife Site	20	1.4	≤1.4	≤0.1%	≤7%	No

Receptor	Critical level (AQO or EAL) (µg/m^3)	Total concentration for:		Change as a percentage of AQO or EAL	Total concentration as a percentage of AQO or EAL	Further consideration required?
		Year 2 baseline (µg/m^3)	Year 2 peak earthworks and Marine Works (µg/m^3)			
Rhostir Mynydd Mechell Wildlife Site	20	1.6	≤1.6	≤0.0%	≤8%	No
Tir Gwlyb Teilia Neuadd Wildlife Site	20	1.6	≤1.6	≤0.1%	≤8%	No
Trwyn Pencarreg Wildlife Site	20	1.9	≤2.1	≤1.1%	≤11%	No
Ancient Woodland (ID 26076)	20	2.1	≤2.1	≤0.1%	≤10%	No
Ancient Woodland (ID 26058)	20	1.7	≤1.7	≤0.1%	≤9%	No
Ancient Woodland (ID 26074)	20	1.7	≤1.7	≤0.1%	≤9%	No
Ancient Woodland (ID 26057)	20	1.5	≤1.5	≤0.1%	≤8%	No
Ancient Woodland (ID 26073)	20	1.5	≤1.5	≤0.0%	≤8%	No
Ancient Woodland (ID 26072)	20	1.5	≤1.5	≤0.0%	≤8%	No
Ancient Woodland (ID 26053)	20	1.5	≤1.5	≤0.0%	≤8%	No
Ancient Woodland (ID 26051)	20	1.6	≤1.6	≤0.1%	≤8%	No
Ancient Woodland (ID 26052)	20	1.6	≤1.6	≤0.1%	≤8%	No
Ancient Woodland (ID 26054)	20	1.5	≤1.5	≤0.1%	v8%	No
Ancient Woodland (ID 26055)	20	1.5	≤1.5	≤0.1%	≤8%	No
Ancient Woodland (ID 26056)	20	1.7	≤1.7	≤0.1%	≤9%	No
Ancient Woodland (ID 26060)	20	2.1	≤2.2	≤0.7%	≤11%	No
Cestyll Garden	20	1.9	≤2.1	≤1.0%	≤11%	No

Table 2-10 Year 2 peak earthworks and Marine Works scenario – change to nitrogen deposition rate at ecological receptors

Receptor	Vegetation type	Nitrogen deposition (kgN/ha/year)				Change as a percentage of CL	Total deposition rate as a percentage of CL	Further consideration required?
		Critical load (CL)	Year 2 baseline	Year 2 peak earthworks and Marine Works contribution	Total			
Anglesey and Llyn Fens SAC and Ramsar	Short	10	14.4	≤0.01	≤14.4	≤0.1%	≤144%	No
Cae Gwyn SSSI	Short	10	9.9	≤0.22	≤10.2	≤2.2%	≤102%	Yes
Cemlyn Bay SAC/SSSI	Short	20	9.9	≤0.43	≤10.4	≤2.2%	≤52%	No
Holy Island Coast SPA and SAC	Short	10	8.1	≤0.01	≤8.1	≤0.1%	≤81%	No
Llyn Dinam SAC	Short	10	12.2	≤0.01	≤12.2	≤0.1%	≤122%	No
Llyn Llygeirian SSSI	Short	10	13.0	≤0.05	≤13.1	≤0.5%	≤131%	No
Tre'r Gof SSSI	Short	10	13.0	≤1.03	≤14.1	≤10.3%	≤141%	Yes
Afon Wygyr Wildlife Site	Short	10	13.0	≤0.11	≤13.1	≤1.1%	≤131%	No
	Tall	10	20.4	≤0.22	≤20.7	≤2.2%	≤207%	No
Arfordir Mynydd y Wylfa - Trwyn Penrhyn (Wylfa Head) Wildlife Site	Short	10	13.0	≤1.59	≤14.6	≤15.9%	≤146%	No
Arfordir Trwyn y Buarth – Porth Wen Wildlife Site	Short	10	13.0	≤0.13	≤13.1	≤1.3%	≤131%	No
Cors Cae-Owen Wildlife Site	Short	10	13.0	≤0.06	≤13.1	≤0.6%	≤131%	No

Receptor	Vegetation type	Nitrogen deposition (kgN/ha/year)				Change as a percentage of CL	Total deposition rate as a percentage of CL	Further consideration required?
		Critical load (CL)	Year 2 baseline	Year 2 peak earthworks and Marine Works contribution	Total			
	Tall	10	20.4	≤0.13	≤20.6	≤1.3%	≤206%	No
Cors Cromlech Wildlife Site	Short	10	13.0	≤0.12	≤13.1	≤1.2%	≤131%	No
Cors Mynachdy Wildlife Site	Short	10	9.9	≤0.08	≤10.0	≤0.8%	≤100%	No
Rhostir Mynydd Mechell Wildlife Site	Short	10	13.0	≤0.04	≤13.1	≤0.4%	≤131%	No
Tir Gwlyb Teilia Neuadd Wildlife Site	Short	10	13.0	≤0.06	≤13.1	≤0.6%	≤131%	No
	Tall	10	20.4	≤0.11	≤20.6	≤1.1%	≤206%	No
Trwyn Pencarreg Wildlife Site	Short	10	9.9	≤1.48	≤11.4	≤14.8%	≤114%	No
Ancient Woodland (ID 26076)	Tall	5	20.4	≤0.19	≤20.6	≤3.8%	≤413%	No
Ancient Woodland (ID 26058)	Tall	5	20.4	≤0.15	≤20.6	≤3.1%	≤412%	No
Ancient Woodland (ID 26074)	Tall	5	20.4	≤0.13	≤20.6	≤2.6%	≤411%	No
Ancient Woodland (ID 26057)	Tall	5	20.4	≤0.12	≤20.6	≤2.4%	≤411%	No
Ancient Woodland (ID 26073)	Tall	5	20.4	≤0.11	≤20.6	≤2.3%	≤411%	No
Ancient Woodland (ID 26072)	Tall	5	20.4	≤0.10	≤20.5	≤2.1%	≤411%	No
Ancient Woodland (ID 26053)	Tall	5	20.4	≤0.10	≤20.5	≤2.0%	≤411%	No
Ancient Woodland (ID 26051)	Tall	5	16.0	≤0.15	≤16.1	≤3.0%	≤322%	No

Receptor	Vegetation type	Nitrogen deposition (kgN/ha/year)				Change as a percentage of CL	Total deposition rate as a percentage of CL	Further consideration required?
		Critical load (CL)	Year 2 baseline	Year 2 peak earthworks and Marine Works contribution	Total			
Ancient Woodland (ID 26052)	Tall	5	16.0	≤0.11	≤16.1	≤2.2%	≤321%	No
Ancient Woodland (ID 26054)	Tall	5	16.0	≤0.12	≤16.1	≤2.4%	≤322%	No
Ancient Woodland (ID 26055)	Tall	5	16.0	≤0.14	≤16.1	≤2.7%	≤322%	No
Ancient Woodland (ID 26056)	Tall	5	16.0	≤0.15	≤16.1	≤2.9%	≤322%	No
Ancient Woodland (ID 26060)	Tall	5	20.4	≤2.24	≤22.7	≤44.8%	≤454%	No
Cestyll Garden	Short	n/a	9.9	≤1.49	≤11.4	n/a		
	Tall		16.0	≤2.99	≤18.9			

Table 2-11 Year 2 peak earthworks and Marine Works scenario – change to acid deposition rate at ecological receptors

Receptor	Vegetation type	Acid deposition (keq/ha/year)				Change as a percentage of CL	Total deposition rate as a percentage of CL	Further consideration required?
		Critical load (CLmaxN)	Year 2 baseline (N + S)	Year 2 peak earthworks and Marine Works contribution	Total			
Anglesey and Llyn Fens SAC and Ramsar	Short	4.28	1.20	≤0.001	≤1.20	≤0.0%	≤28%	No
Cae Gwyn SSSI	Short	1.01	0.85	≤0.019	≤0.87	≤1.9%	≤86%	Yes
Cemlyn Bay SAC/SSSI	Short	1.01	0.85	≤0.040	≤0.89	≤4.0%	≤88%	Yes
Holy Island Coast SPA and SAC	Short	1.97	0.71	≤0.001	≤0.71	≤0.0%	≤36%	No
Llyn Dinam SAC	Short	0.50	1.02	≤0.001	≤1.02	≤0.1%	≤204%	No
Llyn Llygeirian SSSI	Short	2.04	1.07	≤0.005	≤1.07	≤0.2%	≤53%	No
Llyn Llygeirian SSSI (CLmaxS)[1]	Short	0.79	0.14	≤0.001	≤0.14	≤0.1%	≤18%	No
Tre'r Gof SSSI	Short	1.23	1.10	≤0.090	≤1.19	≤7.3%	≤97%	Yes
Afon Wygyr Wildlife Site	Short	1.99	1.10	≤0.010	≤1.11	≤0.5%	≤56%	No
	Tall	2.77	1.66	≤0.020	≤1.68	≤0.7%	≤61%	No
Arfordir Mynydd y Wylfa - Trwyn Penrhyn (Wylfa Head) Wildlife Site	Short	1.02	1.10	≤0.135	≤1.24	≤13.2%	≤121%	No
Arfordir Trwyn y Buarth – Porth Wen Wildlife Site	Short	1.50	1.10	≤0.011	≤1.11	≤0.8%	≤74%	No

Receptor	Vegetation type	Acid deposition (keq/ha/year)				Change as a percentage of CL	Total deposition rate as a percentage of CL	Further consideration required?
		Critical load (CLmaxN)	Year 2 baseline (N + S)	Year 2 peak earthworks and Marine Works contribution	Total			
Cors Cae-Owen Wildlife Site	Short	1.02	1.10	≤0.006	≤1.11	≤0.6%	≤108%	No
	Tall	1.55	1.66	≤0.012	≤1.67	≤0.8%	≤108%	No
Cors Cromlech Wildlife Site	Short	1.99	1.10	≤0.011	≤1.11	≤0.5%	≤56%	No
Cors Mynachdy Wildlife Site	Short	1.99	0.85	≤0.007	≤0.86	≤0.4%	≤43%	No
Rhostir Mynydd Mechell Wildlife Site	Short	1.99	1.10	≤0.004	≤1.10	≤0.2%	≤55%	No
Tir Gwlyb Teilia Neuadd Wildlife Site	Short	1.02	1.10	≤0.005	≤1.11	≤0.5%	≤108%	No
	Tall	1.55	1.66	≤0.010	≤1.67	≤0.7%	≤108%	No
Trwyn Pencarreg Wildlife Site	Short	1.01	0.85	≤0.132	≤0.98	≤13.0%	≤97%	No
Ancient Woodland (ID 26076)	Tall	2.77	1.66	≤0.017	≤1.68	≤0.6%	≤61%	No
Ancient Woodland (ID 26058)	Tall	2.78	1.66	≤0.014	≤1.67	≤0.5%	≤60%	No
Ancient Woodland (ID 26074)	Tall	2.78	1.66	≤0.012	≤1.67	≤0.4%	≤60%	No
Ancient Woodland (ID 26057)	Tall	2.78	1.66	≤0.011	≤1.67	≤0.4%	≤60%	No
Ancient Woodland (ID 26073)	Tall	2.78	1.66	≤0.010	≤1.67	≤0.4%	≤60%	No
Ancient Woodland (ID 26072)	Tall	2.78	1.66	≤0.010	≤1.67	≤0.3%	≤60%	No
Ancient Woodland (ID 26053)	Tall	2.78	1.66	≤0.009	≤1.67	≤0.3%	≤60%	No

Receptor	Vegetation type	Acid deposition (keq/ha/year)				Change as a percentage of CL	Total deposition rate as a percentage of CL	Further consideration required?
		Critical load (CLmaxN)	Year 2 baseline (N + S)	Year 2 peak earthworks and Marine Works contribution	Total			
Ancient Woodland (ID 26051)	Tall	2.74	1.32	≤0.014	≤1.33	≤0.5%	≤49%	No
Ancient Woodland (ID 26052)	Tall	1.52	1.32	≤0.010	≤1.33	≤0.7%	≤88%	No
Ancient Woodland (ID 26054)	Tall	2.74	1.32	≤0.011	≤1.33	≤0.4%	≤49%	No
Ancient Woodland (ID 26055)	Tall	2.74	1.32	≤0.012	≤1.33	≤0.4%	≤49%	No
Ancient Woodland (ID 26056)	Tall	1.51	1.32	≤0.013	≤1.33	≤0.9%	≤88%	No
Ancient Woodland (ID 26060)	Tall	1.55	1.66	≤0.194	≤1.85	≤12.5%	≤120%	No
Cestyll Garden	Short	n/a	0.85	≤0.131	≤0.98	n/a		
	Tall		1.32	≤0.262	≤1.58			

Note 1: As discussed in section 5.4 of chapter B5 [APP-070] the results at Llyn Llygeirian SSSI indicate that the critical load CLmaxS approach should be applied, both approaches have been presented.

Table 2-12 Year 5 peak construction scenario – magnitude of annual mean NOx changes at ecological receptors

Receptor	Critical level (AQO) ($\mu g/m^3$)	Total concentration for:		Change as a percentage of AQO	Total concentration as a percentage of AQO	Further consideration required?
		Year 5 baseline ($\mu g/m^3$)	Year 5 peak construction ($\mu g/m^3$)			
Anglesey and Llyn Fens SAC and Ramsar	30	5.7	≤5.7	≤0.1%	≤19%	No
Cae Gwyn SSSI	30	5.6	≤7.3	≤5.4%	≤24%	No
Cemlyn Bay SAC/SSSI and Anglesey Terns SPA	30	5.3	≤7.1	≤5.8%	≤24%	No
Holy Island Coast SPA and SAC	30	6.0	≤6.1	≤0.1%	≤20%	No
Llyn Dinam SAC	30	6.2	≤6.3	≤0.1%	≤21%	No
Llyn Llygeirian SSSI	30	5.8	≤6.1	≤1.0%	≤20%	No
Tre'r Gof SSSI	30	8.9	≤14.7	≤19.4%	≤49%	No
Afon Wygyr Wildlife Site	30	10.0	≤10.5	≤1.7%	≤35%	No
Arfordir Mynydd y Wylfa - Trwyn Penrhyn (Wylfa Head) Wildlife Site	30	5.8	≤10.5	≤15.7%	≤35%	No
Arfordir Trwyn y Buarth – Porth Wen Wildlife Site	30	5.7	≤6.3	≤1.8%	≤21%	No
Cors Cae-Owen Wildlife Site	30	5.6	≤5.9	≤1.0%	≤20%	No
Cors Cromlech Wildlife Site	30	6.0	≤6.7	≤2.3%	≤22%	No
Cors Mynachdy Wildlife Site	30	5.3	≤5.7	≤1.3%	≤19%	No
Rhostir Mynydd Mechell Wildlife Site	30	5.7	≤5.9	≤0.8%	≤20%	No

Receptor	Critical level (AQO) (µg/m^3)	Total concentration for:		Change as a percentage of AQO	Total concentration as a percentage of AQO	Further consideration required?
		Year 5 baseline (µg/m^3)	Year 5 peak construction (µg/m^3)			
Tir Gwlyb Teilia Neuadd Wildlife Site	30	5.6	≤5.9	≤0.9%	≤20%	No
Trwyn Pencarreg Wildlife Site	30	5.7	≤10.3	≤15.6%	≤34%	No
Ancient Woodland (ID 26076)	30	6.3	≤6.8	≤1.5%	≤23%	No
Ancient Woodland (ID 26058)	30	5.7	≤6.1	≤1.3%	≤20%	No
Ancient Woodland (ID 26074)	30	5.7	≤6.0	≤1.1%	≤20%	No
Ancient Woodland (ID 26057)	30	5.6	≤5.9	≤1.0%	≤20%	No
Ancient Woodland (ID 26073)	30	5.6	≤5.9	≤1.0%	≤20%	No
Ancient Woodland (ID 26072)	30	5.6	≤5.9	≤0.9%	≤20%	No
Ancient Woodland (ID 26053)	30	5.6	≤5.9	≤0.9%	≤20%	No
Ancient Woodland (ID 26051)	30	12.2	≤12.7	≤1.5%	≤42%	No
Ancient Woodland (ID 26052)	30	5.5	≤5.8	≤1.0%	≤19%	No
Ancient Woodland (ID 26054)	30	5.4	≤5.7	≤1.0%	≤19%	No
Ancient Woodland (ID 26055)	30	5.4	≤5.8	≤1.2%	≤19%	No
Ancient Woodland (ID 26056)	30	5.4	≤5.7	≤1.2%	≤19%	No
Ancient Woodland (ID 26060)	30	8.9	≤14.8	≤19.7%	≤49%	No
Cestyll Garden	30	5.7	≤10.8	≤17.2%	≤36%	No

Table 2-13 Year 5 peak construction scenario – magnitude of 24-hour mean NOx changes at ecological receptors

Receptor	Critical level (EAL) ($\mu g/m^3$)	Total concentration for:		Change as a percentage of EAL	Total concentration as a percentage of EAL	Further consideration required?
		Year 5 baseline ($\mu g/m^3$)	Year 5 peak construction ($\mu g/m^3$)			
Anglesey and Llyn Fens SAC and Ramsar	75	11.4	≤11.9	≤0.7%	≤16%	No
Cae Gwyn SSSI	75	11.3	≤23.9	≤16.8%	≤32%	No
Cemlyn Bay SAC/SSSI and Anglesey Terns SPA	200	10.6	≤27.9	≤8.7%	≤14%	No
Holy Island Coast SPA and SAC	75	12.0	≤13.2	≤1.6%	≤18%	No
Llyn Dinam SAC	200	12.5	≤13.6	≤0.5%	≤7%	No
Llyn Llygeirian SSSI	200	11.5	≤16.6	≤2.5%	≤8%	No
Tre'r Gof SSSI	75	17.7	≤47.4	≤39.5%	≤63%	No
Afon Wygyr Wildlife Site	200	20.0	≤24.6	≤2.3%	≤12%	No
Arfordir Mynydd y Wylfa - Trwyn Penrhyn (Wylfa Head) Wildlife Site	200	11.6	≤58.0	≤23.2%	≤29%	No
Arfordir Trwyn y Buarth – Porth Wen Wildlife Site	75	11.4	≤18.1	≤8.9%	≤24%	No
Cors Cae-Owen Wildlife Site	200	11.2	≤15.1	≤1.9%	≤8%	No
Cors Cromlech Wildlife Site	200	12.0	≤21.1	≤4.6%	≤11%	No
Cors Mynachdy Wildlife Site	200	10.5	≤17.0	≤3.2%	≤9%	No
Rhostir Mynydd Mechell Wildlife Site	200	11.3	≤17.2	≤2.9%	≤9%	No

Receptor	Critical level (EAL) (µg/m^3)	Total concentration for:		Change as a percentage of EAL	Total concentration as a percentage of EAL	Further consideration required?
		Year 5 baseline (µg/m^3)	Year 5 peak construction (µg/m^3)			
Tir Gwlyb Teilia Neuadd Wildlife Site	200	11.2	≤14.4	≤1.6%	≤7%	No
Trwyn Pencarreg Wildlife Site	200	11.3	≤40.4	≤14.5%	≤20%	No
Ancient Woodland (ID 26076)	200	12.7	≤16.5	≤1.9%	≤8%	No
Ancient Woodland (ID 26058)	200	11.4	≤15.9	≤2.3%	≤8%	No
Ancient Woodland (ID 26074)	200	11.4	≤15.7	≤2.2%	≤8%	No
Ancient Woodland (ID 26057)	200	11.3	≤16.1	≤2.4%	≤8%	No
Ancient Woodland (ID 26073)	200	11.3	≤15.9	≤2.3%	≤8%	No
Ancient Woodland (ID 26072)	200	11.3	≤15.0	≤1.9%	≤8%	No
Ancient Woodland (ID 26053)	200	11.3	≤14.9	≤1.8%	≤7%	No
Ancient Woodland (ID 26051)	200	24.4	≤30.8	≤3.2%	≤15%	No
Ancient Woodland (ID 26052)	200	11.0	≤16.6	≤2.8%	≤8%	No
Ancient Woodland (ID 26054)	200	10.9	≤17.9	≤3.5%	≤9%	No
Ancient Woodland (ID 26055)	200	10.9	≤17.8	≤3.5%	≤9%	No
Ancient Woodland (ID 26056)	200	10.7	≤17.8	≤3.5%	≤9%	No
Ancient Woodland (ID 26060)	200	17.7	≤48.3	≤15.3%	≤24%	No
Cestyll Garden	200	11.3	≤42.9	≤15.8%	≤21%	No

Table 2-14 Year 5 peak construction scenario – magnitude of annual mean SO_2 changes at ecological receptors

Receptor	Critical level (AQO or EAL) (µg/m^3)	Total concentration for:		Change as a percentage of AQO or EAL	Total concentration as a percentage of AQO or EAL	Further consideration required?
		Year 5 baseline (µg/m^3)	Year 5 peak construction (µg/m^3)			
Anglesey and Llyn Fens SAC and Ramsar	10	1.3	≤1.3	≤0.0%	≤13%	No
Cae Gwyn SSSI	10	1.7	≤1.8	≤1.2%	≤18%	No
Cemlyn Bay SAC/SSSI and Anglesey Terns SPA	20	1.9	≤2.3	≤1.9%	≤11%	No
Holy Island Coast SPA and SAC	10	2.2	≤2.2	≤0.1%	≤22%	No
Llyn Dinam SAC	20	1.5	≤1.5	≤0.0%	≤8%	No
Llyn Llygeirian SSSI	20	1.6	≤1.6	≤0.2%	≤8%	No
Tre'r Gof SSSI	10	2.1	≤2.5	≤4.5%	≤25%	No
Afon Wygyr Wildlife Site	20	2.1	≤2.1	≤0.4%	≤11%	No
Arfordir Mynydd y Wylfa - Trwyn Penrhyn (Wylfa Head) Wildlife Site	20	2.6	≤3.1	≤2.7%	≤16%	No
Arfordir Trwyn y Buarth – Porth Wen Wildlife Site	10	1.8	≤1.9	≤0.9%	≤19%	No
Cors Cae-Owen Wildlife Site	20	1.6	≤1.6	≤0.3%	≤8%	No
Cors Cromlech Wildlife Site	20	1.6	≤1.7	≤0.4%	≤9%	No
Cors Mynachdy Wildlife Site	20	1.4	≤1.4	≤0.3%	≤7%	No
Rhostir Mynydd Mechell Wildlife Site	20	1.6	≤1.6	≤0.2%	≤8%	No
Tir Gwlyb Teilia Neuadd Wildlife Site	20	1.6	≤1.6	≤0.2%	≤8%	No

Receptor	Critical level (AQO or EAL) (µg/m^3)	Total concentration for:		Change as a percentage of AQO or EAL	Total concentration as a percentage of AQO or EAL	Further consideration required?
		Year 5 baseline (µg/m^3)	Year 5 peak construction (µg/m^3)			
Trwyn Pencarreg Wildlife Site	20	1.9	≤2.8	≤4.3%	≤14%	No
Ancient Woodland (ID 26076)	20	2.1	≤2.1	≤0.4%	≤11%	No
Ancient Woodland (ID 26058)	20	1.7	≤1.8	≤0.3%	≤9%	No
Ancient Woodland (ID 26074)	20	1.7	≤1.7	≤0.3%	≤9%	No
Ancient Woodland (ID 26057)	20	1.5	≤1.6	≤0.2%	≤8%	No
Ancient Woodland (ID 26073)	20	1.5	≤1.6	≤0.2%	≤8%	No
Ancient Woodland (ID 26072)	20	1.5	≤1.6	≤0.2%	≤8%	No
Ancient Woodland (ID 26053)	20	1.5	≤1.6	≤0.2%	≤8%	No
Ancient Woodland (ID 26051)	20	1.6	≤1.6	≤0.3%	≤8%	No
Ancient Woodland (ID 26052)	20	1.6	≤1.6	≤0.3%	≤8%	No
Ancient Woodland (ID 26054)	20	1.5	≤1.6	≤0.2%	≤8%	No
Ancient Woodland (ID 26055)	20	1.5	≤1.6	≤0.2%	≤8%	No
Ancient Woodland (ID 26056)	20	1.7	≤1.8	≤0.3%	≤9%	No
Ancient Woodland (ID 26060)	20	2.1	≤2.6	≤2.4%	≤13%	No
Cestyll Garden	20	1.9	≤2.6	≤3.7%	≤13%	No

Table 2-15 Year 5 peak construction scenario – change to nitrogen deposition rate at ecological receptors

Receptor	Vegetation type	Nitrogen deposition (kgN/ha/year)				Change as a percentage of CL	Total deposition rate as a percentage of CL	Further consideration required?
		Critical load (CL)	Year 5 baseline	Year 5 peak construction contribution	Total			
Anglesey and Llyn Fens SAC and Ramsar	Short	10	14.4	≤0.00	≤14.4	0.0%	≤144%	No
Cae Gwyn SSSI	Short	10	9.9	≤0.16	≤10.1	1.6%	≤101%	Yes
Cemlyn Bay SAC/SSSI	Short	20	9.9	≤0.18	≤10.1	0.9%	≤51%	No
Holy Island Coast SPA and SAC	Short	10	8.1	≤0.00	≤8.1	0.0%	≤81%	No
Llyn Dinam SAC	Short	10	12.2	≤0.00	≤12.2	0.0%	≤122%	No
Llyn Llygeirian SSSI	Short	10	13.0	≤0.03	≤13.0	0.3%	≤130%	No
Tre'r Gof SSSI	Short	10	13.0	≤0.59	≤13.6	5.9%	≤136%	Yes
Afon Wygyr Wildlife Site	Short	10	13.0	≤0.05	≤13.1	0.5%	≤131%	No
	Tall	10	20.4	≤0.11	≤20.5	1.1%	≤205%	No
Arfordir Mynydd y Wylfa - Trwyn Penrhyn (Wylfa Head) Wildlife Site	Short	10	13.0	≤0.48	≤13.5	4.8%	≤135%	No
Arfordir Trwyn y Buarth – Porth Wen Wildlife Site	Short	10	13.0	≤0.06	≤13.1	0.6%	≤131%	No
Cors Cae-Owen Wildlife Site	Short	10	13.0	≤0.03	≤13.1	≤0.3%	≤131%	No
	Tall	10	20.4	≤0.06	≤20.5	≤0.6%	≤205%	No

Receptor	Vegetation type	Nitrogen deposition (kgN/ha/year)				Change as a percentage of CL	Total deposition rate as a percentage of CL	Further consideration required?
		Critical load (CL)	Year 5 baseline	Year 5 peak construction contribution	Total			
Cors Cromlech Wildlife Site	Short	10	13.0	≤0.07	≤13.1	≤0.7%	≤131%	No
Cors Mynachdy Wildlife Site	Short	10	9.9	≤0.04	≤10.0	≤0.4%	≤100%	No
Rhostir Mynydd Mechell Wildlife Site	Short	10	13.0	≤0.03	≤13.0	≤0.3%	≤130%	No
Tir Gwlyb Teilia Neuadd Wildlife Site	Short	10	13.0	≤0.03	≤13.0	≤0.3%	≤130%	No
	Tall	10	20.4	≤0.05	≤20.5	≤0.5%	≤205%	No
Trwyn Pencarreg Wildlife Site	Short	10	9.9	≤0.47	≤10.4	≤4.7%	≤104%	No
Ancient Woodland (ID 26076)	Tall	5	20.4	≤0.09	≤20.5	≤1.8%	≤411%	No
Ancient Woodland (ID 26058)	Tall	5	20.4	≤0.08	≤20.5	≤1.6%	≤410%	No
Ancient Woodland (ID 26074)	Tall	5	20.4	≤0.07	≤20.5	≤1.3%	≤410%	No
Ancient Woodland (ID 26057)	Tall	5	20.4	≤0.06	≤20.5	≤1.3%	≤410%	No
Ancient Woodland (ID 26073)	Tall	5	20.4	≤0.06	≤20.5	≤1.2%	≤410%	No
Ancient Woodland (ID 26072)	Tall	5	20.4	≤0.05	≤20.5	≤1.1%	≤410%	No
Ancient Woodland (ID 26053)	Tall	5	20.4	≤0.05	≤20.5	≤1.0%	≤410%	No
Ancient Woodland (ID 26051)	Tall	5	16.0	≤0.09	≤16.1	≤1.8%	≤321%	No
Ancient Woodland (ID 26052)	Tall	5	16.0	≤0.06	≤16.0	≤1.2%	≤320%	No

Receptor	Vegetation type	Nitrogen deposition (kgN/ha/year)				Change as a percentage of CL	Total deposition rate as a percentage of CL	Further consideration required?
		Critical load (CL)	Year 5 baseline	Year 5 peak construction contribution	Total			
Ancient Woodland (ID 26054)	Tall	5	16.0	≤0.06	≤16.0	≤1.3%	≤320%	No
Ancient Woodland (ID 26055)	Tall	5	16.0	≤0.07	≤16.0	≤1.4%	≤321%	No
Ancient Woodland (ID 26056)	Tall	5	16.0	≤0.07	≤16.0	≤1.5%	≤321%	No
Ancient Woodland (ID 26060)	Tall	5	20.4	≤1.19	≤21.6	≤23.9%	≤433%	No
Cestyll Garden	Short	n/a	9.9	≤0.52	≤10.5	n/a		
	Tall		16.0	≤1.04	17.0			

Table 2-16 Year 5 peak construction scenario – change to acid deposition rate at ecological receptors

Receptor	Vegetation type	Acid deposition (keq/ha/year)				Change as a percentage of CL	Total deposition rate as a percentage of CL	Further consideration required?
		Critical load (CLmaxN)	Year 5 baseline (N + S)	Year 5 peak construction contribution	Total			
Anglesey and Llyn Fens SAC and Ramsar	Short	4.28	1.20	≤0.00	≤1.20	≤0.0%	≤28%	No
Cae Gwyn SSSI	Short	1.01	0.85	≤0.03	≤0.88	≤2.6%	≤87%	Yes
Cemlyn Bay SAC/SSSI	Short	1.01	0.85	≤0.06	≤0.91	≤5.8%	≤90%	Yes
Holy Island Coast SPA and SAC	Short	1.97	0.71	≤0.00	≤0.71	≤0.1%	≤36%	No
Llyn Dinam SAC	Short	0.50	1.02	≤0.00	≤1.02	≤0.2%	≤204%	No
Llyn Llygeirian SSSI	Short	2.04	1.07	≤0.01	≤1.08	≤0.4%	≤53%	No
Llyn Llygeirian SSSI (CLmaxS)[1]	Short	0.79	0.14	≤0.05	≤0.15	≤0.6%	≤18%	No
Tre'r Gof SSSI	Short	1.23	1.10	≤0.09	≤1.19	≤7.7%	≤97%	Yes
Afon Wygyr Wildlife Site	Short	1.99	1.10	≤0.01	≤1.11	≤0.7%	≤56%	No
	Tall	2.77	1.66	≤0.03	≤1.69	≤1.0%	≤61%	No
Arfordir Mynydd y Wylfa - Trwyn Penrhyn (Wylfa Head) Wildlife Site	Short	1.02	1.10	≤0.10	≤1.20	≤9.6%	≤117%	No
Arfordir Trwyn y Buarth – Porth Wen Wildlife Site	Short	1.50	1.10	≤0.01	≤1.11	≤1.0%	≤74%	No
Cors Cae-Owen Wildlife Site	Short	1.02	1.10	≤0.01	≤1.11	≤0.8%	≤109%	No

Receptor	Vegetation type	Acid deposition (keq/ha/year)				Change as a percentage of CL	Total deposition rate as a percentage of CL	Further consideration required?
		Critical load (CLmaxN)	Year 5 baseline (N + S)	Year 5 peak construction contribution	Total			
	Tall	1.55	1.66	≤0.02	≤1.68	≤1.1%	≤108%	No
Cors Cromlech Wildlife Site	Short	1.99	1.10	≤0.01	≤1.11	≤0.7%	≤56%	No
Cors Mynachdy Wildlife Site	Short	1.99	0.85	≤0.01	≤0.86	≤0.5%	≤43%	No
Rhostir Mynydd Mechell Wildlife Site	Short	1.99	1.10	≤0.01	≤1.11	≤0.3%	≤56%	No
Tir Gwlyb Teilia Neuadd Wildlife Site	Short	1.02	1.10	≤0.01	≤1.11	≤0.8%	≤109%	No
	Tall	1.55	1.66	≤0.02	≤1.68	≤1.0%	≤108%	No
Trwyn Pencarreg Wildlife Site	Short	1.01	0.85	≤0.13	≤0.98	≤13.2%	≤97%	No
Ancient Woodland (ID 26076)	Tall	2.77	1.66	≤0.02	≤1.68	≤0.9%	≤61%	No
Ancient Woodland (ID 26058)	Tall	2.78	1.66	≤0.02	≤1.68	≤0.7%	≤60%	No
Ancient Woodland (ID 26074)	Tall	2.78	1.66	≤0.02	≤1.68	≤0.6%	≤60%	No
Ancient Woodland (ID 26057)	Tall	2.78	1.66	≤0.02	≤1.68	≤0.5%	≤60%	No
Ancient Woodland (ID 26073)	Tall	2.78	1.66	≤0.01	≤1.67	≤0.5%	≤60%	No
Ancient Woodland (ID 26072)	Tall	2.78	1.66	≤0.01	≤1.67	≤0.5%	≤60%	No
Ancient Woodland (ID 26053)	Tall	2.78	1.66	≤0.01	≤1.67	≤0.4%	≤60%	No
Ancient Woodland (ID 26051)	Tall	2.74	1.32	≤0.02	≤1.34	≤0.8%	≤49%	No
Ancient Woodland (ID 26052)	Tall	1.52	1.32	≤0.02	≤1.34	≤1.1%	≤88%	No

Receptor	Vegetation type	Acid deposition (keq/ha/year)				Change as a percentage of CL	Total deposition rate as a percentage of CL	Further consideration required?
		Critical load (CLmaxN)	Year 5 baseline (N + S)	Year 5 peak construction contribution	Total			
Ancient Woodland (ID 26054)	Tall	2.74	1.32	≤0.02	≤1.34	≤0.6%	≤49%	No
Ancient Woodland (ID 26055)	Tall	2.74	1.32	≤0.02	≤1.34	≤0.6%	≤49%	No
Ancient Woodland (ID 26056)	Tall	1.51	1.32	≤0.02	≤1.34	≤1.1%	≤89%	No
Ancient Woodland (ID 26060)	Tall	1.55	1.66	≤0.20	≤1.86	≤13.0%	≤120%	No
Cestyll Garden	Short	n/a	0.85	≤0.12	≤0.97			
	Tall		1.32	≤0.25	≤1.57			

Note 1: As discussed in section 5.4 of chapter B5 [APP-070] the results at Llyn Llygeirian SSSI indicate that the critical load CLmaxS approach should be applied, both approaches have been presented.

HORIZON NUCLEAR POWER

WYLFA NEWYDD

ENERGY WORKING FOR BRITAIN

Wylfa Newydd Project

Environmental Statement Addendum
Appendix D5-2-A
Dispersion Modelling of Emissions to Atmosphere Arising from Main Site

PINS Reference Number: EN010007

25 March 2019

Revision 2.0
Examination Deadline 8

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Horizon Nuclear Power

Wylfa Newydd

Dispersion modelling of emissions to atmosphere arising from main site construction works for the Wylfa Newydd Project - 207017-0000-AA40-RPT-0012



March 2019

Amec Foster Wheeler Environment
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Contents

1. Introduction 5

1.1 Purpose of this report 5

1.2 Terms and definitions 5

2. Methodology 7

2.1 Air pollutants considered 7

2.2 Selection of dispersion model 7
Modelling of emissions from NRMM and marine plant 7
Modelling emissions from road traffic 8

2.3 Emissions and assessment scenarios 8
Wylfa Newydd Development Area 8
Road traffic – A5025 9

2.4 Emission calculation methodology 9
NRMM 9
Emissions during construction of the MOLF and operation of the MOLF 11
Wylfa A decommissioning 12
Road traffic 12

2.5 Predicting the combined impacts of construction/marine plant and road traffic emissions 12

2.6 Meteorology 13

2.7 Model domain and receptors 14
Modelled grid 14
Specific receptors 14

2.8 Terrain 15

2.9 Surface characteristics 16
Surface roughness 16
Surface energy budget 17
Selection of appropriate surface characteristic parameters for the model domain 17

2.10 Conversion of NO to NO_2 18

2.11 Deposition 19

2.12 Background contributions 21

2.13 Sensitivity analysis and model uncertainty 22

3. Modelling results 23

3.1 Tabulated results 23

3.2 Concentration isopleths 23

Table 1.1	Terms and definitions	5
Table 2.1	Meteorological data capture	14
Table 2.2	Typical surface roughness lengths for different terrain types	17
Table 2.3	Pollutant specific deposition velocities	20
Table 2.4	Deposition rate conversion factors	21

Figure 2.1	Visualisation of construction sources included in the model	11
Figure 2.2	Model receptors within 2 km of the Wylfa Newydd Development Area	15
Figure 2.3	Illustration of terrain used as model input	16
Figure 2.4	Variable surface roughness length visualisation	18

Appendix A	Construction model inputs and emission standards
Appendix B	Meteorological data wind roses
Appendix C	Human and ecological receptor locations
Appendix D	Model results
Appendix E	Concentration isopleths

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1. Introduction

1.1 Purpose of this report

This Report for Horizon Nuclear Power Wylfa Ltd has been produced for the purposes of providing the methodology and results associated with the detailed dispersion modelling study to determine the air quality impacts arising from combustion emissions during the main construction phases of the Wylfa Newydd Project on the Isle of Anglesey. The assessment has considered emissions from:

- Non-road mobile machinery (NRMM) deployed across the Wylfa Newydd Development Area during earthworks, major excavations and construction;
- Marine vessels involved in construction of the Marine Offloading facility (MOLF) and in delivering materials and components to the site; and
- Road traffic movements on the A5025 associated with the construction activity.

The aim of this modelling assessment is to provide an indication of which, if any, human and ecological receptors are adversely affected by these stages of the development, and thereby support the impact assessment team to identify if mitigation is required to lessen these effects. Discussion on significance of effects and requirements for mitigation is, however, outside the scope of this report. The report presents a factual account of the modelling methodology and results of the modelling without interpretation or assessment of significance.

Where data has not yet been established at this stage of the design, assumptions based on best practice or typical values have been adopted.

1.2 Terms and definitions

Table 1.1 Terms and definitions

Term	Definition
AADT	Annual Average Daily Traffic
AAHT	Annual Average Hourly Traffic
ADMS	Atmospheric Dispersion Modelling System
AERMIC	American Meteorological Society/Environmental Protection Agency Regulatory Model Improvement Committee
AMS	American Meteorological Society
APIS	Air Pollution Information System
AOD	Above Ordnance Datum
AQO	Air Quality Objective
CBL	Convective Boundary Layer
CERC	Cambridge Environmental Research Consultants
CO	Carbon Monoxide
CURED	Calculator Using Realistic Emissions for Diesels
Defra	Department for Environment, Food and Rural Affairs

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Term	Definition
EFT	Emissions Factor Toolkit
GIS	Geographical Information System
LAQM	Local Air Quality Management
MOLF	Marine Offloading Facility
NO_x	Oxides of Nitrogen
NO_2	Nitrogen Dioxide
NRMM	Non-Road Mobile Machinery
NWP	Numerical Weather Prediction
O3	Ozone
OS	Ordnance Survey
PBL	Planetary Boundary Layer
PC	Process Contribution
PEC	Predicted Environmental Concentration
$PM_{2.5}$	Particulate matter less than 2.5 micrometres in diameter
PM_{10}	Particulate matter less than 10 micrometres in diameter
SO_2	Sulphur Dioxide
USEPA	United States Environmental Protection Agency

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2. Methodology

2.1 Air pollutants considered

The construction plant will emit a number of pollutants of concern, including oxides of nitrogen (NOx, consisting of nitrogen monoxide (NO) and nitrogen dioxide (NO_2)), particulates (PM_{10} and $PM_{2.5}$), sulphur dioxide (SO_2) and carbon monoxide (CO) and these pollutants are the focus of this assessment. NOx and SO_2, in turn, contribute to nitrogen and acid deposition with the assessment aiming to quantify the additional contribution to background deposition levels as a result of additional emissions of these specific pollutants.

2.2 Selection of dispersion model

Modelling of emissions from NRMM and marine plant

There are two primary dispersion models which have been used extensively throughout the UK for assessing the air quality impacts arising from developments of this nature and which are accepted as appropriate air quality modelling tools by regulators and local planning authorities alike:

- The ADMS model, developed in the UK by Cambridge Environmental Research Consultants (CERC) in collaboration with the Meteorological Office, National Power and the University of Surrey; and
- The AERMOD model, developed in the United States by the American Meteorological Society (AMS)/United States Environmental Protection Agency (USEPA) Regulatory Model Improvement Committee (AERMIC).

Both models are termed 'new generation' models, parameterising stability and turbulence in the planetary boundary layer (PBL) by the Monin-Obukhov length[1] and the boundary layer depth[2]. This approach allows the vertical structure of the PBL to be more accurately defined than by the stability classification methods of earlier Gaussian-type dispersion models such as R91[3] or ISC[4]. Like R91 and ISC, ADMS and AERMOD adopt a symmetrical Gaussian profile of the concentration distribution in the vertical and crosswind directions in neutral and stable conditions. However, unlike R91 or ISC, the ADMS and AERMOD vertical concentration profile in convective conditions adopts a skewed Gaussian distribution to take account of the heterogeneous nature of the vertical velocity distribution in the Convective Boundary Layer (CBL).

Numerous model inter-comparison studies have demonstrated little difference between the output of ADMS and AERMOD, except in certain complex terrain scenarios[5]. For the purposes of this particular study, ADMS (Version 5.2) has been selected as the most appropriate model to use. The justification for this selection is provided below.

ADMS is capable of calculating sub-hourly averaged concentrations based on site-specific meteorological and surface conditions, whereas AERMOD can only produce output down to hourly-averaged values. Therefore, to enable an assessment of impact against the 15-minute mean SO_2 air quality objective (AQO), a standard conversion factor (1.34) must be applied to the hourly output from AERMOD to approximate 15-minute mean concentrations. This factor is taken from Turner (1994)[6] who published estimated ratios of calculated peak and mean concentrations at 3 minutes, 15 minutes, 1 hour, 3 hours and 24 hours from published data on lateral and vertical diffusion coefficients in steady winds as reported by Nonhebel (1960)[7].

[1] A measure of the effects of buoyancy on turbulent flows, particularly in the lower tenth of the atmospheric boundary layer.
[2] The lowest layer of the atmosphere in which turbulent motion, influenced by the earth's surface processes, affects the dispersion and dilution of emitted material.
[3] https://admlc.files.wordpress.com/2014/05/r91.pdf
[4] https://www3.epa.gov/scram001/userg/regmod/isc3v1.pdf
[5] Carruthers et al., 2011. 'Comparison of the complex terrain algorithms incorporated into two commonly used local-scale air pollution dispersion models (ADMS and AERMOD) using a hybrid model.' J. Air Waste Manag. Assoc., 61, 1227-35
[6] Turner, B., 1994. 'Workbook of Atmospheric Dispersion Estimates.'
[7] Nonhebel, G., 1960. 'Recommendations on Heights for Industrial Chimneys.' J. Inst. Fuel 33, 479-513

What is important to note here is that these estimates were based upon calculated dispersion coefficients, rather than monitoring results. Furthermore, Turner (1994) cautions that:

"*...ratios of peak to mean data depend also on the stability of the atmosphere and the type of terrain that the plume is passing over*."

Therefore, application of a standard, non-site specific conversion factor that does not have its basis in monitored data would significantly increase the uncertainty in modelled 15-minute mean values obtained from AERMOD. This limitation is not present in ADMS, which uses site-specific meteorological and surface conditions to directly calculate sub-hourly averaged concentrations.

For incorporation of terrain effects, AERMOD adopts a basic treatment of topographical effects on pollutant dispersion, using a dividing streamline approach, with the receptor concentration being a weighted average of the contribution from a horizontal plume and a terrain following-plume. ADMS, however, through its FLOWSTAR sub-routine, explicitly calculates the 3-dimensional flow field over terrain, allowing more advanced treatment of dispersion in areas of complex terrain. The overly-pessimistic approach of AERMOD in areas of complex terrain has been discussed by Carruthers et al (2011) who concluded:

"...where there is plume impaction AERMOD has a tendency to overestimate concentrations and, therefore, may act as a screening model in this case, whereas ADMS may predict more realistic concentrations."

Although Carruthers et al (2011) acknowledge that both models appeared to perform reasonably when compared to measurements at the six specific monitoring sites in one of the case studies reviewed (the Clifty Creek case), they also state that:

"…although both models appear to perform reasonably, the comparisons provide relatively little insight into how well the two models are taking account of the impacts of the complex terrain because other factors such as differences in input meteorology arising from the two meteorological pre-processors may cause the model differences between the data and model predictions."

Furthermore, as stated in Carruthers et al (2011), only ADMS could replicate the higher predicted concentrations as a result of the reduction in speed and streamline divergence across the valley, with associated increase in speed and streamline convergence towards the downwind edge of the valley, demonstrated in field studies of air flow by Wiggs et al (2002)[8] and Mason (1987)[9].

Modelling emissions from road traffic

This study uses the ADMS Roads version 4.1.1 model, with version 7.0 of the Emission Factors Toolkit (EFT) [10] supported by the Calculator Using Realistic Emissions for Diesels (CURED)[11] version 2A to quantify the contribution from on-road vehicles on the A5025. Emission from on-road vehicles have been explicitly modelled for those receptors within 200 m of the A5025 and in close proximity to the Wylfa Newydd Development Area in order to more accurately predict the combined impacts of construction plant and on-road vehicle emissions at these receptors during operation of the Wylfa Newydd Project.

Further information on the methodology for modelling vehicle emissions from traffic on the A5025 can be found in appendix C4-01 of the Environmental Statement.

2.3 Emissions and assessment scenarios

Wylfa Newydd Development Area

Construction work on the Wylfa Newydd Development Area is programmed to last several years. Major activities include construction of a MOLF to facilitate import of materials and equipment, deep excavations and earth moving, and building construction. Sources of emissions to air associated with construction activities include exhaust emissions from NRMM, marine construction plant and marine vessels on site,

[8] Wiggs, G.F.S.; Bullard, J.E.; Garvey, B. and Castro, I., 2002. 'Interactions between Airflow and Valley Topography with Implications for Aeolian Sediment Transport' Phys. Geogr. 23, 366-380.
[9] Mason, P.J., 1987. 'Diurnal Variations in Flow over a Succession of Ridges and Valleys' Q. J. R. Meteorol. Soc. 113, 1117-1140.
[10] https://laqm.defra.gov.uk/review-and-assessment/tools/emissions-factors-toolkit.html
[11] http://www.aqconsultants.co.uk/News/August-2016/Updated-CURED-to-V2A.aspx

related road traffic (both transporting plant and materials and worker commuting) and fugitive dust emissions from exposed ground. Fugitive dust emissions from construction activities are not considered in this report: an assessment of these can be found in Chapter D5 of the Environmental Statement [APP-124].

Two stages of the construction activity have been assessed, each lasting twelve months:

- The period October 2019–September 2020[12] which represents the peak earth-moving and excavation phase (i.e. the 'year 2' scenario); and
- The period January–December 2023 which represents the peak construction phase (i.e. the 'year 5' scenario).

These scenarios have been chosen based on best available information provided by Horizon regarding likely timescales and activities that are due to take place.

Road traffic – A5025

Information on the assessment scenarios for road traffic emissions can be found in appendix C4-01 of the Environmental Statement [APP-114].

2.4 Emission calculation methodology

NRMM

Emission limits for NRMM depend on the age of the equipment, with regulations specifying tighter standards as new plant items enter into service. Stage IIIB standards, as specified in the Non-Road Mobile Machinery (Emission of Gaseous and Particulate Pollutants) Regulations 1999, as amended, were enacted for new plant in the UK between January 2011 and January 2013, depending upon engine power rating, and the Stage IV standards were enacted in January and October 2014 for new plant. These standards provide limits on emissions for carbon monoxide, nitrogen oxides and particulate matter.

The exact age profile of the plant cannot be known yet, but Horizon Nuclear Power has committed to using Stage IV plant as far as possible. To allow for the possibility that plant meeting that standard may not always be available, in this assessment 90% of plant is assumed to meet Stage IV standards, with the remaining 10% meeting Stage IIIB standards. No attempt was made to partition individual plant items into Stage IV or Stage IIIB. Instead the weighted mean emission factor was calculated for each power category. For example, for plant in the power range 56–130 kW, the weighted mean NO_x emission factor is 0.1 × 3.3 + 0.9 × 0.4 = 0.69 g/kWh, where 3.3 g/kWh is the Stage IIIB emission factor and 0.4 g/kWh is the Stage IV emission factor. Engines with power ratings above 560 kW were assumed to meet the standard for 560 kW engines. Emission factors for sulphur emissions were calculated using the Stage IIIB standards for specific fuel consumption[13] and the sulphur content of the diesel fuel, assumed to be ultra-low sulphur diesel (10 ppm or 0.001% sulphur w/w).

Further information on construction phase input information can be found in Appendix A.

The construction data provided by Horizon gave a list of plant items with their power ratings, their daily hours of use (including breaks), the number of plant items in use in each month, and the work areas in which they would be operating. The work areas were defined on drawings provided by Horizon (see data in Appendix A and Figure A1). It was assumed that emissions are spread uniformly across each work area. For modelling in ADMS, it was necessary to divide each work area into a number of convex polygons; this entailed slightly simplifying the shape of the work areas, but care was taken to ensure that the boundary was accurately captured close to sensitive receptors or, to ensure conservatism, the boundary was slightly closer to receptors than the actual working area. These polygons are shown in Figure 2.1.

[12] Strictly speaking, annual mean concentrations for assessment against air quality limit values should be based on calendar years. However, in this case, the split year covers the period of greatest activity, according to the programme, and is therefore a worst case.
[13] http://www.bafu.admin.ch/publikationen/publikation/01003/index.html?lang=en (pg 126)

Emissions were calculated for each of the convex polygons within each work area, for each hour of the year. The procedure may be represented by the following pseudocode[14] (Box 1):

Box 1 Emissions Calculation Procedure

For each emissions standard (Stage IIIB or Stage IV):
  For each convex polygon:
    For each day of the year:
      For each hour of the day:
        For each plant item:
          If this plant item operates within the work area containing this convex polygon, during the month containing this day of the year, and during this hour of the day, then:
            Emission rate (g m^{-2} s^{-1}) = operating power (kW) × emission factor (g kWh^{-1}) × number of plant items / 3600 (s h^{-1}) / area of work area (m^2).
        Sum over all plant items and output total emission rate for this convex polygon for this hour of the year.

In the above algorithm, the operating power is calculated from the rated power by assuming that equipment is working at 80% full power (working load) for a fraction of its working hours (ranging from 10% of working hours to 100% of working hours dependent on the type of equipment and activity) and at 20% full power (idle load) for the remainder of its working hours (ranging from 0% of working hours to 90% of working hours dependent on the type of equipment and activity). The fraction of hours spent at working load is contained within the data provided by Horizon.

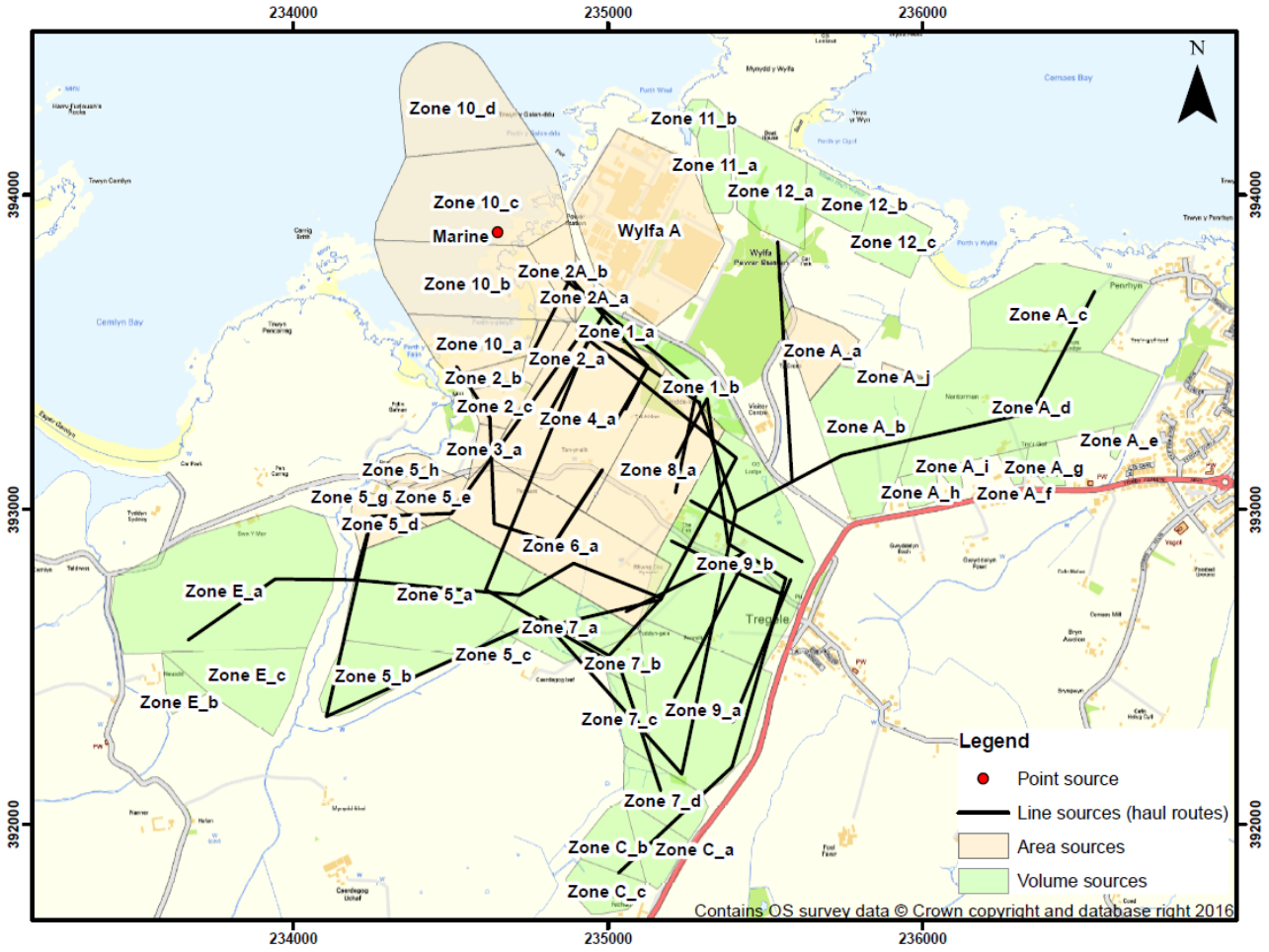
The emission rates thus calculated, for each convex polygon and each hour of the year, were entered directly into ADMS by use of a time-varying emissions (or "var") file. This allows the full spatial and temporal variation in the emissions to be captured by the dispersion modelling.

The emissions within the convex polygons are entered into ADMS as either volume or area sources. For the volume sources, the area emission rate as calculated by the procedure in Box 1 has been divided by the vertical dimension of the source to calculate a volume-based emission rate. Volume sources have a marginal advantage for modelling these type of emissions as they capture the initial mixing in the vertical dimension but, due to limitations in the number of sources of different types that ADMS can model, some sources (those more remote from receptors) have been treated as area sources; this is not expected to make a material difference to the output at any off-site receptor. The distribution of volume and area sources is such that the volume sources have been placed nearer to the largest groups of receptors. This does mean that the smaller number of receptors to the east of Cemlyn Bay, which are adjacent to certain area sources, are likely to experience a marginally greater predicted impact than that which would have resulted if applying a volume source approach to all modelled construction areas was possible. This is considered to be a robust assumption, erring on the side of caution, given that these receptors have the highest predicted off-site impact.

The release height for the volume sources was set to 3 m and the vertical dimension of the volume sources was set at 6 m. These are standard assumptions which have been made on numerous other assessments of NRMM emissions. These assumptions and this approach are broadly consistent with recommendations made by the US EPA for modelling the impact of haul road emissions[15]. For activity on haul routes, the same approach was taken, but treating them in ADMS as line sources of width 10 m.

[14] Pseudocode is an informal high-level description of the operating principle of a computer program or other algorithm.
[15] US EPA, 2012. 'Haul Road Workgroup Final Report Submission to EPA-OAQPS'

Figure 2.1 Visualisation of construction sources included in the model



Note: These areas and haul routes do not fully correspond to the labelled areas and routes detailed in Appendix A due to the requirement to convert the actual area in to a convex form which can be accepted by the model and due to reaching the limitation on the maximum number of line sources which may be accepted by ADMS.

Emissions during construction of the MOLF and operation of the MOLF

Horizon provided the number of marine vessels/types and MOLF construction plant on a monthly basis for each of the 2020 (when the MOLF is undergoing construction) and 2023 (when the MOLF is operational) construction years. Some vessels, such as jack-up barges and back-hoe dredgers, which are primarily used during the construction of the MOLF only, were included in the NRMM and other construction plant data described above, and so do not feature in the "marine" point source in Figure 2.1. Emissions from these particular vessels are modelled using the NRMM approach described in the preceding sub-section with their emissions distributed equally over the relevant area sources. Other vessels associated with the Marine Works, such as tugs and split-hopper barges, are assumed to meet International Maritime Organization Tier III marine emissions standards, and emissions were calculated using emission factors based on the Tier III limits.

Vessels within the marine point source, which represents emissions during operation of the MOLF, include bulk carriers, vessels for abnormal integral loads, and unpowered barges with tugs. Power ratings for the engines for each vessel type were determined by Amec Foster Wheeler (now Wood) from public information[16]. Each shipping movement was assumed to entail 2 hours operating the main engines at 20% of their rated power (representing manoeuvring and docking) and 10 hours operating the auxiliary engines at

[16] www.fleetmon.com, www.marinetraffic.com, www.workboatsinternational.com

80% of their rated power (representing time docked and loading/unloading). Emission factors were derived from Defra's UK Ship Emissions Inventory report[17].

Movement numbers and the assumed 12-hour turnaround time per movement suggest that approximately four vessels will be present at any time during MOLF operation. In view of this, marine vessel emissions during MOLF operation were modelled as a single continuous point source located in the MOLF area with typical values for the stack height, diameter, temperature and velocity parameters. The emission rates for the point source were derived from the total annual emission calculated for each of the various types of vessel and numbers of associated movements at the MOLF in that particular year.

Wylfa A decommissioning

Concurrent with the 2023 peak construction scenario of the Wylfa Newydd Project, the existing Wylfa A Magnox station will be in its "preparation for care and maintenance" phase. During this phase, some plant and buildings will be removed and remaining structures will be put into a passively safe and secure state. Emissions from this activity have been added to the model and added to the baseline concentration. These emissions are relatively low and are not expected to make a significant contribution to concentrations at receptors, so a fairly simple, conservative approach, such as assuming operation takes place 365 days of the year, has been taken.

The Environmental Statement for the Wylfa A decommissioning contains a list of equipment proposed for these works, with a fractional running time. Power ratings for each equipment type were determined by Amec Foster Wheeler from public information. Equipment was assumed to operate for 8 hours per day, factored by the fractional running time given in the Environmental Statement, and for 365 days per year. Emission factors were based on Stage IIIB standards.

Emissions were then assigned to an area source covering the Wylfa A Magnox site.

Road traffic

Information on the methodology for quantifying the contribution from road traffic emissions can be found in appendix C4-01 of the Environmental Statement.

2.5 Predicting the combined impacts of construction/marine plant and road traffic emissions

In order to estimate the combined impact of construction/marine plant and road traffic emissions, the long-term baseline/background concentration used in the assessment of construction/marine plant emissions takes a value of the total modelled annual mean concentration from the roads model i.e. local roads contribution plus background after verification, before the long-term process contribution from the construction/marine plant emissions is added. Analogous to NRW's '*Air emissions risk assessment for your environmental permit*' guidance[18], the short-term baseline/background concentration used in the assessment of construction/marine plant emissions takes a value of twice the total modelled annual mean concentration from the roads model before the relevant percentile process contribution from the construction/marine plant emissions source is added.

Due to the non-linearity in the NO_x:NO_2 relationship (section 2.10 provides further explanation), a more appropriate method would perhaps be to consider the combined modelled NO_x road source and construction/marine plant contribution for each hour before calculating the combined long-term and short-term NO_2 impacts using Defra's NO_x to NO_2 calculator [19]. However, use of the proposed method is considered appropriate in this instance due to the following factors:

[17] Entec (2010), Defra UK Ship Emissions Inventory. Doc Reg No 21897-01.
[18] https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit
[19] https://laqm.defra.gov.uk/documents/no2tonox9_ja-forweb_june2016.xls

- The fraction of primary NO_2 in construction/marine plant and road traffic emissions is likely to be different which increases the uncertainty in the fraction of primary NO_2 estimate in methods such as Defra's NO_x to NO_2 calculator;
- Accurate predictions of the road contribution for each hour would require a diurnal profile of traffic flows which are not always readily available; and
- Experience suggests use of the NO_x:NO_2 conversion factors from the Environment Agency's Air Quality Modelling and Assessment Unit (AQMAU) guidance[20] generally results in a more conservative prediction of impact for construction plant and marine vessel emissions and therefore provides a precautionary approach for these particular emission sources.

2.6 Meteorology

For meteorological data to be suitable for ADMS dispersion modelling purposes, a number of meteorological parameters need to be measured on an hourly basis. These parameters include wind speed, wind direction, cloud cover and temperature. There are only a limited number of sites in the UK where the required meteorological measurements are made. The nearest synoptic station to the Wylfa Newydd Development Area that records these parameters in a format suitable for the model is RAF Valley, located approximately 20 km to the south-west of the Wylfa Newydd Development Area on the southern coast of Anglesey.

However, due to the distance and potential localised influences of topographical/coastal effects, it may not necessarily be the case that data from RAF Valley is completely representative of the conditions more local to the development site. Therefore, this assessment has used interpolated meteorological data from the UK Meteorological Office ('Met Office') Numerical Weather Prediction (NWP) models for the latitude and longitude of the Wylfa Newydd Development Area during the period 2007-2016. Wind rose figures illustrating the frequency of wind speed and direction from the NWP data for each year over this period can be found in Appendix B.

NWP models, such as the Unified Model (UM), are now used operationally by the Met Office for weather forecasting and to model climate change. These models are run on large supercomputers and input observations from ground stations, buoys at sea, radiosondes, aircraft and satellites. The models integrate the governing equations forward in time to move from a current view of the weather to some future state (the "Forecast"). The starting point of NWP forecasts is a set of data (the "Analysis") that combines the currently available observations measured all over the globe with an initial state taken from the previous NWP model run.

Versions of the Unified Model include the global and mesoscale models. These cover various domains and grid resolutions. The mesoscale model covers a limited area focussed on the UK. In 2006, the North Atlantic & European (NAE) model replaced the mesoscale model. It covers a larger area but has the same resolution as the immediately preceding version of the mesoscale model.

When generating data suitable for the ADMS model, the NWP Analysis data for the chosen year from the UM mesoscale model is retrieved from storage and then processed using multi-linear interpolation in all three dimensions and in time to get the effective values of each variable at the station position (latitude & longitude). The raw NWP data are, strictly speaking, Analysis data at each assimilation step in the mesoscale model run, mixed with Forecast data for the intervening hours. Data before 2004 are interpolated from older versions of the UM mesoscale model with a 60 km resolution, whilst data from 2004 to 2006 are interpolated at 12 km resolution and data between 2007 to 2012 at a 4 km resolution, whilst, from 2013 onwards, model resolution is at 1.5 km.

Gaussian plume models, such as ADMS, cannot, as standard, model calm weather conditions, since this results in a discontinuity produced by a 'divide by zero' calculation. Most Gaussian plume models simply skip lines of meteorological data where calm conditions occur. Met lines will also be skipped where any of the required meteorological input parameters are missing. If there are a significant number of calm conditions or missing data, this can result in an equally significant number of met lines being discounted and an

[20] AQMAU, undated. 'Conversion ratios for NOx and NO_2' http://webarchive.nationalarchives.gov.uk/20140328084622/http:/www.environment-agency.gov.uk/static/documents/Conversion_ratios_for__NOx_and_NO2_.pdf

unrepresentative prediction of modelled impact, particularly for annual mean or percentile based concentrations. The generally accepted best practice requirement is to ensure that no more than 10% of meteorological data is omitted from the model run. Table 2.1 demonstrates that this requirement is satisfied for all modelled years of NWP meteorological data for the Wylfa Newydd Development Area.

Table 2.1 Meteorological data capture

Year	Number of met lines used	Percentage of lines not used
2007	8727	0.4%
2008	8747	0.4%
2009	8725	0.4%
2010	8717	0.5%
2011	8716	0.5%
2012	8744	0.5%
2013	8700	0.7%
2014	8712	0.5%
2015	8705	0.6%
2016	8731	0.6%

ADMS does possess an additional sub-routine, allowing estimates of modelled contributions during calm conditions to be made. However, validation of this method of calculating concentrations has never been carried out and, consequently, this sub-routine was not used as part of these model runs.

2.7 Model domain and receptors

Modelled grid

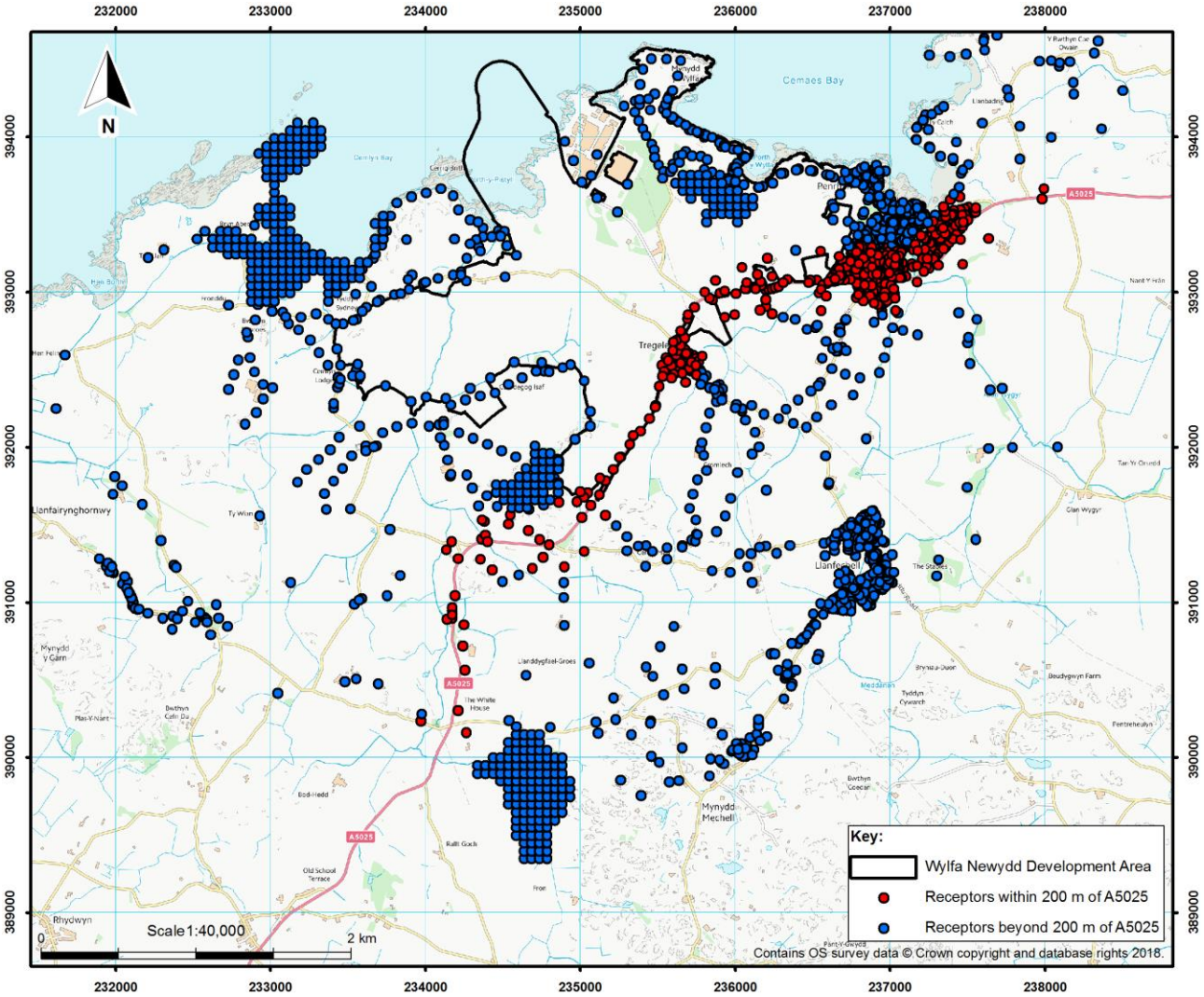
The model incorporates a 6 km x 6 km Cartesian grid, centred on the Wylfa Newydd Development Area, with a receptor resolution of 60 m, to assess the impact of atmospheric emissions during construction on local air quality. The Cartesian grid was used for the purposes of generating concentration isopleths/contour plots indicating process contributions from construction plant and marine vessels.

Specific receptors

Guidance from the UK Government and Devolved Administrations makes it clear that exceedances of the human health based objectives should only be assessed at outdoor locations where members of the general public are regularly present over the averaging time of the objective. The receptors considered were chosen based on places where people may be located, judged in terms of the likely duration of their exposure to pollutants and their proximity to the Wylfa Newydd Development Area boundary (all relevant human receptors within 2 km of the Wylfa Newydd Development Area were considered). Model predictions are made at a height of 1.6 m above ground level, representative of the typical human breathing zone height. Ecological receptors within 2 km (all designated sites) and 15 km (European designated sites only) of the Wylfa Newydd Development Area have been considered in the assessment with predictions for these receptors made at ground level.

Details of the locations of the receptors considered in the assessment are provided in Appendix C and those within 2 km of the Wylfa Newydd Development Area presented in Figure 2.2.

Figure 2.2 Model receptors within 2 km of the Wylfa Newydd Development Area



Notes: Red dots indicate those receptors within 200m of the A5025, blue dots indicate those receptors further than 200m of the A5025. Please refer to Section 2.16 for an explanation of this distinction.

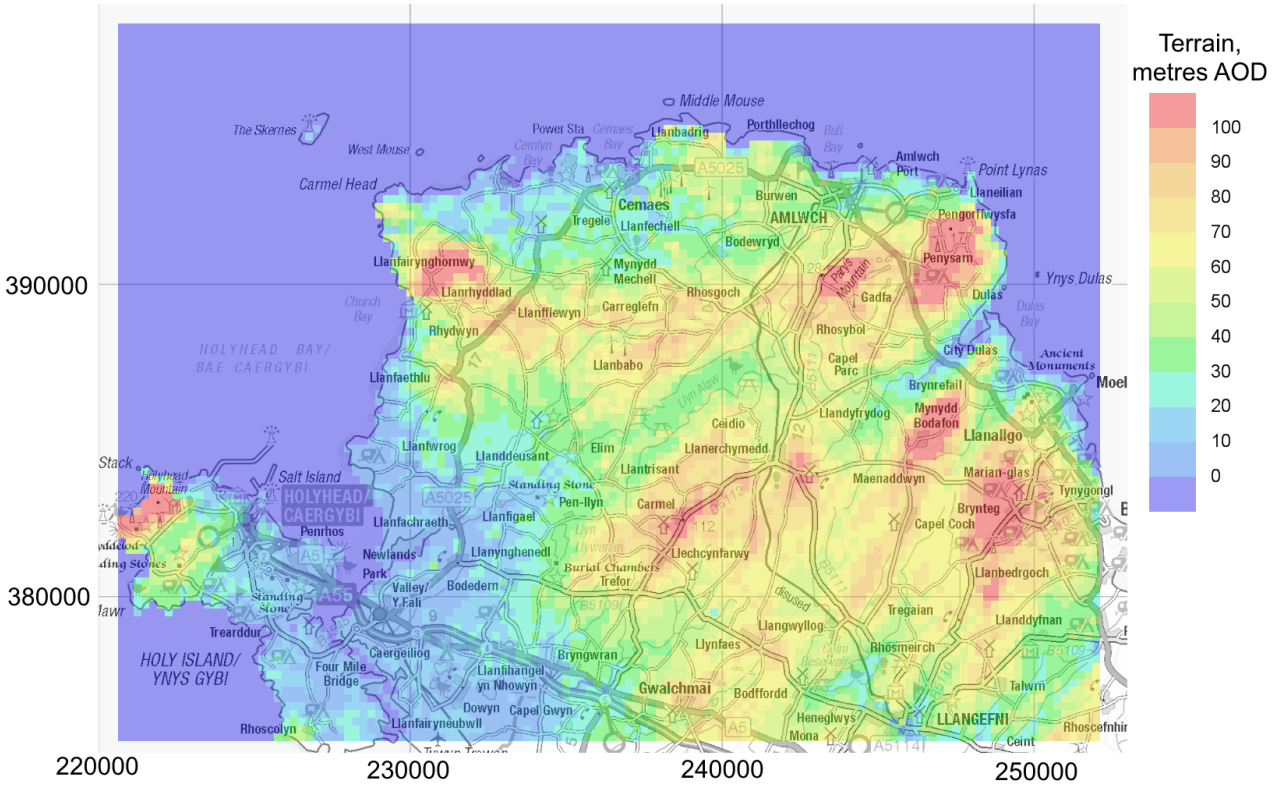
2.8 Terrain

The ground level concentrations of pollutants arising from emissions in areas of complex terrain differ from those found in simple, level terrain due to a number of topographical-induced effects on the three-dimensional flow and turbulent fields over the terrain. These effects are most pronounced when terrain gradients are steeper than 1 in 10. The terrain in the model domain approaches or exceeds this criterion and, consequently, digitally mapped terrain data has been included in the model set up.

Within the Wylfa Newydd Development Area, construction works will change the landform due to the creation of level platforms for the main reactor island area, and mounds made from the extracted spoil. Clearly, these will change during the course of the construction phase. Horizon provided drawings of the landform corresponding to various stages of construction (called Reference Points). Reference Point 3, corresponding to main construction through to first nuclear construction, was used for modelling both scenarios, representing an indicative terrain profile during the middle point of the construction schedule. Sensitivity analysis indicated a negligible effect on predicted concentrations with terrain profiles for the different Reference Points so this approach represents a pragmatic solution. Heights of the platforms and mounds were extracted from the drawing and gridded for input into ADMS, combined with OS Terrain 50 data for the wider landscape. The resulting terrain file covered a region of 31 km × 22 km, in order to cover all the modelled receptors, and is illustrated in Figure 2.3.

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Figure 2.3 Illustration of terrain used as model input



2.9 Surface characteristics

The predominant surface characteristics and land use in a model domain have an important influence in determining turbulent fluxes and, hence, the stability of the boundary layer and atmospheric dispersion. Factors pertinent to this determination are discussed below.

Surface roughness

The surface roughness length represents the aerodynamic effects of surface friction and is defined as the height at which the extrapolated surface layer wind profile tends to zero. This value is an important parameter used by meteorological pre-processors to interpret the vertical profile of wind speed and estimate friction velocities which are, in turn, used to define heat and momentum fluxes and, consequently, the degree of turbulent mixing in the boundary layer.

The surface roughness length is typically related to the height of surface elements; typically, the surface roughness length is approximately 10% of the height of the main surface features. Thus, it follows that surface roughness is higher in urban and congested areas than in rural and open areas. Oke[21] and CERC[22] suggest typical roughness lengths for various land use categories (Table 2.2).

[21] Oke, T.R., 1987. 'Boundary Layer Climates' 2nd Edition, Methuen.
[22] CERC, 2003. 'The Met Input Module'. ADMS Technical Specification ADMS 3 P05/01N/03.

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Table 2.2 Typical surface roughness lengths for different terrain types

Type of surface	Typical surface roughness length (m)
Ice	0.00001
Smooth snow	0.00005
Smooth sea	0.0002
Lawn grass	0.01
Pasture	0.2
Isolated settlement (farms, trees, hedges)	0.4
Parkland, woodlands, villages, open suburbia	0.5-1.0
Forests/cities/industrialised areas	1.0-1.5
Heavily industrialised areas	1.5-2.0

Increasing surface roughness increases turbulent mixing in the lower boundary layer. With respect to near-ground sources, such as those represented in this modelling of construction and road traffic activity, the overall impact on ground level concentration is correlated with the distance of a receptor from the emission source.

Surface energy budget

One of the key factors governing the generation of convective turbulence is the magnitude of the surface sensible heat flux. This, in turn, is a function of the incoming solar radiation. However, not all solar radiation arriving at the Earth's surface is available to be emitted back to atmosphere in the form of sensible heat. By adopting a surface energy budget approach, it can be identified that, for fixed values of incoming short and long wave solar radiation, the surface sensible heat flux is inversely proportional to the surface albedo and latent heat flux.

The surface albedo is a measure of the fraction of incoming short-wave solar radiation reflected back into the atmosphere by the Earth's surface. This parameter is dependent upon surface characteristics and varies throughout the year. Oke[23] (1987) recommends average surface albedo values of 0.6 for snow covered ground and 0.23 for non-snow covered ground, respectively.

The latent heat flux is dependent upon the amount of moisture present at the surface. The modified Priestly-Taylor parameter can be used to represent the amount of moisture available for evaporation. Areas where moisture availability is greater will experience a greater proportion of incoming solar radiation released back to atmosphere in the form of latent heat, leaving less available in the form of sensible heat and, thus, decreasing convective turbulence. Holstag and van Ulden (1983)[24] suggest modified Priestly-Taylor values of 0.45 and 1.0 for dry grassland and moist grassland respectively.

Selection of appropriate surface characteristic parameters for the model domain

A detailed analysis of the effects of surface characteristics on ground level concentrations by Auld et al. (2002)[25] led them to conclude that, with respect to uncertainty in model predictions:

"…the energy budget calculations had relatively little impact on the overall uncertainty"

[23] T. R. Oke (1987). Boundary Layer Climates. 2nd Edition, Methuen & Co. Ltd, London 435 pp.
[24] A. A. M Holstag & A. P. van Ulden (1983). A Simple Scheme for Daytime Estimates of the Surface Fluxes from Routine Weather Data. J. Clim. App. Met., 22 (4) 517-521.
[25] https://admlc.files.wordpress.com/2014/05/admlc-r2.pdf

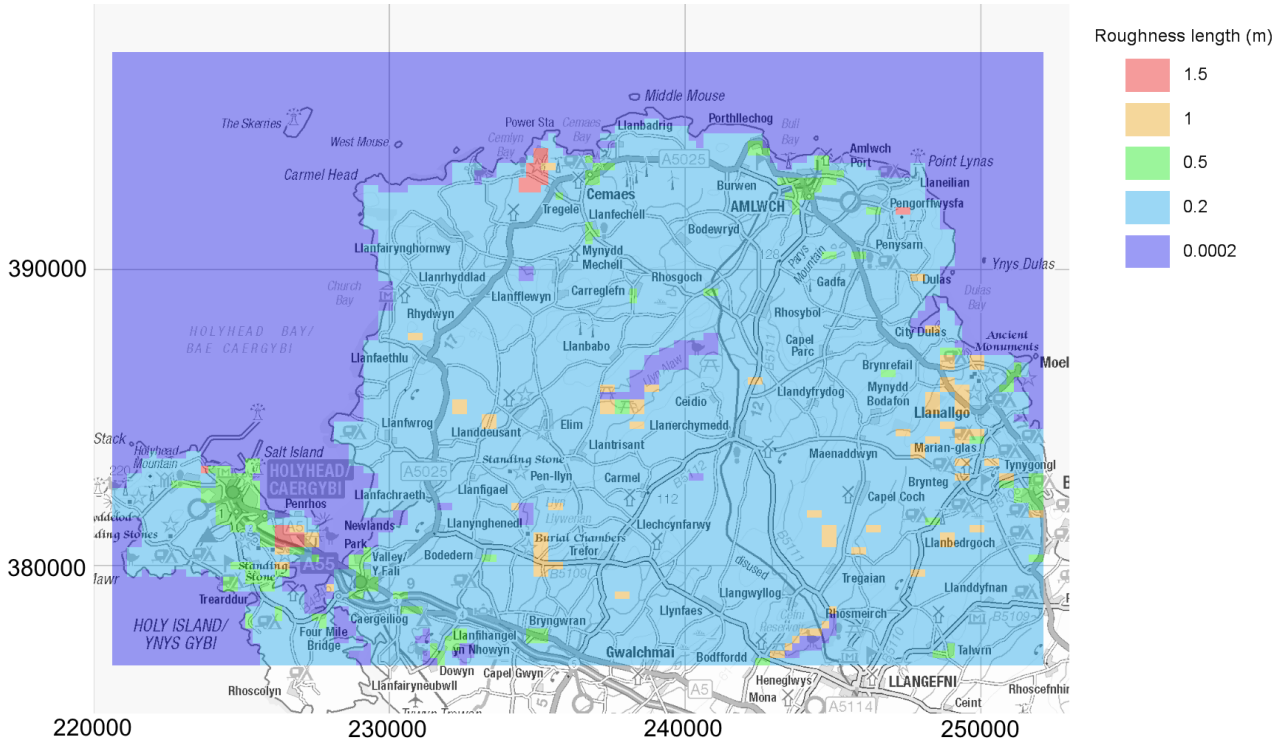
In this regard, it is not considered necessary to vary the surface energy budget parameters, spatially or temporally, and annual averaged values have been adopted throughout the model domain for this assessment.

As snow covered ground is only likely to be present for a small fraction of the year, the surface albedo of 0.23 for non-snow covered ground advocated by Oke[17] has been used, whilst the model default modified Priestly-Taylor parameter value of 1.0 (equivalent of moist vegetation) has also been retained.

However, due to the variability and contrasting nature of land use within the model domain, a spatially varying surface roughness file has been used instead of adopting a uniform surface roughness length throughout the model domain. The surface roughness file, whose varying nature is visualised in Figure 2.4, is composed of the following values and land use categories:

- 0.0002 m - representative of the sea/water;
- 0.2 m - representative of open grass and scrubland;
- 0.5 m - representative of suburbia and isolated settlement;
- 1.0 m - representative of built up areas and woodland; and
- 1.5 m - representative of large industrialised areas.

Figure 2.4 Variable surface roughness length visualisation



Notes: The area covered by construction activity associated with the Wylfa Newydd Project has been assigned an enhanced surface roughness length of 1.5 m to reflect the additional mechanically generated turbulence associated with large numbers of HDVs and NRMM in a concentrated area.

2.10 Conversion of NO to NO_2

Emissions of NO_x from combustion processes are predominantly in the form of NO. Excess oxygen in the combustion gases and further atmospheric reactions cause the oxidation of NO to NO_2. NO_x chemistry in the lower troposphere is strongly interlinked in a complex chain of reactions involving Volatile Organic Compounds (VOCs) and Ozone (O_3). Two of the key reactions interlinking NO and NO_2 are detailed below:

$$NO_2 + O_2 \xrightarrow{h\nu} NO + O_3 \qquad (R1)$$

$$NO + O_3 \rightarrow NO_2 + O_2 \qquad (R2)$$

Where *hv* is used to represent a photon of light energy (i.e., sunlight).

Taken together, reactions R1 and R2 produce no net change in O_3 concentrations, and NO and NO_2 adjust to establish a near steady state reaction (photo-equilibrium). However, the presence of VOCs and CO in the atmosphere offer an alternative production route of NO_2 for photolysis, allowing O_3 concentrations to increase during the day with a subsequent decrease in the NO_2:NO_x ratio.

However, at night, the photolysis of NO_2 ceases, allowing reaction R2 to promote the production of NO_2, at the expense of O_3, with a corresponding increase in the NO_2:NO_x ratio.

Near to an emission source of NO, the result is a net increase in the rate of reaction R2, suppressing O_3 concentrations immediately downwind of the source, and increasing further downwind as the concentrations of NO begin to stabilise to typical background levels (Gilani and Pliem, 1996)[26].

Given the complex nature of NO_x chemistry, the Environment Agency's Air Quality Modelling and Assessment Unit (AQMAU) has adopted a pragmatic, risk-based approach in determining the conversion rate of NO to NO_2 which dispersion model practitioners can use in detailed assessments. AQMAU guidance advises that the source term should be modelled as NOx (as NO_2) and then suggests a tiered approach when considering ambient NO_2:NOx ratios:

- Screening Scenario: 50% and 100% of the modelled NOx process contributions should be used for short-term and long-term average concentration, respectively. That is, 50% of the predicted NOx concentrations should be assumed to be NO_2 for short-term assessments and 100% of the predicted NOx concentrations should be assumed to be NO_2 for long-term assessments;
- Worst Case Scenario: 35% and 70% of the modelled NOx process contributions should be used for short-term and long-term average concentration, respectively. That is, 35% of the predicted NOx concentrations should be assumed to be NO_2 for short-term assessments and 70% of the predicted NOx concentrations should be assumed to be NO_2 for long-term assessments; and
- Case Specific Scenario: Operators are asked to justify their use of percentages lower than 35% for short-term and 70% for long-term assessments in their application reports.

In line with the AQMAU guidance, this assessment has used the 'Worst Case Scenario' approach in determining the conversion rate of NO to NO_2 from construction plant and marine vessels as a robust assumption. For consideration of emissions from on-road vehicles, Defra's NO_x to NO_2 calculator (version 5.1)[27] has been used. Section 2.5 provides further description on how results from the two types of emission source (i.e. construction/marine and road traffic) have been combined.

2.11 Deposition

The predominant route by which emissions will affect land in the vicinity of an emission source is by deposition of material from the plume. Ecological receptors can potentially be sensitive to the deposition of pollutants, particularly nitrogen and sulphur compounds, which can affect the character of the habitat through eutrophication and acidification.

Deposition processes in the form of dry and wet deposition remove material from a plume and alter the plume concentration. Dry deposition occurs when particles are brought to the surface by gravitational settling and turbulence. They are then removed from the atmosphere by deposition on the land surface or on vegetation. Wet deposition occurs due to rainout (within cloud) scavenging and washout (below cloud) scavenging of the material in the plume. These processes lead to a variation with downwind distance of the

[26] M. V. Gilani & J. E. Pliem (1996) Sub-Grid Scale Features of Anthropogenic Emissions of NOx and VOC in the Context of Regional Eulerian Models. Atmos. Environ. 30, 2043-2059.
[27] https://laqm.defra.gov.uk/review-and-assessment/tools/background-maps.html#NOxNO2calc

plume strength and may alter the shape of the vertical concentration profile, as dry deposition only occurs at the surface.

Near to sources of pollutants (< 2 km), dry deposition is generally the predominant removal mechanism for pollutants such as NO_x, SO_2 and NH_3 (Fangmeier et al. 1994)[28]. Dry deposition may be quantified from the near-surface plume concentration and the deposition velocity (Chamberlin and Chadwick, 1953)[29];

$$F_d = v_d C(x, y, 0)$$

Where:

F_d = dry deposition flux (µg m^{-2} s^{-1})

v_d = deposition velocity (m s^{-1})

$C(x, y, 0)$ = ground level concentration (µg m^{-3})

AQTAG06 guidance (AQTAG, 2014)[30] recommends deposition velocities for various pollutants dependent upon the habitat type (Table 2.3).

Table 2.3 Pollutant specific deposition velocities

Pollutant	Deposition velocity (m s^{-1})	
	Short vegetation	Long vegetation
NO_2	0.0015	0.003
SO_2	0.012	0.024

In order to assess the impacts of deposition, habitat-specific critical loads and critical levels have been developed. These are generally defined as (e.g., Nilsson and Grennfelt, 1988)[31];

"...a quantitative estimate of exposure to one or more pollutants below which significant harmful effects on specified sensitive elements of the environment do not occur according to present knowledge"

It is important to distinguish between a critical load and a critical level. The critical load relates to the quantity of a material deposited from air to the ground, whilst critical levels refer to the concentration of a material in air. The UK Air Pollution Information System (APIS[32]) provides critical load data for ecological sites in the UK.

The critical loads used to assess the impact of compounds deposited to land which result in eutrophication and acidification are expressed in terms of kilograms of nitrogen deposited per hectare per year (kg N ha^{-1} y^{-1}) and also as kilo-equivalents deposited per hectare per year (keq ha^{-1} y^{-1}). The unit of 'equivalents' (eq) is used for the purposes of assessing acidification, rather than a unit of mass. The unit eq (1 keq ≡ 1,000 eq) refers to molar equivalent of potential acidity resulting from e.g. sulphur, oxidised and reduced nitrogen, as well as base cations. Essentially, it means 'moles of charge' and is a measure of how acidifying a particular chemical species can be.

To convert the predicted concentration in air the following algorithm is used:

$$DR_i = C_i v_{d_i} f_i$$

[28] A. Fangmeier et al. (1994) Effects of Atmospheric Ammonia on Vegetation – A Review. Environ. Pollution, 86 278-291.
[29] A. C. Chamberlin & R. C. Chadwick (1953) Deposition of Airborne Radioactive Vapour. Nucleonics 11 22-25.
[30] AQTAG06 (2014). 'Technical Guidance on Detailed Modelling Approach for an Appropriate Assessment for Emissions to Air'
[31] J. Nilsson & P. Grennfelt (1988) Critical Loads for Sulphur and Nitrogen. Miljorapport 1988:15, Nordic Council of Ministers, Copenhagen.
[32] http://www.apis.ac.uk/

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Where:

DR_i = annual deposition of N or S (kg N ha^{-1} y^{-1} or kg S ha^{-1} y^{-1})

C_i = annual mean concentration of the *i*th chemical species (µg m^{-3})

v_{d_i} = deposition velocity of *i*th species

f_i = factor to convert from µg m^{-2} s^{-1} to kg ha^{-1} y^{-1} for the *i*th species

Table 2.4 provides the relevant conversion factors.

Table 2.4 Deposition rate conversion factors

From	Conversion factor (µg m^{-2} s^{-1} to kg ha^{-1} y^{-1} for the *i*th species)	
	Convert to	**Factor**
NO_2	N	96
SO_2	S	157.7

In order to convert deposition of N to acid equivalents, the following relationships can be used:

- 1 keq ha^{-1} y^{-1} = 14 kg N ha^{-1} y^{-1}; and
- 1 keq ha^{-1} y^{-1} = 16 kg S ha^{-1} y^{-1}.

With respect to wet deposition, AQTAG06 states:

"*It is considered that wet deposition of SO_2, NO_2 and NH_3 is not significant within a short range*"

Therefore, the assessment only considers dry deposition of nitrifying and acidifying N and S compounds.

2.12 Background contributions

Background concentrations are summarised in the baseline air quality report prepared by Jacobs[33]. In summary, the following data sources have been used to quantify background concentrations:

- NO_x and NO_2: For receptors more than 200 m from the A5025, 2013 data from Defra background maps is used to obtain the background concentration for the grid squares containing individual receptors. For receptors within 200 m of the A5025, the contribution from the A5025 has been explicitly modelled for each receptor and added to the 2013 background mapped value after removal of the mapped roads contribution;
- SO_2 and CO: 2001 data from Defra background maps for the grid squares containing individual receptors; and
- PM_{10} and $PM_{2.5}$: Uniform concentrations based on monitored data collected by IACC in the vicinity of the Wylfa Newydd Development Area in 2013/2014 and 2016 (PM_{10} = 14.9 µg m^{-3}; $PM_{2.5}$ = 7.8 µg m^{-3}) for receptors more than 200 m from the A5025. For receptors within 200 m of the A5025 the contribution from the A5025 has been explicitly modelled for each receptor and added to the uniform concentration based on the monitored data.

Conservatively, no reduction in background concentrations in future years is assumed, except for the explicitly modelled roads contribution, where concentrations associated with road traffic emissions have been calculated from emission factors relevant for that specific year.

[33] Jacobs, 2017. 'Baseline Data Synopsis Report – Air Quality' WN03.03.01-S5-PAC-REP-00017

Short-term background/baseline concentrations have been derived from annual mean background/baseline concentrations by applying a factor of 2 to the annual mean data, in accordance with information contained within the Environment Agency's guidance[34]. Section 2.5 provides further description on how results from the two types of emission source (i.e. construction/marine and road traffic) have been combined.

2.13 Sensitivity analysis and model uncertainty

Emissions have been modelled using the standard steady state algorithms in ADMS to determine the impact on local human and ecological receptors. In order to model atmospheric dispersion using standard Gaussian methods, the following assumptions and limitations have to be made and appreciated:

- Conservation of mass – the entire mass of emitted pollutant remains in the atmosphere and no allowance is made for loss due to chemical reactions or deposition processes (although the standard Gaussian model can be modified to include such processes, as is the case with ADMS). Portions of the plume reaching the ground are assumed to be dispersed back away from the ground by turbulent eddies (eddy reflection);
- Steady state emissions – emission rates are assumed to be constant and continuous over the time averaging period of interest, apart from where time-varying emissions are explicitly modelled (see Section 2.4 above); and
- Steady state meteorology – no variations in wind speed, direction or turbulent profiles occur during transport from the source to the receptor. This assumption is reasonable within a few kilometres of a source but may not be valid for receptor distances in the order of tens of kilometres. For example, for a receptor 50 km from a source and with a wind speed of 5 m s^{-1} it will take nearly three hours for the plume to travel this distance, during which time many different processes may change (e.g., the sun may rise or set and clouds may form or dissipate, affecting the turbulent profiles). For this reason, Gaussian models are practically limited to predicting concentrations within ~20 km of a source.

Another area of uncertainty arises from using historical meteorological data to estimate future concentrations. The key limiting assumption here is that conditions in the future will be the same as in the past; however, in reality, no two years are the same. Defra's Technical Guidance LAQM.TG(16)[35] reviews a number of studies examining inter-annual variability of meteorological data and the effect on dispersion model output; it is suggested that variability in source contribution should be no more than 30% between any two years.

As a result of the above, and in combination with other factors, not least attempting to replicate stochastic processes (e.g., turbulence) by deterministic methods, dispersion modelling is inherently uncertain, but is nonetheless a useful tool in the prediction of ground level concentrations. The use of dispersion models has been widely applied in the UK for both regulatory and compliance purposes for a number of years and is an accepted approach for this type of assessment.

This assessment has incorporated a number of worst-case assumptions which should result in an over-estimation of the predicted ground level concentrations. Attempts to minimise uncertainty have been made by undertaking verification of the modelled roads output, assuming no reduction in background concentrations in future assessment years and uplifting the NOx emission factors in the EFT using the CURED tool. As a result of these worst-case assumptions, the predicted results should be considered the upper limit of model uncertainty for a scenario where the actual site impact is determined. In addition, the peak number of construction workers has been taken to be 9,000 and it is expected that the true number will be lower than this.

Given the above, the results provided by this assessment are considered to be robust.

[34] https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit
[35] https://laqm.defra.gov.uk/documents/LAQM-TG16-April-16-v1.pdf

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3. Modelling results

3.1 Tabulated results

Results tables providing the construction/marine plant process contribution (PC), predicted environmental concentration with construction/marine plant contribution only (PEC(C))[36] and PEC with total Wylfa Newydd Project contribution (PEC(T))[37] for each receptor and each scenario, including a numerical comparison against the relevant AQO, are presented in appendix D. These results are the highest concentrations predicted for individual receptors obtained from any year of meteorological data.

3.2 Concentration isopleths

Annual mean NO_2, PM_{10}/$PM_{2.5}$ and short-term NO_2 process contribution isopleths only are provided in Appendix E, as these are considered to be the pollutants/averaging time periods of greatest importance.

[36] PEC(C) = PC + baseline concentration without additional Wylfa Newydd Project operational traffic contribution
[37] PEC(T) = PC + baseline concentration with additional Wylfa Newydd Project operational traffic contribution

Appendix A
Construction model inputs and emission standards

Table A.1 summarises the plant data used. Here, the numbers of plant are presented as averages for brevity, but in the original data the number of plant units active in each month was supplied, and this more detailed month-by-month data was used in the emissions calculation.

Table A.1 Construction supplementary information

Vehicle ID	Description	Working hours	Breaks	% of shift under load	Engine size (kW)	Work areas	2019–2020 average plant	2023 average plant
EX75	Tracked Excavator:75t:352kW:Cat374FLME:5000lt bucket:Mass excavation	07:00-23:00	1.5 hours	80%	355	1,2,3,4,6	1.58	0.00
EX75	Tracked Excavator:75t:352kW:Cat374FLME:5000lt bucket:Mass excavation	07:00-23:00	1.5 hours	80%	355	1,2,3,4,6	1.50	0.00
BD442	Tractor:Track:442kW:Caterpillar D10T:Ripper	07:00-23:00	1.5 hours	80%	482	1,2,3,4,6	1.50	0.00
ADT40	Artic Dump Truck:39.5t:365kW:6x6:Caterpillar 740B	07:00-23:00	1.5 hours	80%	365	Haul 1, 2, 3, 4, 6 to E	4.00	0.00
ADT40	Artic Dump Truck:39.5t:365kW:6x6:Caterpillar 740B	07:00-23:00	1.5 hours	80%	365	Haul 6, 7, 9 to E	4.00	0.00
BD228	Tractor:Track:228kW:D8T	07:00-23:00	1.5 hours	80%	268	5, E	2.75	0.00
RO16	Roller:Steel/Rubber:16t:129kW:Caterpillar CS74B	07:00-23:00	1.5 hours	80%	130	5, E	2.42	0.00
CO32	Compactor:32t:Caterpillar 825G	07:00-23:00	1.5 hours	80%	254	5, E	2.08	0.00
BD123	Tractor:Track:123kW:Caterpillar D6T LGP	07:00-23:00	1.5 hours	80%	171	5, E	0.67	0.00
EX50	Tracked Excavator:50t:317kW:Cat349ELME:3500lt Bucket:Mass Excavation	07:00-23:00	1.5 hours	80%	295	1,2,3,4,6	1.33	0.00
RO16	Roller:Steel/Rubber:16t:129kW:Caterpillar CS74B	07:00-07:00 (24h)	3 hours	80%	130	Haul 1, 2, 3, 4, 6 to E	1.00	0.00
R32	Bowser:Water:Truck mounted:10,000lt:4x2	07:00-07:00 (24h)	3 hours	80%	160	Haul 1, 2, 3, 4, 6 to E	1.00	0.00
GD26	Grader:26t:222kW:Caterpillar 16M Artic	07:00-07:00 (24h)	3 hours	80%	243	Haul 1, 2, 3, 4, 6 to E	1.00	0.00

Vehicle ID	Description	Working hours	Breaks	% of shift under load	Engine size (kW)	Work areas	2019–2020 average plant	2023 average plant
RO16	Roller:Steel/Rubber:16t:129kW:Caterpillar CS74B	07:00-07:00 (24h)	3 hours	80%	130	Haul 6, 7, 9 to E	0.33	0.00
R32	Bowser:Water:Truck mounted:10,000lt:4x2	07:00-07:00 (24h)	3 hours	80%	160	Haul 6, 7, 9 to E	0.33	0.00
GD26	Grader:26t:222kW:Caterpillar 16M Artic	07:00-07:00 (24h)	3 hours	80%	243	Haul 6, 7, 9 to E	0.33	0.00
EX75	Tracked Excavator:75t:352kW:Cat374FLME:5000lt bucket:Mass excavation	07:00-23:00	1.5 hours	80%	355	6, 7, 8, 9	1.58	0.00
EX75	Tracked Excavator:75t:352kW:Cat374FLME:5000lt bucket:Mass excavation	07:00-23:00	1.5 hours	80%	355	6, 7, 8	0.75	0.00
BD442	Tractor:Track:442kW:Caterpillar D10T:Ripper	07:00-23:00	1.5 hours	80%	482	6, 7, 8	0.75	0.00
ADT40	Artic Dump Truck:39.5t:365kW:6x6:Caterpillar 740B	07:00-23:00	1.5 hours	80%	365	Haul 6, 7, 9 to B, C	8.83	0.00
ADT40	Artic Dump Truck:39.5t:365kW:6x6:Caterpillar 740B	07:00-23:00	1.5 hours	80%	365	Haul 6, 9 (and 4 etc) to A	17.58	0.00
BD228	Tractor:Track:228kW:D8T	07:00-23:00	1.5 hours	80%	268	A,C	2.33	0.00
RO16	Roller:Steel/Rubber:16t:129kW:Caterpillar CS74B	07:00-23:00	1.5 hours	80%	130	A,C	2.33	0.00
CO32	Compactor:32t:Caterpillar 825G	07:00-23:00	1.5 hours	80%	254	A,C	2.33	0.00
BD123	Tractor:Track:123kW:Caterpillar D6T LGP	07:00-23:00	1.5 hours	80%	171	A,C	1.00	0.00
EX50	Tracked Excavator:50t:317kW:Cat349ELME:3500lt Bucket:Mass Excavation	07:00-23:00	1.5 hours	80%	295	6, 7, 8, 9	0.67	0.00
RO16	Roller:Steel/Rubber:16t:129kW:Caterpillar CS74B	07:00-07:00 (24h)	3 hours	80%	130	Haul 6, 7, 8 to A, B, C	2.00	0.00
R32	Bowser:Water:Truck mounted:10,000lt:4x2	07:00-07:00 (24h)	3 hours	80%	160	Haul 6, 7, 8 to A, B, C	2.00	0.00
GD26	Grader:26t:222kW:Caterpillar 16M Artic	07:00-07:00 (24h)	3 hours	80%	243	Haul 6, 7, 8 to A, B, C	1.33	0.00
BD442	Tractor:Track:442kW:Caterpillar D10T:Ripper	07:00-07:00 (24h)	3 hours	80%	482	2, 4, 6	3.00	0.00

Vehicle ID	Description	Work-ing hours	Breaks	% of shift under load	Engine size (kW)	Work areas	2019–2020 average plant	2023 average plant
DR1100	Drill Rig:Quarry Drifter:CHA 1100	07:00-07:00 (24h)	3 hours	80%	224	4	14.00	0.00
R34	ANFO Mixer Truck:3t:4x4	07:00-07:00 (24h)	3 hours	80%	202	4	2.00	0.00
R24	Explosives Transport Truck:6t:4x4	07:00-07:00 (24h)	3 hours	80%	202	4	2.00	0.00
DR1100	Drill Rig	07:00-07:00 (24h)	3 hours	80%	224	4	21.00	0.00
R35	Concrete Pump:Truck: 34m Boom; Max output 90m3/hr plus	07:00-07:00 (24h)	3 hours	80%	231	4	1.00	0.00
R33	Truck Mixer: 8m3	07:00-07:00 (24h)	3 hours	80%	201	4	1.00	0.00
DR1100	Drill Rig	07:00-07:00 (24h)	3 hours	80%	224	4	9.00	0.00
C30	Crane:All Terrain: 30t	07:00-07:00 (24h)	3 hours	80%	275	4	2.00	0.00
EX75	Tracked Excavator:75t:352kW:Cat374FLME: 5000lt bucket:Mass excavation 3.8m3 bucket	07:00-07:00 (24h)	3 hours	80%	355	2, 4, 6	11.67	0.00
EX50	Tracked Excavator:50t:317kW:Cat349ELME: 3500lt Bucket:Mass excavation 3.2m3 bucket	07:00-07:00 (24h)	3 hours	80%	295	2, 4, 6	3.00	0.00
ADT40	Artic Dump Truck:39.5t:365kW:6x6:Caterpillar 740B 24m3 Hopper	07:00-23:00	1.5 hours	80%	365	Haul 8 to A	28.00	0.00
ADT40	Artic Dump Truck:39.5t:365kW:6x6:Caterpillar 740B 24m3 Hopper	07:00-23:00	1.5 hours	80%	365	Haul 8 to C	14.33	0.00
ADT40	Artic Dump Truck:39.5t:365kW:6x6:Caterpillar 740B 24m3 Hopper	23:00-07:00	1 hour	80%	365	Haul 4/8 to 2A and 2 (northern ramp)	5.67	0.00
ADT40	Artic Dump Truck:39.5t:365kW:6x6:Caterpillar 740B 24m3 Hopper	23:00-07:00	1 hour	80%	365	Haul 4/8 to 10 (southern ramp)	5.67	0.00
ADT40	Artic Dump Truck:39.5t:365kW:6x6:Caterpillar 740B 24m3 Hopper	23:00-07:00	1 hour	80%	365	Haul 4/8 to 6 (southern ramp)	11.00	0.00

Vehicle ID	Description	Work-ing hours	Breaks	% of shift under load	Engine size (kW)	Work areas	2019–2020 average plant	2023 average plant
BD442	Tractor:Track:442kW:Caterpillar D10T:Ripper	07:00-07:00 (24h)	3 hours	80%	482	8	3.00	0.00
GD26	Grader:26t:222kW:Caterpillar 16M Artic	07:00-23:00	1.5 hours	80%	243	9	2.00	0.00
RO16	Roller:Steel/Rubber:16t:129kW:Caterpillar CS74B	07:00-23:00	1.5 hours	80%	130	9	2.00	0.00
DR1100	Drill Rig:Quarry Drifter:CHA 1100	07:00-07:00 (24h)	3 hours	80%	224	8	13.00	0.00
R34	ANFO Mixer Truck:3t:4x4	07:00-07:00 (24h)	3 hours	80%	202	8	2.00	0.00
R24	Explosives Transport Truck:6t:4x4	07:00-07:00 (24h)	3 hours	80%	202	8	2.00	0.00
DR1100	Drill Rig	07:00-07:00 (24h)	3 hours	80%	224	8	20.00	0.00
R35	Concrete Pump:Truck: 34m Boom; Max output 90m3/hr plus	07:00-07:00 (24h)	3 hours	80%	231	8	1.00	0.00
R33	Truck Mixer: 8m3	07:00-07:00 (24h)	3 hours	80%	201	8	1.00	0.00
DR1100	Drill Rig	07:00-07:00 (24h)	3 hours	80%	224	8	8.67	0.00
EX75	Tracked Excavator:75t:352kW:Cat374FLME: 5000lt bucket:Mass excavation 3.8m3 bucket	07:00-07:00 (24h)	3 hours	80%	355	8	11.67	0.00
EX50	Tracked Excavator:50t:317kW:Cat349ELME: 3500lt Bucket:Mass excavation 3.2m3 bucket	07:00-07:00 (24h)	3 hours	80%	295	8	3.00	0.00
ADT40	Artic Dump Truck:39.5t:365kW:6x6:Caterpillar 740B 24m3 Hopper	07:00-23:00	1.5 hours	80%	365	Haul 8, 9 to A	28.33	0.00
ADT40	Artic Dump Truck:39.5t:365kW:6x6:Caterpillar 740B 24m3 Hopper	23:00-07:00	1 hour	80%	365	Haul 4/8 to 2A and 2 (northern ramp)	4.00	0.00
ADT40	Artic Dump Truck:39.5t:365kW:6x6:Caterpillar 740B 24m3 Hopper	23:00-07:00	1 hour	80%	365	Haul 4/8 to 10 (southern ramp)	4.00	0.00

Vehicle ID	Description	Working hours	Breaks	% of shift under load	Engine size (kW)	Work areas	2019–2020 average plant	2023 average plant
ADT40	Artic Dump Truck:39.5t:365kW:6x6:Caterpillar 740B 24m3 Hopper	23:00-07:00	1 hour	80%	365	Haul 4/8 to 6 (southern ramp)	7.67	0.00
CS400	Crusher and Screen:400t/hr:Mobile:Jaw:Powerscreen Premiertrac 400:Diesel	07:00-07:00 (24h)	3 hours	80%	300	2A	1.00	0.00
LD966K	Loader:Wheel:Caterpillar 966K:199kW:3300-4100lt bucket	07:00-07:00 (24h)	3 hours	80%	199	2A	2.00	0.00
ADT23	Artic Dump Truck:22.7t:6x6:725C	07:00-07:00 (24h)	3 hours	80%	239	2A	3.00	0.00
SG300	Screen:Simba Grid 300	07:00-07:00 (24h)	3 hours	80%	277	2A	2.00	0.00
LD980	Loader:Wheel:980K:Quarry spec.:5300-5700lt bucket	07:00-07:00 (24h)	3 hours	80%	274	2A	2.00	0.00
EX50	Tracked Excavator:50t:317kW:Cat349ELME:3500lt Bucket:Mass Excavation	07:00-07:00 (24h)	3 hours	80%	295	2A	2.00	0.00
ADT23	Artic Dump Truck:22.7t:6x6:725C	07:00-07:00 (24h)	3 hours	80%	239	2A	4.00	0.00
CS400	Crusher and Screen:400t/hr:Mobile:Jaw:Powerscreen Premiertrac 400:Diesel	07:00-07:00 (24h)	3 hours	80%	300	1	2.00	1.00
LD966K	Loader:Wheel:Caterpillar 966K:199kW:3300-4100lt bucket	07:00-07:00 (24h)	3 hours	80%	199	1	2.00	1.00
ADT23	Artic Dump Truck:22.7t:6x6:725C	07:00-07:00 (24h)	3 hours	80%	239	1	4.00	1.00
SG300	Screen:Simba Grid 300	07:00-07:00 (24h)	3 hours	80%	277	1	2.00	1.00
R32	Bowser:Fuel:Truck Mounted:12,000lt:4X2	07:00-07:00 (24h)	3 hours	80%	160	1-9, A-C	2.00	2.00
R32	Mobile Workshop/ Lubrication Truck:4x4:inc welder & compressor	07:00-07:00 (24h)	3 hours	80%	160	1-9, A-C	1.00	1.00
R21	Tyre Truck:4x4:5t Crane	07:00-07:00 (24h)	3 hours	80%	50	1-9, A-C	1.00	1.00
EX30	Tracked Excavator >30T (eg: Cat330D2)	07:00-23:00	1.5 hours	80%	157	1, 2, 3, 4, 6, 7, 8, 9	1.50	2.00

Vehicle ID	Description	Work-ing hours	Breaks	% of shift under load	Engine size (kW)	Work areas	2019–2020 average plant	2023 average plant
CPW	Cable Pulling Winch TW5000 (5 tonne)	07:00-23:00	1.5 hours	80%	19	1, 2, 3, 4, 6, 7, 8, 9	3.00	4.00
BL	Backhoe loader 3CX Super Sitemaster 68kW	07:00-23:00	1.5 hours	80%	68	1, 2, 3, 4, 6, 7, 8, 9	1.50	2.00
R35	Concrete Pump:Truck: 34m Boom; Max output 90m3/hr plus	07:00-23:00	1.5 hours	80%	231	1, 2, 3, 4, 6, 7, 8, 9	0.75	1.00
R33	Truck Mixer: 8m3	07:00-23:00	1.5 hours	80%	201	1, 2, 3, 4, 6, 7, 8, 9	0.75	1.00
DT820	1 x Twin mast drilling jumbo (Sandvik DT820 or similar)	07:00-07:00 (24h)	16 hours	100%	110	11, 1	2.00	0.00
MEWP	2 x Basket lifter (MEWP) (Normet Himec 1125B or similar)	07:00-07:00 (24h)	12 hours	100%	96	11	4.00	0.00
ITC312	1 x Tunnel Excavator/Loader per tunnel (Terex Shaeff ITC 312 or similar)	07:00-07:00 (24h)	20 hours	100%	165	11	2.00	0.00
ADT23	1 x Articulated dump truck per tunnel (e.g. Volvo / Hydrema / Bell / Paus or simlar) Assumed small 23t tunnel dumper	07:00-07:00 (24h)	20 hours	100%	239	11	2.00	0.00
SRMP	1 x Shotcrete robot per tunnel (e.g. Meyco Potenza / Normet or similar)	07:00-07:00 (24h)	20 hours	100%	74	11	2.00	0.00
CN35	4 x Concrete remixer trucks per tunnel (e.g. Carmix or similar)	07:00-07:00 (24h)	20 hours	100%	83	11	8.00	0.00
RH720	Sandvik Roadheader MT720	07:00-07:00 (24h)	3 hours	100%	555	11 - In tunnel but noise and emissions exhausted through tunnel entrance in Zone 11	2.00	0.00
EX30	Tracked Excavator >30T (eg: Cat330D2)	07:00-07:00 (24h)	3 hours	80%	157	11, 1	4.00	0.00
EX30	Tracked Excavator >30T (eg: Cat330D2)	07:00-23:00	1.5 hours	80%	157	11, 1	4.50	0.00

Vehicle ID	Description	Work-ing hours	Breaks	% of shift under load	Engine size (kW)	Work areas	2019–2020 average plant	2023 average plant
ADT30	Artic Dump Truck >30T (Assumed Cat 730C)	07:00-23:00	1.5 hours	50%	274	Haul from 11, 1 to rock processi ng (6) - assume max of 0.5 day working	3.00	0.00
BD442	Tractor:Track:442kW:Caterpillar D10T:Ripper	07:00-23:00	1.5 hours	80%	482	11, 1	1.25	0.00
P2	Diesel Generator (assumed 500kVa)	07:00-07:00 (24h)	0 hours	100%	433	11	1.67	0.00
LD950	Loader:Wheel:Caterpillar 950K:172kW:2500-3300lt bucket:	07:00-07:00 (24h)	3 hours	80%	172	11	2.00	0.00
CC150	Tracked Mobile Crawler Crane (eg:Manitowoc MLC165-1)	07:00-07:00 (24h)	3 hours	60%	242	11	1.00	0.00
LR35	Telescopic Leader Rig (Hydraulic vibratory hammer)(eg; ABI TM13/16SL on SR35)	07:00-07:00 (24h)	3 hours	60%	390	11	1.00	0.00
R61	Tractor (assumed Agri Tractor:7760:89kW)	07:00-07:00 (24h)	3 hours	60%	89	11	1.00	0.00
EX60	Rock wheel cutter, 60T excavator, on spud leg barge	07:00-07:00 (24h)	3 hours	60%	433	11	0.83	0.00
P2A	Generator (1MVA)	07:00-07:00 (24h)	0 hours	100%	866	11	1.00	0.00
R33	Truck Mixer: 8m3	07:00-07:00 (24h)	3 hours	80%	201	11	3.00	0.00
EX110	110 tonne long reach excavator (eg;Leibherr 9100 110T Excavator)	07:00-07:00 (24h)	3 hours	60%	565	2, 10	0.83	0.00
BMD	Backhoe dredger (Eg; NordicGiant or Liebherr P955)	07:00-07:00 (24h)	3 hours	60%	1,600	2, 10	0.83	0.00
P5	Jack Up Barge 1 (Deckmounted 100kVa generator)	07:00-07:00 (24h)	3 hours	60%	103	2, 10	0.50	0.00
P5	Jack Up Barge 2 (Deckmounted 100kVa generator)	07:00-07:00 (24h)	3 hours	60%	103	2, 10	0.25	0.00
EX75	70 tonne Excavator (eg; Cat 374)	07:00-07:00 (24h)	3 hours	60%	355	2, 10	3.33	0.00

Vehicle ID	Description	Work-ing hours	Breaks	% of shift under load	Engine size (kW)	Work areas	2019–2020 average plant	2023 average plant
ADT40	40 Tonne ADT	07:00-07:00 (24h)	3 hours	60%	365	2, 10	12.17	0.00
RD01	BG 42 Rotary Drill	07:00-07:00 (24h)	3 hours	60%	570	2, 10	0.33	0.00
P5	Jack Up Barge 3 ((Deckmounted 100kVa generator)	07:00-07:00 (24h)	3 hours	60%	103	2, 10	0.33	0.00
EX45	45 Tonne Excavator (eg: Cat 345	07:00-07:00 (24h)	3 hours	60%	295	2, 10	1.83	0.00
EX60	60 Tonne Excavator (eg: Cat365)	07:00-07:00 (24h)	3 hours	60%	433	2, 10	1.83	0.00
CC251	250 Tonne Crawler Crane (eg: Kobelco CKE 2500: 247kW) 24hr	07:00-07:00 (24h)	3 hours	50%	247	2, 10	1.67	0.00
CC251	250 Tonne Crawler Crane (eg: Kobelco CKE 2500: 247kW) 10hr	07:00-07:00 (24h)	3 hours	50%	247	2, 10	1.67	0.00
CC150	150 Tonne Crawler Crane (eg:Manitowoc MLC165-1)	07:00-07:00 (24h)	3 hours	60%	242	2, 10	2.00	0.00
CC90	90 tonne crawler crane	07:00-07:00 (24h)	3 hours	60%	247	2, 10	1.42	0.00
CC300	300 Tonne Crawler Crane (eg: Leibherr LR1300)	07:00-07:00 (24h)	3 hours	60%	336	2, 10	0.83	0.00
DR1100	Drill and blast rig 1	07:00-07:00 (24h)	3 hours	60%	224	2, 10	3.58	0.00
EX35	35 Tonne Excavator (eg: Cat335)	07:00-07:00 (24h)	3 hours	60%	225	2, 10	3.92	0.00
ADT30	30 Tonne DT	07:00-07:00 (24h)	3 hours	60%	274	2, 10	2.33	0.00
N/A	Large impact Breaker (Excavator Attachement)	07:00-07:00 (24h)	3 hours	60%	-	2, 10	1.58	0.00
EX60	60 tonne excavator	07:00-07:00 (24h)	3 hours	60%	433	2, 10	0.42	0.00
CC70	70 tonne Crawler Crane	07:00-07:00 (24h)	3 hours	60%	213	2, 10	0.42	0.00

Vehicle ID	Description	Work-ing hours	Breaks	% of shift under load	Engine size (kW)	Work areas	2019–2020 average plant	2023 average plant
LR35	Leader rig inc opp (eg; ABI TM13/16SL on SR35)	07:00-07:00 (24h)	3 hours	60%	390	2, 10	0.08	0.00
DR1100	Drilling Rig (eg; CHA 1100)	07:00-07:00 (24h)	3 hours	60%	224	2, 10	0.08	0.00
M01	Tug Holyhead Towing - 24 hour working but only on site for 6 hours out of 72 for each barge	07:00-07:00 (24h)	3 hours	60%	4,200	2, 10	2.50	0.00
VS500	Vibratory Screen (eg; CMB BX500B)	07:00-07:00 (24h)	3 hours	60%	103	2, 10	0.67	0.00
LD938	Loader: Wheeled:Cat938M 2.5-5m3 bucket	07:00-07:00 (24h)	3 hours	60%	172	2, 10	0.67	0.00
RIB	Safety Boat (assumed to be Standard 6m Rigid Inflatable Boat ~110hp 80kW)	07:00-07:00 (24h)	3 hours	10%	80	2, 10	0.67	0.00
M12	Multicat MTS Vector: 2x 600hp CAT C18 engine	07:00-07:00 (24h)	3 hours	30%	900	2, 10	1.33	0.00
M02	Split Hopper Barge (eg; Jan de Nul Arent class 2x1850kW)	07:00-07:00 (24h)	3 hours	60%	1,850	2, 10	2.83	0.00
P4	MEWP	07:00-07:00 (24h)	3 hours	30%	35	2, 10	1.25	0.00
R35	Mobile Concrete Pump 25m3 - Boom Truck Pump for Anti-Collision Barrier and Top of MOLF	07:00-07:00 (24h)	3 hours	30%	231	2, 10	0.67	0.00
N/A	Dawson Pile Hammer (Operated from Crane)	07:00-19:00	1 hour	10%	-	2, 10	0.08	0.00
R61	Tractor and Trailer (Assumed tractor andtrailerfordust mitigation spraying)	07:00-07:00 (24h)	3 hours	60%	89	2, 10	2.00	0.00
P5	Jackup Split barge / barge	07:00-07:00 (24h)	3 hours	60%	103	2, 10	4.25	0.00
BMD	Backhoe dredger (Eg; NordicGiant or Liebherr P955)	07:00-07:00 (24h)	3 hours	60%	1,600	2, 10	1.00	0.00
P1	Diesel Generators 50kVa for Lighting (Diesel worst case, could be mains powered or Hydrogen Fuel Cell if required)	07:00-07:00 (24h)	0 hours	100%	46	2, 10	4.00	0.00
CSD	Cutter Suction Dredger	07:00-07:00 (24h)	0 hours	100%	24,702	2, 10	0.08	0.00

Vehicle ID	Description	Working hours	Breaks	% of shift under load	Engine size (kW)	Work areas	2019–2020 average plant	2023 average plant
EX75	70 tonne Excavator (eg; Cat 374)	07:00-19:00	1 hour	60%	355	2, 10	1.50	1.00
ADT40	40 Tonne ADT	07:00-19:00	1 hour	60%	365	2, 10	3.00	2.00
EX45	45 Tonne Excavator (eg: Cat 345	07:00-19:00	1 hour	60%	295	2, 10	0.75	0.50
EX35	35 Tonne Excavator (eg: Cat335)	07:00-19:00	1 hour	60%	225	2, 10	1.50	1.00
ADT30	30 Tonne DT	07:00-19:00	1 hour	60%	274	2, 10	1.50	1.00
LD938	Loader: Wheeled:Cat938M 2.5-5m3 bucket	07:00-19:00	1 hour	60%	172	2, 10	0.75	0.50
RIB	Safety Boat (assumed to be Standard 6m Rigid Inflatable Boat ~110hp 80kW)	07:00-19:00	1 hour	10%	80	2, 10	0.75	0.50
R61	Tractor and Trailer (Assumed tractor andtrailerfordust mitigation spraying)	07:00-19:00	1 hour	60%	89	2, 10	1.50	1.00
P1	Diesel Generators 50kVa for Lighting (Diesel worst case, could be mains powered or Hydrogen Fuel Cell if required)	07:00-19:00	0 hours	100%	46	2, 10	3.00	2.00
P2A	Generator (1MWe) to power 40m3 batching plant and then standby for full batching plant	07:00-07:00 (24h)	0 hours	100%	866	2A	0.25	0.00
LD966G	Loader:Wheel:966G:(3300-4100lt)	07:00-07:00 (24h)	3 hours	80%	160	2A	0.25	1.00
R33	Truck Mixer: 8m3	07:00-07:00 (24h)	3 hours	80%	201	4, 6, 8	0.50	4.00
R33	Truck Mixer: 8m3	07:00-07:00 (24h)	3 hours	80%	201	2-9	0.50	3.00
R35	Concrete Pump:Truck: 34m Boom; Max output 90m3/hr plus	07:00-07:00 (24h)	3 hours	80%	231	4, 6, 8	0.25	2.00
P1	Compressor:180cfm(5m3/m):Diesel	07:00-07:00 (24h)	3 hours	80%	46	4, 6, 8	0.50	3.00
R30	Tractor Unit:56t GCW:Tows Low loader with 30t capacity	07:00-07:00 (24h)	3 hours	80%	89	4, 6, 8, 9, 10	0.33	4.00
CC100	Crane:Crawler:100t:Manitowoc MTW12000:Lattice boom	07:00-07:00 (24h)	3 hours	80%	247	4	0.50	2.08
CC100	Crane:Crawler:100t:Manitowoc MTW12000:Lattice boom	07:00-07:00 (24h)	3 hours	80%	247	4	0.25	1.08

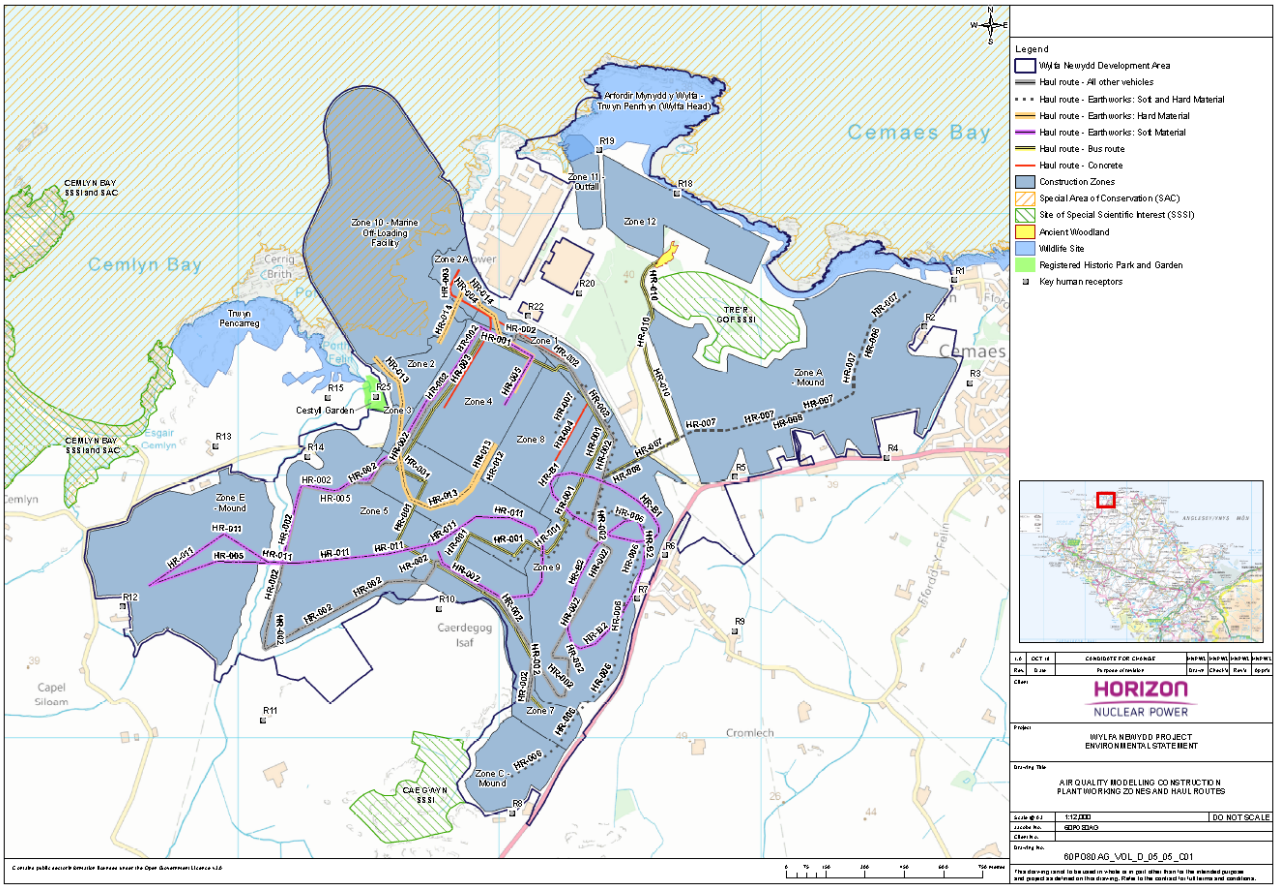
Vehicle ID	Description	Working hours	Breaks	% of shift under load	Engine size (kW)	Work areas	2019–2020 average plant	2023 average plant
C90	Crane: Rough Terrain:90t:Grove RT9130E-2	07:00-07:00 (24h)	3 hours	80%	239	4	0.50	1.00
C30	Crane: All Terrain: 30t	07:00-07:00 (24h)	3 hours	80%	275	4	1.83	4.00
CC100	Crane:Crawler:100t:Manitowoc MTW12000:Lattice boom	07:00-07:00 (24h)	3 hours	80%	247	8	0.00	3.00
CC100	Crane:Crawler:100t:Manitowoc MTW12000:Lattice boom	07:00-07:00 (24h)	3 hours	80%	247	8	0.00	2.00
CC100	Crane:Crawler:100t:Manitowoc MTW12000:Lattice boom	07:00-07:00 (24h)	3 hours	80%	247	8	0.00	2.00
C90	Crane: Rough Terrain:90t:Grove RT9130E-2	07:00-07:00 (24h)	3 hours	80%	239	8	0.00	8.00
C30	Crane: All Terrain: 30t	07:00-07:00 (24h)	3 hours	80%	275	8	0.00	8.00
P4	Access Platform:20m:Telescopic:RT:Genie model S65	07:00-07:00 (24h)	3 hours	80%	35	4, 8	0.25	2.00
P4	Access Platform:13m:Scissor:Slab:680kg - Genie model 4390 RT 2WD	07:00-07:00 (24h)	3 hours	80%	35	4, 8	0.25	2.00
R50	Workman's Bus:60 Seat	07:00-23:00	1.5 hours	50%	210	From N security plaze to Site Campus	7.25	10.00
R50	Workman's Bus:60 Seat	07:00-07:00 (24h)	3 hours	50%	210	Haul / site roads	8.00	24.00
R23	Pick Up:4x2:Diesel:2415GVW:1090kg Payload:Toyota	07:00-07:00 (24h)	3 hours	50%	132	Haul / site roads	3.67	12.00
R22	Van:Diesel:1.9t GVW:675kg Payload:Escort	07:00-07:00 (24h)	3 hours	50%	80	Haul / site roads	3.67	12.00
R50	Workman's Bus:60 Seat	23:00-07:00	1 hour	50%	210	Haul / site roads	1.00	3.50
FL3	Forklift:Rough Terrain: 3.0t:JCB930 - 4	07:00-07:00 (24h)	3 hours	50%	55	Haul / site roads	1.00	22.00
TH4C	Telehandler:4t:17m Up:12m Out:Rough Terrain:Caterpillar TH417C AC	07:00-07:00 (24h)	3 hours	50%	75	Haul / site roads	1.00	22.00

Vehicle ID	Description	Work-ing hours	Breaks	% of shift under load	Engine size (kW)	Work areas	2019–2020 average plant	2023 average plant
R61	Agri Tractor:7760:89kW	07:00-07:00 (24h)	3 hours	50%	89	Haul / site roads	1.00	8.00
R31	Flat Truck:30,000kg:18tm Crane:4x4:	07:00-07:00 (24h)	3 hours	50%	50	Haul / site roads	1.00	22.00
R32	Bowser:Water:Truck mounted:10,000lt:4x2	07:00-07:00 (24h)	3 hours	50%	160	Haul / site roads	2.00	2.00
R32	Road Sweeper:Truck Mounted:Vacuum	07:00-07:00 (24h)	3 hours	50%	160	Haul / site roads	2.00	4.00
CC300	300 Tonne Crawler Crane (eg: Leibherr LR1300)	07:00-19:00	1 hour	80%	336	12	1.00	0.00
EX35	3x 35 Tonne Excavator (eg: Cat335)	07:00-19:00	1 hour	80%	225	12	2.25	0.25
CO32	compactor:32t:Caterpillar 825G	07:00-19:00	1 hour	80%	254	12	1.50	0.00
GD26	Grader:26t:222kW:Caterpillar 16M Artic	07:00-19:00	1 hour	80%	243	12	1.50	0.25
P1	2x Compressor, Diesel	07:00-19:00	1 hour	80%	46	12	2.00	0.50
R35	2x Concrete Pump:Truck: 34m Boom; Max output 90m3/hr plus	07:00-19:00	1 hour	80%	231	12	1.75	0.00
C30	Crane: All Terrain, 30T	07:00-19:00	1 hour	80%	275	12	0.75	0.00
C50	Crane: All Terrain, 50T	07:00-19:00	1 hour	80%	280	12	0.58	0.08
ADT23	4 x Articulated dump trucks (e.g. Volvo / Hydrema / Bell / Paus or simlar)	07:00-19:00	1 hour	80%	239	12	4.00	0.17
R32	Road Sweeper:Truck Mounted:Vacuum	07:00-19:00	1 hour	80%	160	12	1.00	0.25
R22	2x Van:Diesel: Payload:Escort	07:00-19:00	1 hour	80%	80	12	2.00	0.50
TH3	2x Telehandler:3t:Rough Terrain:Merlo ROTO 38.16K:Tunnel Rib Handler:Access Basket	07:00-19:00	1 hour	80%	75	12	1.00	0.50
R31	4x Flat Truck:30,000kg:18tm Crane:4x4:	07:00-19:00	1 hour	80%	50	12	2.25	0.67
P2	3x Generator 500 kVA	07:00-19:00	1 hour	80%	433	12	2.75	0.50
R33	6x Truck Mixer	07:00-19:00	1 hour	80%	201	12	5.00	1.00
R32	Bowser:Water:Truck mounted:10,000lt:4x2	07:00-19:00	1 hour	80%	160	12	1.00	0.33

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Construction work areas and haul routes, which were used as the basis of the simplified areas and routes used for the dispersion modelling, are shown in Figure A1, which is reproduced from Figure D5-2 in Appendix D-A of the ES Addendum document [as submitted at Deadline 8 (25 March)].

Figure A1 Construction Work Areas



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Appendix B
Meteorological data wind roses

Figure B1 2007 wind rose

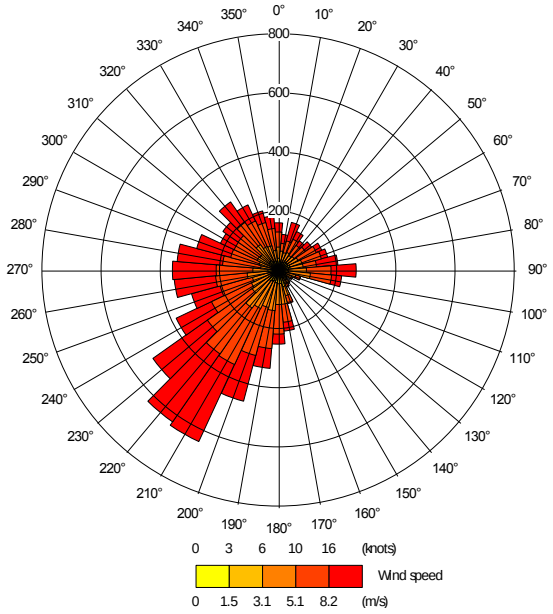


Figure B2 2008 wind rose

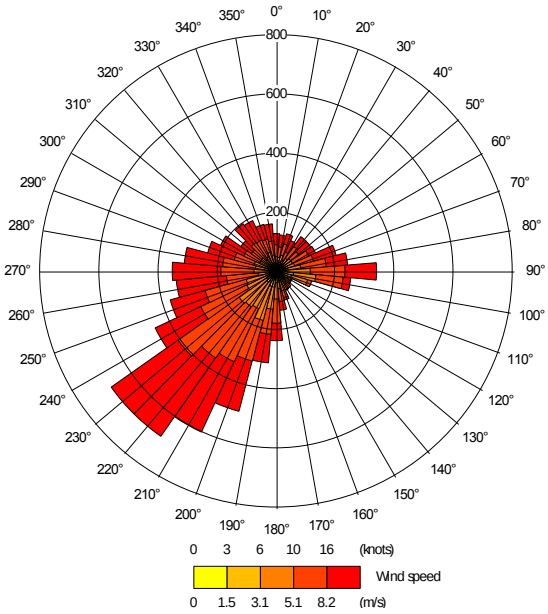


Figure B3 2009 wind rose

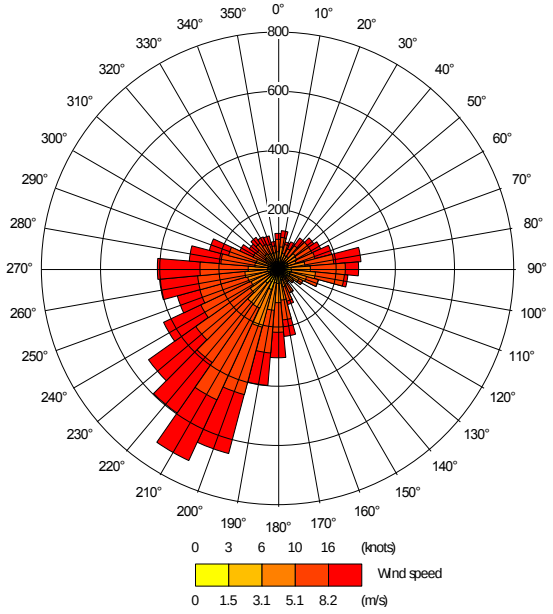
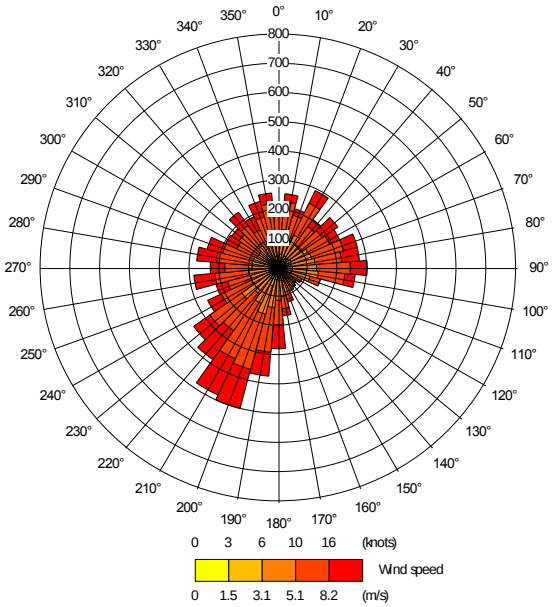


Figure B4 2010 wind rose



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Figure B5 2011 wind rose

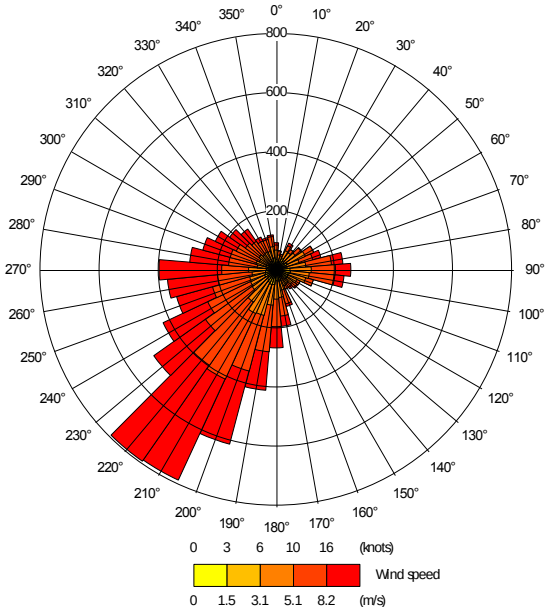


Figure B6 2012 wind rose

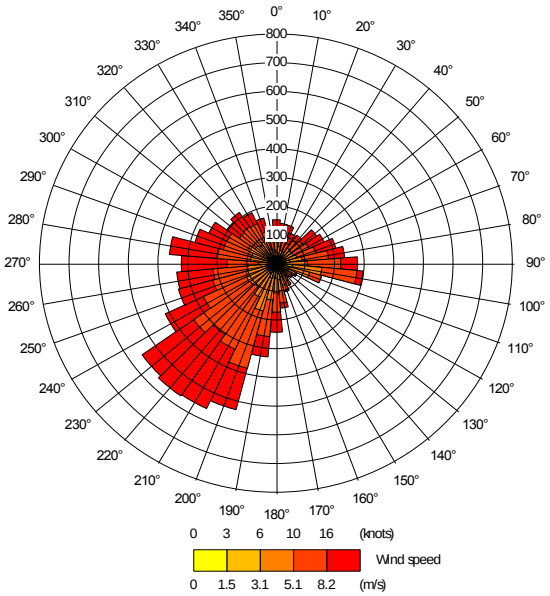


Figure B7 2013 wind rose

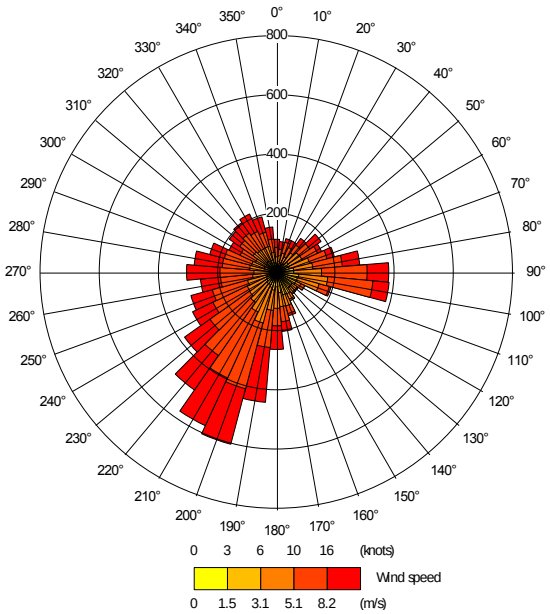
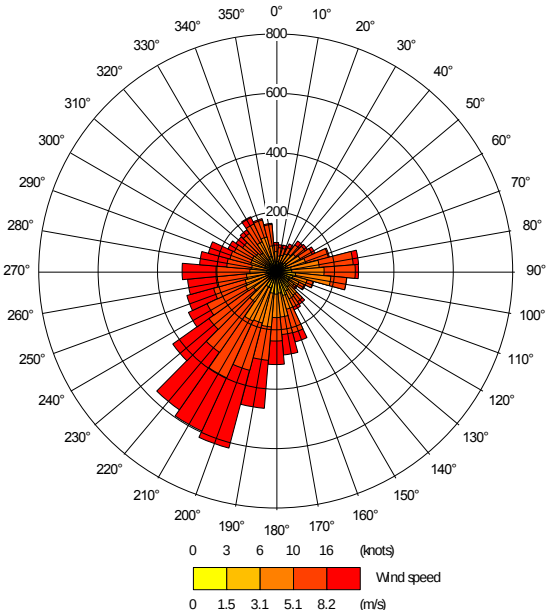


Figure B8 2014 wind rose



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Figure B9 2015 wind rose

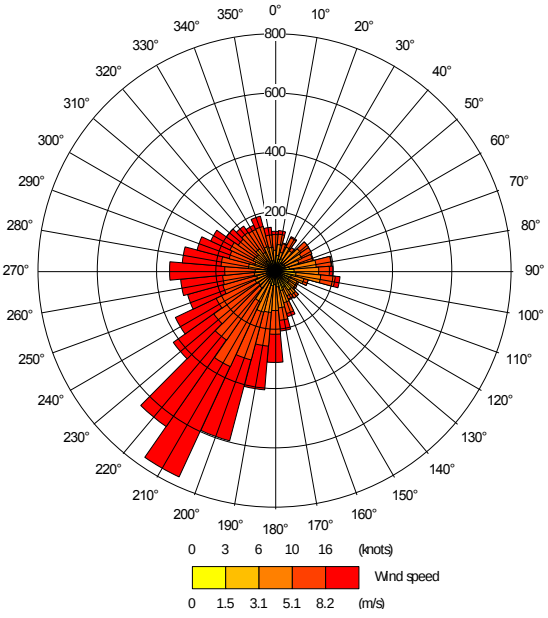
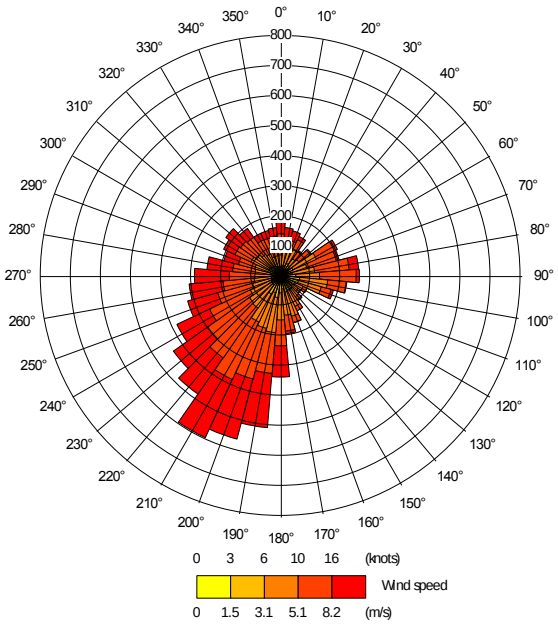


Figure B10 2016 wind rose



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Appendix C
Human and ecological receptor locations

Details of the human and ecological receptor locations are given in the attached spreadsheet (double-click on paperclip icon to open).



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Appendix D
Model results

Full model results are given in the attached spreadsheets (double-click on paperclip icon to open).



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Appendix E
Concentration isopleths

N

LEGEND

Wylfa Newydd Development Area

Annual Mean Process Contribution for NO_2 ($\mu g/m^3$)

- 0.4
- 1
- 5
- 10

Construction Plant (2019-20, 90% Stage IV) Annual Mean NO_2 Process Contribution



Scale: 1:15,000

When printed at A3

0 150 300 450

M

HORIZON NUCLEAR POWER

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N

LEGEND

Wylfa Newydd Development Area

Hourly Mean Process Contribution for NO_2 ($\mu g/m^3$)

- 20
- 50
- 100
- 150
- 200

Construction plant (2019-20, 90% Stage IV) 99.79th percentile 1-hour mean NO_2 process



Scale: 1:12,500

When printed at A3

0 150 300 450 M

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N

LEGEND

Wylfa Newydd Development Area

Annual Mean Process Contribution for PM_{10} / $PM_{2.5}$ ($\mu g/m^3$)

- 0.4
- 1
- 5
- 10

Construction Plant (2019-20, Stage IV) Annual Mean PM_{10} and $PM_{2.5}$ Process Contribution



Scale: 1:12,500

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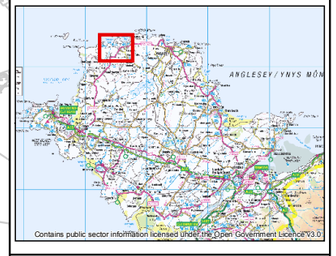
LEGEND

Wylfa Newydd Development Area

Annual Mean Process Contribution for NO_2 ($\mu g/m^3$)

- 0.4
- 1
- 5
- 10

Construction Plant (2023, 90% Stage IV) Annual Mean NO_2 Process Contribution



Scale: 1:15,000

When printed at A3

0 150 300 450 M

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N

LEGEND

Wylfa Newydd Development Area

Hourly Mean Process Contribution for NO_2 ($\mu g/m^3$)

- 20
- 50
- 100
- 150
- 200

Construction plant (2023, 90% Stage IV) 99.79th percentile 1-hour mean NO_2 process



Scale: 1:12,500

When printed at A3

0 150 300 450 M

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N

LEGEND

Wylfa Newydd Development Area

Annual Mean Process Contribution for PM_{10} / $PM_{2.5}$ ($\mu g/m^3$)

0.4

1

5

10

Construction Plant (2023, Stage IV) Annual Mean PM_{10} and $PM_{2.5}$ Process Contribution



Scale: 1:12,500

When printed at A3

0 150 300 450 M

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WYLFA NEWYDD

ENERGY WORKING FOR BRITAIN

Wylfa Newydd Project

Environmental Statement Addendum
Appendix D6-1-A
Noise Modelling Inputs and Results

PINS Reference Number: EN010007

25 March 2019

Revision 2.0
Examination Deadline 8

Regulation Number: 5(2)(a)

Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Horizon Internal DCRM Number: WN0902-HZDCO-PAC-REP-00308

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Contents

1 Construction Noise Model Inputs 3
1.1 Plant list and activity sound power levels used in noise assessment..... 3

List of Tables

Table A1-1 Plant list and modelling input data 3

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1 Construction Noise Model Inputs

1.1 Plant list and activity sound power levels used in noise assessment

1.1.1 Table A1-1 below lists the plant and equipment on which the revised construction noise modelling detailed in the Environmental Statement Addendum noise assessment is based. The plant list and noise data presented in Table A1-1 are extracts from “Construction Plant Schedule for Noise and Air Quality Modelling Rev 8 - SINE 20181031.xlsx” provided by Horizon.

Table A1-1 Plant list and modelling input data

Plant description	Percentage of plant number working (%)			Percentage (%) of shift working	Plant Working Hours	BS5228 Annex C Reference	Noise level dB L_{Aeq} @10m	Working in Construction Zone / Haul Route	Number of plant working in months					
	07:00 - 19:00	19:00 - 23:00	23:00 - 07:00						7-9	10-12	19-21	31-33	58-60	100-102
Site Grading and Power Block Excavation														
Unit 1, Site Access and Civil Contractor Compound Site Grading														
Tracked Excavator: 75t: 352kW: Cat374FLME: 5000lt bucket: Mass excavation	100	50	0	80	07:00-23:00	C2.2	77	4,6	4	4				
Tracked Excavator: 75t: 352kW: Cat374FLME: 5000lt bucket: Mass excavation	100	50	0	80	07:00-23:00	C2.2	77	4,6	2	2				
Tractor: Track: 442kW: Caterpillar D10T: Ripper	100	50	0	80	07:00-23:00	C6.28	89	4,6	2	2				
Articulated Dump Truck: 39.5t: 365kW: 6x6: Caterpillar 740B	100	50	0	80	07:00-23:00	C6.26	79	HR-005	12	12				
Articulated Dump Truck: 39.5t: 365kW: 6x6: Caterpillar 740B	100	50	0	80	07:00-23:00	C6.26	79	HR-011	12	12				
Tractor: Track: 228kW: D8T	100	50	0	80	07:00-23:00	C6.30	86	5	2	2				
Tractor: Track: 228kW: D8T	100	50	0	80	07:00-23:00	C6.30	86	E	3	3				
Roller: Steel/Rubber: 16t: 129kW: Caterpillar CS74B	100	50	0	80	07:00-23:00	C5.21	80	5	1	1				
Roller: Steel/Rubber: 16t: 129kW: Caterpillar CS74B	100	50	0	80	07:00-23:00	C5.21	80	E	3	3				
Compactor: 32t: Caterpillar 825G	100	50	0	80	07:00-23:00	C2.39	80	5	1	1				
Compactor: 32t: Caterpillar 825G	100	50	0	80	07:00-23:00	C2.39	80	E	3	3				
Tractor: Track: 123kW: Caterpillar D6T LGP	100	50	0	80	07:00-23:00	C5.15	83	5	1					
Tractor: Track: 123kW: Caterpillar D6T LGP	100	50	0	80	07:00-23:00	C5.15	83	E	2	3				
Tracked Excavator: 50t: 317kW: Cat349ELME: 3500lt Bucket: Mass Excavation	100	50	0	80	07:00-23:00	C2.3	78	1,2,3	1	1				
Tracked Excavator: 50t: 317kW: Cat349ELME: 3500lt Bucket: Mass Excavation	100	50	0	80	07:00-23:00	C2.3	78	4,6	1	1				
Breaker: For 42-75t Excavator:	100	50	0	80	07:00-23:00	N/A	89	1,2,3	1	1				
Breaker: For 42-75t Excavator:	100	50	0	80	07:00-23:00	N/A	89	4,6	1	1				
Roller: Steel/Rubber: 16t: 129kW: Caterpillar CS74B	100	100	100	80	24h	C5.24	84	HR-005	1	1				

Plant description	Percentage of plant number working (%)			Percentage (%) of shift working	Plant Working Hours	BS5228 Annex C Reference	Noise level dB L_{Aeq} @10m	Working in Construction Zone / Haul Route	Number of plant working in months					
	07:00 - 19:00	19:00 - 23:00	23:00 - 07:00						7-9	10-12	19-21	31-33	58-60	100-102
Bowser: Water: Truck mounted: 10,000lt: 4x2	100	100	100	80	24h	C11.4	83	HR-005	1	1				
Grader: 26t: 222kW: Caterpillar 16M Articulated	100	100	100	80	24h	C6.31	86	HR-005	1	1				
Roller: Steel/Rubber: 16t: 129kW: Caterpillar CS74B	100	100	100	80	24h	C5.24	84	HR-011	1	1				
Bowser: Water: Truck mounted: 10,000lt: 4x2	100	100	100	80	24h	C11.4	83	HR-011	1	1				
Grader: 26t: 222kW: Caterpillar 16M Articulated	100	100	100	80	24h	C6.31	86	HR-011	1	1				
Unit 2 and MEH Contractor Compound Site Grading														
Tracked Excavator: 75t: 352kW: Cat374FLME: 5000lt bucket: Mass excavation	100	50	0	80	07:00-23:00	C2.2	77	9	4	4				
Tracked Excavator: 75t: 352kW: Cat374FLME: 5000lt bucket: Mass excavation	100	50	0	80	07:00-23:00	C2.2	77	6, 7, 8	2	2				
Tracked Excavator: 75t: 352kW: Cat374FLME: 5000lt bucket: Mass excavation	100	50	0	80	07:00-23:00	C2.2	77	9	2	2				
Articulated Dump Truck: 39.5t: 365kW: 6x6: Caterpillar 740B	100	50	0	80	07:00-23:00	C6.26	79	HR-B1	8	8				
Articulated Dump Truck: 39.5t: 365kW: 6x6: Caterpillar 740B	100	50	0	80	07:00-23:00	C6.26	79	HR-B2	8	8				
Tractor: Track: 228kW: D8T	100	50	0	80	07:00-23:00	C6.30	86	B	2	2				
Tractor: Track: 228kW: D8T	100	50	0	80	07:00-23:00	C6.30	86	B	2	2				
Roller: Steel/Rubber: 16t: 129kW: Caterpillar CS74B	100	50	0	80	07:00-23:00	C5.21	80	B	2	2				
Roller: Steel/Rubber: 16t: 129kW: Caterpillar CS74B	100	50	0	80	07:00-23:00	C5.21	80	B	2	2				
Compactor: 32t: Caterpillar 825G	100	50	0	80	07:00-23:00	C2.39	80	B	2	2				
Compactor: 32t: Caterpillar 825G	100	50	0	80	07:00-23:00	C2.39	80	B	2	2				
Roller: Steel/Rubber: 16t: 129kW: Caterpillar CS74B	100	100	100	80	24h	C5.24	84	HR-B1	1	1				
Roller: Steel/Rubber: 16t: 129kW: Caterpillar CS74B	100	100	100	80	24h	C5.24	84	HR-B2	1	1				
Bowser: Water: Truck mounted: 10,000lt: 4x2	100	100	100	80	24h	C11.4	83	HR-B1	1	1				
Bowser: Water: Truck mounted: 10,000lt: 4x2	100	100	100	80	24h	C11.4	83	HR-B2	1	1				
Grader: 26t: 222kW: Caterpillar 16M Articulated	100	100	100	80	24h	C6.31	86	HR-B1	1	1				
Grader: 26t: 222kW: Caterpillar 16M Articulated	100	100	100	80	24h	C6.31	86	HR-B2	1	1				
Unit 1 Rock Excavation														
Tractor: Track: 442kW: Caterpillar D10T: Ripper	100	50	50	80	24h	C6.28	85	4		2	2			

Plant description	Percentage of plant number working (%)			Percentage (%) of shift working	Plant Working Hours	BS5228 Annex C Reference	Noise level dB L_{Aeq} @10m	Working in Construction Zone / Haul Route	Number of plant working in months					
	07:00 - 19:00	19:00 - 23:00	23:00 - 07:00						7-9	10-12	19-21	31-33	58-60	100-102
Tractor: Track: 442kW: Caterpillar D10T: Ripper	100	50	50	80	24h	C6.28	85	2, 6		1	1			
Drill Rig: Quarry Drifter: CHA 1100	100	100	100	80	24h	C9.1	90	4		8	8			
ANFO Mixer Truck: 3t: 4x4	100	100	100	80	24h	C11.20	83	4		1	1			
Explosives Transport Truck: 6t: 4x4	100	100	100	80	24h	C11.19	83	4		1	1			
Drill Rig	100	50	50	80	24h	C9.1	90	4		21	21			
Concrete Pump: Truck: 34m Boom; Max output 90m3/hr plus	100	100	100	80	24h	C4.32	78	4		1	1			
Truck Mixer: 8m3	100	100	100	80	24h	C4.27	79	4		1	1			
Drill Rig	100	50	50	80	24h	C9.1	90	4		9	9			
Crane: All Terrain: 30t	100	100	100	80	24h	C3.29	70	4		2	2			
Unit 1 Rock Excavation - 100 T gross laden weight (55T payload) Dumper Truck Option														
Articulated Dump Truck: 39.5t: 365kW: 6x6: Caterpillar 740B 24m3 Hopper	100	0	0	80	07:00-19:00	C6.17	85	HR-007	17	20	20			
Articulated Dump Truck: 39.5t: 365kW: 6x6: Caterpillar 740B 24m3 Hopper	100	0	0	80	07:00-19:00	C6.17	85	HR-006	9	10	10			
Articulated Dump Truck: 39.5t: 365kW: 6x6: Caterpillar 740B 24m3 Hopper	0	0	100	80	23:00-07:00	C6.17	85	HR-014	2	2	6			
Articulated Dump Truck: 39.5t: 365kW: 6x6: Caterpillar 740B 24m3 Hopper	0	0	100	80	23:00-07:00	C6.17	85	HR-013	2	2	6			
Articulated Dump Truck: 39.5t: 365kW: 6x6: Caterpillar 740B 24m3 Hopper	0	0	100	80	23:00-07:00	C6.17	85	HR-012	3	4	12			
Articulated Dump Truck: 55t: 470kW: 6x6: Volvo A60H	100	0	0	80	07:00-19:00	C6.15	90	HR-007	8	8	8			
Articulated Dump Truck: 55t: 470kW: 6x6: Volvo A60H	100	0	0	80	07:00-19:00	C6.15	90	HR-006	4	4	4			
Articulated Dump Truck: 55t: 470kW: 6x6: Volvo A60H	0	0	100	80	23:00-07:00	C6.15	90	HR-014	2	2	2			
Articulated Dump Truck: 55t: 470kW: 6x6: Volvo A60H	0	0	100	80	23:00-07:00	C6.15	90	HR-013	2	2	2			
Articulated Dump Truck: 55t: 470kW: 6x6: Volvo A60H	0	0	100	80	23:00-07:00	C6.15	90	HR-012	3	3	3			
Excavator: EX1900-6 190t 810kW (1086hp) (12m3 bucket/11m3 shovel)	100	50	50	80	24h	C6.3	86	4	7	10	10			
Excavator: EX2500 (Specs for EX2600 260t 1119kW) (17m3 bucket/15m3 shovel)	100	50	50	80	24h	C6.2	89	4	3	3	3			
Unit 2 Rock Excavation														
Tractor: Track: 442kW: Caterpillar D10T: Ripper	100	50	50	80	24h	C6.28	85	8		2	2			

Plant description	Percentage of plant number working (%)			Percentage (%) of shift working	Plant Working Hours	BS5228 Annex C Reference	Noise level dB L_{Aeq} @10m	Working in Construction Zone / Haul Route	Number of plant working in months					
	07:00 - 19:00	19:00 - 23:00	23:00 - 07:00						7-9	10-12	19-21	31-33	58-60	100-102
Grader: 26t: 222kW: Caterpillar 16M Articulated	100	50	0	80	07:00-23:00	C6.31	86	9		8	8			
Roller: Steel/Rubber: 16t: 129kW: Caterpillar CS74B	100	50	0	80	07:00-23:00	C5.24	84	9		1	1			
Drill Rig: Quarry Drifter: CHA 1100	100	100	100	80	24h	C9.1	90	8		1	1			
ANFO Mixer Truck: 3t: 4x4	100	100	100	80	24h	C11.20	83	8		21	21			
Explosives Transport Truck: 6t: 4x4	100	100	100	80	24h	C11.19	83	8		1	1			
Drill Rig	100	50	50	80	24h	C9.1	90	8		1	1			
Concrete Pump: Truck: 34m Boom; Max output 90m3/hr plus	100	100	100	80	24h	C4.32	78	8		9	9			
Truck Mixer: 8m3	100	100	100	80	24h	C4.27	79	8		2	2			
Drill Rig	100	50	50	80	24h	C9.1	90	8		2	2			
Crane: All Terrain: 30t	100	100	100	80	24h	C3.29	70	8		2	2			
Unit 2 Rock Excavation - 100 T gross laden weight (55T payload) Dumper Truck Option														
Articulated Dump Truck: 39.5t: 365kW: 6x6: Caterpillar 740B 24m3 Hopper	100	0	0	80	07:00-19:00	C6.17	85	HR-007		10	10			
Articulated Dump Truck: 39.5t: 365kW: 6x6: Caterpillar 740B 24m3 Hopper	0	0	100	80	23:00-07:00	C6.17	85	HR-014		2	2			
Articulated Dump Truck: 39.5t: 365kW: 6x6: Caterpillar 740B 24m3 Hopper	0	0	100	80	23:00-07:00	C6.17	85	HR-013		2	2			
Articulated Dump Truck: 39.5t: 365kW: 6x6: Caterpillar 740B 24m3 Hopper	0	0	100	80	23:00-07:00	C6.17	85	HR-012		3	3			
Articulated Dump Truck: 55t: 470kW: 6x6: Volvo A60H	100	0	0	80	07:00-19:00	C6.15	90	HR-007	11	11	11			
Articulated Dump Truck: 55t: 470kW: 6x6: Volvo A60H	0	0	100	80	23:00-07:00	C6.15	90	HR-014	2	2	2			
Articulated Dump Truck: 55t: 470kW: 6x6: Volvo A60H	0	0	100	80	23:00-07:00	C6.15	90	HR-013	2	2	2			
Articulated Dump Truck: 55t: 470kW: 6x6: Volvo A60H	0	0	100	80	23:00-07:00	C6.15	90	HR-012	3	3	3			
Excavator: EX1900-6 190t 810kW (1086hp) (12m3 bucket/11m3 shovel)	100	50	50	80	24h	C6.3	86	8	4	10	10			
Excavator: EX2500 (Specs for EX2600 260t 1119kW) (17m3 bucket/15m3 shovel)	100	50	50	80	24h	C6.2	89	8	3	3	3			
Rock Processing (won from main site, for use in Marine Works)														
Crusher and Screen: 400t/hr: Mobile: Jaw: Powerscreen Premiertrac 400: Diesel	100	100	100	80	24h	C11.14	82	2A	1	1	1			
Loader: Wheel: Caterpillar 966K: 199kW: 3300-4100lt bucket	100	100	100	80	24h	C2.28	80	2A	2	2	2			

Plant description	Percentage of plant number working (%)			Percentage (%) of shift working	Plant Working Hours	BS5228 Annex C Reference	Noise level dB L_{Aeq} @10m	Working in Construction Zone / Haul Route	Number of plant working in months					
	07:00 - 19:00	19:00 - 23:00	23:00 - 07:00						7-9	10-12	19-21	31-33	58-60	100-102
Articulated Dump Truck: 22.7t: 6x6: 725C	100	100	100	80	24h	C6.17	85	2A	3	3	3			
Screen: Simba Grid 300	100	100	100	80	24h	N/A	90	2A	2	2	2			
Loader: Wheel: 980K: Quarry spec.: 5300-5700lt bucket	100	100	100	80	24h	C2.26	79	2A	2	2	2			
Tracked Excavator: 50t: 317kW: Cat349ELME: 3500lt Bucket: Mass Excavation	100	100	100	80	24h	C1.10	85	2A	2	2	2			
Articulated Dump Truck: 22.7t: 6x6: 725C	100	100	100	80	24h	C6.17	85	2A	4	4	4			
Process Material (Backfill)														
Crusher and Screen: 400t/hr: Mobile: Jaw: Powerscreen Premiertrac 400: Diesel	100	100	100	80	24h	C11.14	82	1	2	2	2	2	1	1
Loader: Wheel: Caterpillar 966K: 199kW: 3300-4100lt bucket	100	100	100	80	24h	C2.28	80	1	2	2	2	2	1	1
Articulated Dump Truck: 22.7t: 6x6: 725C	100	100	100	80	24h	C6.17	85	1	4	4	4	4	1	1
Screen: Simba Grid 300	100	100	100	80	24h	N/A	90	1	2	2	2	2	1	1
Common Equipment														
Bowser: Fuel: Truck Mounted: 12,000lt: 4X2	100	100	100	80	24h	C6.23	82	9	2	2	2	2	2	2
Mobile Workshop/ Lubrication Truck: 4x4: inc welder & compressor	100	100	100	80	24h	C6.23	82	9	1	1	1	1	1	1
Tyre Truck: 4x4: 5t Crane	100	100	100	80	24h	C6.23	82	9	1	1	1	1	1	1
Tracked Excavator >30T (eg: Cat330D2)	100	50	0	80	07:00-23:00	C2.16	75	1, 2, 3, 4, 6, 7, 8, 9			2	2	2	2
Cable Pulling Winch TW5000 (5 tonne)	100	50	0	80	07:00-23:00	C4.86	65	1, 2, 3, 4, 6, 7, 8, 9			4	4	4	4
Backhoe loader 3CX Super Sitemaster 68kW	100	50	0	80	07:00-23:00	C4.66	69	1, 2, 3, 4, 6, 7, 8, 9			2	2	2	2
Concrete Pump: Truck: 34m Boom; Max output 90m3/hr plus	100	50	0	80	07:00-23:00	C4.32	78	1, 2, 3, 4, 6, 7, 8, 9			1	1	1	1
Truck Mixer: 8m3	100	50	0	80	07:00-23:00	C4.27	79	1, 2, 3, 4, 6, 7, 8, 9			1	1	1	1
Tunnelling & Outfall														
1 x Twin mast drilling jumbo (Sandvik DT820 or similar)	100	100	100	100	24h	C9.2	92	11	2	2				
1 x Twin mast drilling jumbo (Sandvik DT820 or similar)	100	100	100	100	24h	C9.2	92	1						
2 x Basket lifter (MEWP) (Normet Himec 1125B or similar)	100	100	100	100	24h	C4.57	67	11	4	4	4			

Plant description	Percentage of plant number working (%)			Percentage (%) of shift working	Plant Working Hours	BS5228 Annex C Reference	Noise level dB L_{Aeq} @10m	Working in Construction Zone / Haul Route	Number of plant working in months					
	07:00 - 19:00	19:00 - 23:00	23:00 - 07:00						7-9	10-12	19-21	31-33	58-60	100-102
1 x Tunnel Excavator/Loader per tunnel (Terex Shaeff ITC 312 or similar)	100	100	100	100	24h	C4.53	77	11	2	2				
1 x Articulatedulated dump truck per tunnel (e.g. Volvo / Hydrema / Bell / Paus or simlar) Assumed small 23t tunnel dumper	100	100	100	100	24h	Average of C4.2, C5.17, C8.14, C10.19 (23 t ADTs).	82	11	2	2	2			
1 x Shotcrete robot per tunnel (e.g. Meyco Potenza / Normet or similar)	100	100	100	100	24h	C4.29	80	11	2	2	2			
4 x Concrete remixer trucks per tunnel (e.g. Carmix or similar)	100	100	100	100	24h	C4.20	80	11	8	8	8			
Sandvik Roadheader MT720	100	100	100	100	24h	C9.13	95	11	2	2	2			
Tracked Excavator >30T (eg: Cat330D2)	100	100	100	80	24h	C2.16	75	11	2	2	2			
Tracked Excavator >30T (eg: Cat330D2)	100	100	100	80	24h	C2.16	75	11	2	2	2			
Tracked Excavator >30T (eg: Cat330D2)	100	100	100	80	24h	C2.16	75	1			2			
Tracked Excavator >30T (eg: Cat330D2)	100	100	100	80	24h	C2.16	75	11	4	4	4			
Articulated Dump Truck >30T (Assumed Cat 730C)	100	100	100	50	24h	C9.22	89	4	3	3	3			
Tractor: Track: 442kW: Caterpillar D10T: Ripper	100	100	100	80	24h	C6.28	85	1			1			
Tractor: Track: 442kW: Caterpillar D10T: Ripper	100	100	100	80	24h	C6.28	85	11	1	1	1			
Diesel Generator (assumed 500kVa)	100	100	100	100	24h	C6.39	65	11	1	2	1			
Ventilation Fan: 75kW: 1219mm dia	100	100	100	100	24h	N/A	80	11	4	4	4			
Ventilation Fan: 110kW: 900mm dia	100	100	100	100	24h	N/A	80	11	4	4	4			
Pump: Electric: Submersible: 75mm	100	100	100	100	24h	C11.3	69	11	8	8	8			
Compressor: 400cfm(11.3m3/m): 7.5bar: Electric	100	100	100	60	24h	N/A	68	11	4	4	4			
Concrete Pump: Trailer: 54m3/hr; Schwing WP 750-18X	100	100	100	90	24h	C4.24	67	11	2	2	2			
Concrete Remixer: Agitator: 9m3: Skid Mounted	100	100	100	90	24h	N/A	75	11	2	2	2			
Loader: Wheel: Caterpillar 950K: 172kW: 2500-3300lt bucket:	100	100	100	80	24h	C2.28	80	11	2	2	2			
Tracked Mobile Crawler Crane (eg: Manitowoc MLC165-1)	100	100	100	60	24h	C4.52	75	11	2	2				
Telescopic Leader Rig (Hydraulic vibratory hammer)(eg; ABI TM13/16SL on SR35)	100	100	100	60	24h	C3.8	88	11	2	2				

Plant description	Percentage of plant number working (%)			Percentage (%) of shift working	Plant Working Hours	BS5228 Annex C Reference	Noise level dB L_{Aeq} @10m	Working in Construction Zone / Haul Route	Number of plant working in months					
	07:00 - 19:00	19:00 - 23:00	23:00 - 07:00						7-9	10-12	19-21	31-33	58-60	100-102
Tractor (assumed Agri Tractor: 7760: 89kW)	100	100	100	60	24h	C4.74	80	11	2	2				
Rock wheel cutter, 60T excavator, on spud leg barge	100	100	100	60	24h	C9.13	95	11	1	1				
Crane 200T	100	100	100	60	24h	C6.4	65	11	1	1				
Compressor (180 CFM)	100	100	100	60	24h	C3.19	75	11	1	1				
Pumps (200mm) - electric, submerged (same as coffer dam pumps)	100	100	100	100	24h	C11.3	69	11	2	2				
Generator (1MVA)	100	100	100	100	24h	C2.44	77	11	1	1				
Concrete Pump: Trailer: 100m3/hr: Putzmeister BPE 2107 HP E	100	100	100	80	24h	C4.24	67	11	1	1				
Concrete Remixer: Agitator: 9m3: Skid Mounted	100	100	100	80	24h	N/A	75	11	1	1				
Truck Mixer: 8m3	100	100	100	80	24h	C4.27	79	11	3	3				
Marine														
110 tonne long reach excavator (eg;Leibherr 9100 110T Excavator)	100	100	100	60	24h	C6.3	86	2, 10		1	1			
Backhoe dredger (Eg; NordicGiant or Liebherr P955)	100	100	100	60	24h	C7.1	78	2, 10	1	1	1			
Jack Up Barge 1 (Deckmounted 100kVa generator)	100	100	100	60	24h	C6.39	65	2, 10	1	1				
Jack Up Barge 2 (Deckmounted 100kVa generator)	100	100	100	60	24h	C6.39	65	2, 10			1			
70 tonne Excavator (eg; Cat 374)	100	100	100	60	24h	C6.4	80	2, 10	4	5	3			
40 Tonne ADT	100	100	100	60	24h	C1.10	85	2, 10	10	16	10			
BG 42 Rotary Drill	100	100	100	60	24h	C6.4	95	2, 10	1	1				
CDZ 1830 Cluster Drill with 900cfm Compressor	100	100	100	60	24h	C6.4	95	2, 10	1	1				
Jack Up Barge 3 ((Deckmounted 100kVa generator)	100	100	100	60	24h	C6.4	65	2, 10	1	1				
Patriot C330 Numa Down the Hole Hammer (Alternative for Mono Piles)	100	100	100	60	24h	C6.4	95	2, 10	1	1				
45 Tonne Excavator (eg: Cat 345	100	100	100	60	24h	C1.10	85	2, 10	3	3	1			
60 Tonne Excavator (eg: Cat365)	100	100	100	60	24h	C9.13	95	2, 10	3	3	1			
Rock Cutter (Websters G55)	100	100	100	60	24h	C9.13	95	2, 10	1	1	1			
250 Tonne Crawler Crane (eg: Kobelco CKE 2500: 247kW) 24hr	100	100	100	50	24h	C4.38	78	2, 10	1	3	1			
250 Tonne Crawler Crane (eg: Kobelco CKE 2500: 247kW) 10hr	100	100	100	50	24h	C4.38	78	2, 10	1	3	1			

Plant description	Percentage of plant number working (%)			Percentage (%) of shift working	Plant Working Hours	BS5228 Annex C Reference	Noise level dB L_{Aeq} @10m	Working in Construction Zone / Haul Route	Number of plant working in months					
	07:00 - 19:00	19:00 - 23:00	23:00 - 07:00						7-9	10-12	19-21	31-33	58-60	100-102
150 Tonne Crawler Crane (eg: Manitowoc MLC165-1)	100	100	100	60	24h	C4.52	75	2, 10	1	2	2			
Compressor and tools	100	100	100	60	24h	C3.19	75	2, 10	13	14	10			
90 tonne crawler crane	100	100	100	60	24h	C4.39	77	2, 10	1	1	2			
300 Tonne Crawler Crane (eg: Leibherr LR1300)	100	100	100	60	24h	C4.38	78	2, 10	1	1	1			
Drill and blast rig 1	100	100	100	60	24h	C9.1	90	2, 10	4	9				
35 Tonne Excavator (eg: Cat335)	100	100	100	60	24h	C2.16	75	2, 10	4	9				
30 Tonne DT	100	100	100	60	24h	C8.16	81	2, 10		6	3			
Large impact Breaker (Excavator Attachement)	100	100	100	60	24h	C9.13	95	2, 10	2	4				
Large Eccentric Ripper	100	100	100	60	24h	C9.13	95	2, 10	2	4				
60 tonne excavator	100	100	100	60	24h	C2.2	77	2, 10						
70 tonne Crawler Crane	100	100	100	60	24h	C3.30	70	2, 10						
Leader rig inc opp (eg; ABI TM13/16SL on SR35)	100	100	100	60	24h	C3.8	88	2, 10	1					
Drilling Rig (eg; CHA 1100)	100	100	100	60	24h	C9.1	90	2, 10	2					
Transport Barge - 24 hour working but only on site for 6 hours out of 72 for each barge	100	100	100	60	24h	Data for Stemat 86	88	2, 10	3	3	2			
Tug Holyhead Towing - 24 hour working but only on site for 6 hours out of 72 for each barge	100	100	100	60	24h	Data from WesPac	92	2, 10	3	3	2			
Vibratory Pile Hammer	100	100	100	30	24h	C3.8	88	2, 10			1			
200mm pumps (Electric Submersible)	100	100	100	60	24h	C11.3	69	2, 10		8	2			
Vibratory Screen (eg; CMB BX500B)	100	100	100	60	24h	C10.14	81	2, 10	1	1				
Loader: Wheeled: Cat938M 2.5-5m3 bucket	100	100	100	60	24h	C10.17	84	2, 10	1	1				
Safety Boat (assumed to be Standard 6m Rigid Inflatable Boat ~110hp 80kW)	100	100	100	10	24h	No data. Assume same as barge.	88	2, 10	1	1				
Multicat MTS Vector: 2x 600hp CAT C18 engine	100	100	100	30	24h	No data. Assume same as tug.	92	2, 10	2	2	1			
Split Hopper Barge (eg; Jan de Nul Arent class 2x1850kW)	100	100	100	60	24h	Data for Stemat 86	88	2, 10	4	4	2			
MEWP	100	100	100	30	24h	C4.57	49	2, 10	2	2	2			
Mobile Concrete Pump 25m3 - Boom Truck Pump for Anti-Collision Barrier and Top of MOLF	100	100	100	30	24h	C3.25	78	2, 10	1	1				
Dawson Pile Hammer (Operated from Crane)	100	0	0	10	07:00-19:00	C3.1	89	2, 10	1					

Plant description	Percentage of plant number working (%)			Percentage (%) of shift working	Plant Working Hours	BS5228 Annex C Reference	Noise level dB L_{Aeq} @10m	Working in Construction Zone / Haul Route	Number of plant working in months					
	07:00 - 19:00	19:00 - 23:00	23:00 - 07:00						7-9	10-12	19-21	31-33	58-60	100-102
Tractor and Trailer (Assumed tractor andtrailerfordust mitigation spraying)	100	100	100	60	24h	C11.4	83	2, 10	2	2	2			
Jackup Split barge / barge	100	100	100	60	24h	C6.39	65	2, 10	5	5	4			
Backhoe dredger (Eg; NordicGiant or Liebherr P955)	100	100	100	60	24h	C7.1	78	2, 10	1	1	1			
Diesel Generators 50kVa for Lighting (Diesel worst case, could be mains powered or Hydrogen Fuel Cell if required)	100	100	100	100	24h	C6.39	65	2, 10	4	4	4			
Cutter Suction Dredger	100	100	100	100	24h	C6.39	88	2, 10						
70 tonne Excavator (eg; Cat 374)	100	0	0	60	07:00-19:00	C6.4	80	2, 10			2	2	2	
40 Tonne ADT	100	0	0	60	07:00-19:00	C1.10	85	2, 10			4	4	4	
45 Tonne Excavator (eg: Cat 345	100	0	0	60	07:00-19:00	C1.10	85	2, 10			1	1	1	
Compressor and tools	100	0	0	60	07:00-19:00	C3.19	75	2, 10			5	5	5	
35 Tonne Excavator (eg: Cat335)	100	0	0	60	07:00-19:00	C2.16	75	2, 10			2	2	2	
30 Tonne DT	100	0	0	60	07:00-19:00	C8.16	81	2, 10			2	2	2	
Transport Barge - Floating Crane Barge & Transport Barge	100	0	0	60	07:00-19:00	Data for Stemat 86	88	2, 10				1	1	
200mm pumps (Electric Submersible)	100	0	0	60	07:00-19:00	C11.3	69	2, 10			3	3	3	
Loader: Wheeled: Cat938M 2.5-5m3 bucket	100	0	0	60	07:00-19:00	C10.17	84	2, 10			1	1	1	
Safety Boat (assumed to be Standard 6m Rigid Inflatable Boat ~110hp 80kW)	100	0	0	10	07:00-19:00	No data. Assume same as barge.	88	2, 10			1	1	1	
Tractor and Trailer (Assumed tractor andtrailerfordust mitigation spraying)	100	0	0	60	07:00-19:00	C11.4	83	2, 10			2	2	2	
Diesel Generators 50kVa for Lighting (Diesel worst case, could be mains powered or Hydrogen Fuel Cell if required)	100	0	0	100	07:00-19:00	C6.39	65	2, 10			4	4	4	
Concrete Production, Distribution & Placing														
Batching Plant: 200m3/Hr: Bin Feeder: No Silos	100	100	100	80	24h	C4.22	76	2A			1	2	2	2
Cement Silo: 96t: 80m3 c/w cement screw	100	100	100	80	24h	N/A	Nil	2A			4	8	8	8
Batching Plant: 40m3/Hr: 6 section Bin Feeder: 200m3 cement silos	100	100	100	80	24h	C4.22	76	2A			1	1	1	1
Generator (1MWe) to power 40m3 batching plant and then standby for full batching plant	100	100	100	100	24h	C2.44	77	2A			1			
Loader: Wheel: 966G: (3300-4100lt)	100	100	100	80	24h	C4.28	76	2A			1	1	1	1
Concrete Reclaimer: 20m3/hr;Stetter RA20	100	100	100	80	24h	N/A	75	2A			1	1	1	1

Plant description	Percentage of plant number working (%)			Percentage (%) of shift working	Plant Working Hours	BS5228 Annex C Reference	Noise level dB L_{Aeq} @10m	Working in Construction Zone / Haul Route	Number of plant working in months					
	07:00 - 19:00	19:00 - 23:00	23:00 - 07:00						7-9	10-12	19-21	31-33	58-60	100-102
Compressor: 812cfm(22.8m3/m): 7.5bar: Electric	100	100	100	80	24h	N/A	68	2A			1	2	2	2
Concrete Pump: Trailer: 100m3/hr: Putzmeister BPE 2107 HP E	100	100	100	80	24h	C4.24	67	4,6,8			2	3	3	3
Concrete Remixer: Agitator: 9m3: Skid Mounted	100	100	100	80	24h	N/A	75	4,6,8			2	3	3	3
Compressor: 812cfm(22.8m3/m): 7.5bar: Electric	100	100	100	80	24h	N/A	68	4,6,8			1	2	2	2
Truck Mixer: 8m3	100	100	100	80	24h	C4.27	79	HR-003/ HR-004			2	4	4	4
Truck Mixer: 8m3	100	100	100	80	24h	C4.27	79	HR-003/ HR-004			2	3	3	3
Distributor Boom: 38m Radius: 42m Up	100	100	100	80	24h	C4.37	65	4,6,8			4	8	8	8
Distributor Boom: 38m Radius: 42m Up	100	100	100	80	24h	C4.37	65	4,6,8			2	4	4	4
Distributor Boom: 38m Radius: 42m Up	100	100	100	80	24h	C4.37	65	4,6,8			1	2	2	2
Distributor Boom: 38m Radius: 42m Up	100	100	100	80	24h	C4.37	65	4,6,8			1	2	2	2
Distributor Boom: 38m Radius: 42m Up	100	100	100	80	24h	C4.37	65	4,6,8			1	2	2	2
Concrete Pump: Truck: 34m Boom; Max output 90m3/hr plus	100	100	100	80	24h	C4.32	78	HR-003/ HR-004			1	2	2	2
Compressor: 180cfm(5m3/m): Diesel	100	100	100	80	24h	D3.99	86	4,6,8			2	3	3	3
Cut & Bend Reinforcement, Couplers and Distribution														
Integrated rebar cutting, bending, swaging, threading facility, capacity 100T/day - allmains electric	100	100	100	80	24h	N/A	76	6, 9			1	1	1	1
Tower Crane, 5T at 50m	100	100	100	80	24h	C4.79	77	6, 9			2	2	2	2
Tractor Unit: 56t GCW: Tows Low loader with 30t capacity	100	100	100	80	24h	C11.4	83	4, 6, 8, 9, 10			4	4	4	4
Articulated Flat Trailer: 40ft	100	100	100	80	24h	N/A	NA	4, 6, 8, 9, 10			12	12	12	12
Craneage														
Unit 1														
Crane: Tower: Saddle Jib: 6t@40m: Liebherr 250EC-B12: 35m UH	100	100	100	80	24h	C4.48	76	4			1	1	1	
Crane: Tower: Saddle Jib: 4.5t@25m: Liebherr 110EC-6BFR: 27m UH: Special short jib	100	100	100	80	24h	C4.49	77	4			1	1	1	
Crane: Tower: Saddle Jib: 4.5t@25m: Liebherr 110EC-6BFR: 27m UH: Special short jib	100	100	100	80	24h	C4.49	77	4			1	1	1	
Crane: Tower: Saddle Jib: 4.5t@25m: Liebherr 110EC-6BFR: 27m UH: Special short jib	100	100	100	80	24h	C4.49	77	4			1	1	1	

Plant description	Percentage of plant number working (%)			Percentage (%) of shift working	Plant Working Hours	BS5228 Annex C Reference	Noise level dB L_{Aeq} @10m	Working in Construction Zone / Haul Route	Number of plant working in months					
	07:00 - 19:00	19:00 - 23:00	23:00 - 07:00						7-9	10-12	19-21	31-33	58-60	100-102
Crane: Tower: Saddle Jib: 4.5t@25m: Liebherr 110EC-6BFR: 27m UH: Special short jib	100	100	100	80	24h	C4.49	77	4			1	1	1	
Crane: Tower: Saddle Jib: 6t@40m: Liebherr 250EC-B12: 35m UH	100	100	100	80	24h	C4.48	76	4			1	1	1	
Crane: Tower: Saddle Jib: 6t@40m: Liebherr 250EC-B12: 35m UH	100	100	100	80	24h	C4.48	76	4			1	1	1	
Crane: Tower: Saddle Jib: Liebherr 630HC-H40: 55m UH	100	100	100	80	24h	C4.48	76	4			1	1	1	
Crane: Tower: Saddle Jib: Liebherr 550HC-H20: 60m UH	100	100	100	80	24h	C4.48	76	4			1	1	1	
Crane: Tower: Saddle Jib: 6t@40m: Max 25t: Potain MD 485: 60m UH	100	100	100	80	24h	C4.48	76	4			1	1	1	
Crane: Tower: Saddle Jib: Liebherr 380EC-B12: 45m UH	100	100	100	80	24h	C4.48	76	4			1	1	1	
Crane: Tower: Saddle Jib: Liebherr 630HC-H40: 55m UH	100	100	100	80	24h	C4.48	76	4			1	1	1	
Crane: Tower: Saddle Jib: Liebherr 380EC-B12: 45m UH	100	100	100	80	24h	C4.48	76	4			1	1	1	
Crane: Tower: Saddle Jib: 4.5t@25m: Liebherr 110EC-6BFR: 27m UH: Special short jib	100	100	100	80	24h	C4.49	77	4			1	1	1	
Crane: Tower: Saddle Jib: 4.5t@25m: Liebherr 110EC-6BFR: 27m UH: Special short jib	100	100	100	80	24h	C4.49	77	4			1	1	1	
Crane: Tower: Saddle Jib: 4.5t@25m: Liebherr 110EC-6BFR: 27m UH: Special short jib	100	100	100	80	24h	C4.49	77	4			1	1	1	
Crane: Tower: Saddle Jib: 4.5t@25m: Liebherr 110EC-6BFR: 27m UH: Special short jib	100	100	100	80	24h	C4.49	77	4			1	1	1	
Crane: Tower: Saddle Jib: Liebherr 380EC-B12: 45m UH	100	100	100	80	24h	C4.48	76	4					1	
Crane: Tower: Saddle Jib: 6t@40m: Liebherr 250EC-B12: 35m UH	100	100	100	80	24h	C4.48	76	4			1	1		
Crane: Tower: Saddle Jib: Liebherr 1000HC-H40: 35m UH	100	100	100	80	24h	C4.48	76	6			1	1	1	
Crane: Crawler: 100t: Manitowoc MTW12000: Lattice boom	100	100	100	80	24h	C4.52	75	4						
Crane: Crawler: 100t: Manitowoc MTW12000: Lattice boom	100	100	100	80	24h	C4.52	75	4			2	3	2	
Crane: Crawler: 100t: Manitowoc MTW12000: Lattice boom	100	100	100	80	24h	C4.52	75	4			1	2	1	
Crane: Rough Terrain: 90t: Grove RT9130E-2	100	100	100	80	24h	C4.39	77	4			2	2	1	

Plant description	Percentage of plant number working (%)			Percentage (%) of shift working	Plant Working Hours	BS5228 Annex C Reference	Noise level dB L_{Aeq} @10m	Working in Construction Zone / Haul Route	Number of plant working in months					
	07:00 - 19:00	19:00 - 23:00	23:00 - 07:00						7-9	10-12	19-21	31-33	58-60	100-102
Crane: All Terrain: 30t	100	100	100	80	24h	C4.43	70	4			8	8	4	
Unit 2														
Crane: Tower: Saddle Jib: 6t@40m: Liebherr 250EC-B12: 35m UH	100	100	100	80	24h	C4.48	76	8				1	1	1
Crane: Tower: Saddle Jib: 4.5t@25m: Liebherr 110EC-6BFR: 27m UH: Special short jib	100	100	100	80	24h	C4.49	77	8				1	1	
Crane: Tower: Saddle Jib: 4.5t@25m: Liebherr 110EC-6BFR: 27m UH: Special short jib	100	100	100	80	24h	C4.49	77	8				1	1	
Crane: Tower: Saddle Jib: 4.5t@25m: Liebherr 110EC-6BFR: 27m UH: Special short jib	100	100	100	80	24h	C4.49	77	8				1	1	
Crane: Tower: Saddle Jib: 4.5t@25m: Liebherr 110EC-6BFR: 27m UH: Special short jib	100	100	100	80	24h	C4.49	77	8				1	1	
Crane: Tower: Saddle Jib: 6t@40m: Liebherr 250EC-B12: 35m UH	100	100	100	80	24h	C4.48	76	8				1	1	
Crane: Tower: Saddle Jib: 6t@40m: Liebherr 250EC-B12: 35m UH	100	100	100	80	24h	C4.48	76	8				1	1	1
Crane: Tower: Saddle Jib: Liebherr 630HC-H40: 55m UH	100	100	100	80	24h	C4.48	76	8				1	1	
Crane: Tower: Saddle Jib: Liebherr 550HC-H20: 60m UH	100	100	100	80	24h	C4.48	76	8				1	1	1
Crane: Tower: Saddle Jib: 6t@40m: Max 25t: Potain MD 485: 60m UH	100	100	100	80	24h	C4.48	76	8				1	1	1
Crane: Tower: Saddle Jib: Liebherr 380EC-B12: 45m UH	100	100	100	80	24h	C4.48	76	8				1	1	1
Crane: Tower: Saddle Jib: Liebherr 630HC-H40: 55m UH	100	100	100	80	24h	C4.48	76	8				1	1	1
Crane: Tower: Saddle Jib: Liebherr 380EC-B12: 45m UH	100	100	100	80	24h	C4.48	76	8				1	1	1
Crane: Tower: Saddle Jib: 4.5t@25m: Liebherr 110EC-6BFR: 27m UH: Special short jib	100	100	100	80	24h	C4.49	77	8				1	1	1
Crane: Tower: Saddle Jib: 4.5t@25m: Liebherr 110EC-6BFR: 27m UH: Special short jib	100	100	100	80	24h	C4.49	77	8				1	1	1
Crane: Tower: Saddle Jib: 4.5t@25m: Liebherr 110EC-6BFR: 27m UH: Special short jib	100	100	100	80	24h	C4.49	77	8				1	1	1
Crane: Tower: Saddle Jib: 4.5t@25m: Liebherr 110EC-6BFR: 27m UH: Special short jib	100	100	100	80	24h	C4.49	77	8				1	1	1
Crane: Tower: Saddle Jib: Liebherr 380EC-B12: 45m UH	100	100	100	80	24h	C4.48	76	8						

Plant description	Percentage of plant number working (%)			Percentage (%) of shift working	Plant Working Hours	BS5228 Annex C Reference	Noise level dB L_{Aeq} @10m	Working in Construction Zone / Haul Route	Number of plant working in months					
	07:00 - 19:00	19:00 - 23:00	23:00 - 07:00						7-9	10-12	19-21	31-33	58-60	100-102
Crane: Tower: Saddle Jib: 6t@40m: Liebherr 250EC-B12: 35m UH	100	100	100	80	24h	C4.48	76	8				1	1	
Crane: Tower: Saddle Jib: Liebherr 1000HC-H40: 35m UH	100	100	100	80	24h	C4.48	76	8				1	1	1
Crane: Crawler: 100t: Manitowoc MTW12000: Lattice boom	100	100	100	80	24h	C4.52	75	8				2	3	1
Crane: Crawler: 100t: Manitowoc MTW12000: Lattice boom	100	100	100	80	24h	C4.52	75	8				1	2	1
Crane: Crawler: 100t: Manitowoc MTW12000: Lattice boom	100	100	100	80	24h	C4.52	75	8				2	2	1
Crane: Rough Terrain: 90t: Grove RT9130E-2	100	100	100	80	24h	C4.39	77	8				8	8	2
Crane: All Terrain: 30t	100	100	100	80	24h	C4.43	70	8				8	8	2
Structures Access														
Hoist: Goods/Passenger: 2t: Alimak Scando 450	100	100	100	80	24h	C4.62	66	4			2	2	2	
Hoist: Goods/Passenger: 2t: Alimak Scando 450	100	100	100	80	24h	C4.62	66	8					2	2
Hoist: Goods/Passenger: 2t: Alimak Scando 450	100	100	100	80	24h	C4.62	66	4			1	1	1	
Hoist: Goods/Passenger: 2t: Alimak Scando 450	100	100	100	80	24h	C4.62	66	8					1	1
Hoist: Goods/Passenger: 2t: Alimak Scando 450	100	100	100	80	24h	C4.62	66	4			1	1	1	
Hoist: Goods/Passenger: 2t: Alimak Scando 450	100	100	100	80	24h	C4.62	66	8					1	1
Hoist: Goods/Passenger: 2t: Alimak Scando 450	100	100	100	80	24h	C4.62	66	4			1	1	1	
Hoist: Goods/Passenger: 2t: Alimak Scando 450	100	100	100	80	24h	C4.62	66	8					1	1
Access Platform: 20m: Telescopic: RT: Genie model S65	100	100	100	80	24h	C4.57	67	4			1	1	1	
Access Platform: 20m: Telescopic: RT: Genie model S65	100	100	100	80	24h	C4.57	67	8					1	1
Access Platform: 13m: Scissor: Slab: 680kg - Genie model 4390 RT 2WD	100	100	100	80	24h	C4.59	70	4			1	1	1	

Plant description	Percentage of plant number working (%)			Percentage (%) of shift working	Plant Working Hours	BS5228 Annex C Reference	Noise level dB L_{Aeq} @10m	Working in Construction Zone / Haul Route	Number of plant working in months					
	07:00 - 19:00	19:00 - 23:00	23:00 - 07:00						7-9	10-12	19-21	31-33	58-60	100-102
Access Platform: 13m: Scissor: Slab: 680kg - Genie model 4390 RT 2WD	100	100	100	80	24h	C4.59	70	8					1	1
Access Platform: 6m: Scissor - Genie model GS-2046	100	100	100	80	24h	C4.59	70	4			1	1	1	
Access Platform: 6m: Scissor - Genie model GS-2046	100	100	100	80	24h	C4.59	70	8					1	1
Site Logistics & General														
Workman's Bus: 60 Seat	100	100	0	50	07:00-23:00	C11.20	83	HR-010	5	5	8	10	10	5
Workman's Bus: 60 Seat	100	100	100	50	24h	C11.20	83	HR-001	4	8	8	12	12	
Workman's Bus: 60 Seat	100	100	100	50	24h	C11.20	83	HR-002					12	12
Pick Up: 4x2: Diesel: 2415GVW: 1090kg Payload: Toyota	100	100	100	50	24h	N/A	72	HR-002	2	4	4	6	6	
Pick Up: 4x2: Diesel: 2415GVW: 1090kg Payload: Toyota	100	100	100	50	24h	N/A	72	HR-001					6	3
Van: Diesel: 1.9t GVW: 675kg Payload: Escort	100	100	100	50	24h	N/A	72	HR-001	2	4	4	6	6	
Van: Diesel: 1.9t GVW: 675kg Payload: Escort	100	100	100	50	24h	N/A	72	HR-002					6	3
Workman's Bus: 60 Seat	0	0	100	50	23:00-07:00	C11.20	83	HR-010	1	1	1	2	4	1
Forklift: Rough Terrain: 3.0t: JCB930 - 4	100	100	100	50	24h	C4.54	77	HR-001			4	12	12	
Forklift: Rough Terrain: 3.0t: JCB930 - 4	100	100	100	50	24h	C4.54	77	HR-002					12	12
Telehandler: 4t: 17m Up: 12m Out: Rough Terrain: Caterpillar TH417C AC	100	100	100	50	24h	C4.54	79	HR-001			4	12	12	
Telehandler: 4t: 17m Up: 12m Out: Rough Terrain: Caterpillar TH417C AC	100	100	100	50	24h	C4.54	79	HR-002					12	12
Agri Tractor: 7760: 89kW	100	100	100	50	24h	C4.75	79	HR-001			4	4	4	
Agri Tractor: 7760: 89kW	100	100	100	50	24h	C4.75	79	HR-002					4	4
Trailer: Drawbar: 7t: 4w	100	100	100	50	24h	N/A	Nil	HR-001			8	8	8	
Trailer: Drawbar: 7t: 4w	100	100	100	50	24h	N/A	Nil	HR-002					8	8
Flat Truck: 30,000kg: 18tm Crane: 4x4:	100	100	100	50	24h	C11.14	79	HR-001			4	12	12	
Flat Truck: 30,000kg: 18tm Crane: 4x4:	100	100	100	50	24h	C11.14	79	HR-002					12	12
Pump: Electric: Submersible: 50mm	100	100	100	100	24h	C11.3	69	4	3	3	3	3	9	3
Pump: Electric: Submersible: 50mm	100	100	100	100	24h	C11.3	69	5	2	2	2	2	3	2
Pump: Electric: Submersible: 50mm	100	100	100	100	24h	C11.3	69	8	3	3	3	3	9	3
Pump: Electric: Submersible: 50mm	100	100	100	100	24h	C11.3	69	9	2	2	2	2	3	2
Pump: Electric: Submersible: 150mm	100	100	100	100	24h	C11.3	69	4	8	8	8	8	9	3
Pump: Electric: Submersible: 150mm	100	100	100	100	24h	C11.3	69	5	2	2	2	2	3	2
Pump: Electric: Submersible: 150mm	100	100	100	100	24h	C11.3	69	8	8	8	8	8	9	3
Pump: Electric: Submersible: 150mm	100	100	100	100	24h	C11.3	69	9	2	2	2	2	3	2

Plant description	Percentage of plant number working (%)			Percentage (%) of shift working	Plant Working Hours	BS5228 Annex C Reference	Noise level dB L_{Aeq} @10m	Working in Construction Zone / Haul Route	Number of plant working in months					
	07:00 - 19:00	19:00 - 23:00	23:00 - 07:00						7-9	10-12	19-21	31-33	58-60	100-102
Pump: Electric: Submersible: 50mm	100	100	100	100	24h	C11.3	69	4			10	10	10	
Pump: Electric: Submersible: 50mm	100	100	100	100	24h	C11.3	69	6			10	10	10	
Pump: Electric: Submersible: 50mm	100	100	100	100	24h	C11.3	69	7					10	10
Pump: Electric: Submersible: 50mm	100	100	100	100	24h	C11.3	69	8					10	10
Pump: Electric: Submersible: 150mm	100	100	100	100	24h	C11.3	69	4			10	10	10	
Pump: Electric: Submersible: 150mm	100	100	100	100	24h	C11.3	69	6			10	10	10	
Pump: Electric: Submersible: 150mm	100	100	100	100	24h	C11.3	69	7					10	10
Pump: Electric: Submersible: 150mm	100	100	100	100	24h	C11.3	69	8					10	10
Weighbridge: 40tx9m	100	100	100	50	24h	N/A	Nil	9	1	1	1	1	1	1
Bowser: Water: Truck mounted: 10,000lt: 4x2	100	100	100	50	24h	C11.4	83	HR-001	2	2	2	2	2	
Road Sweeper: Truck Mounted: Vacuum	100	100	100	50	24h	C4.90	76	HR-001	2	2	2	4	4	
Site Campus														
300 Tonne Crawler Crane (eg: Leibherr LR1300)	100	0	0	80	07:00-19:00	C4.38	78	12	1	1	1	1		
3x 35 Tonne Excavator (eg: Cat335)	100	0	0	80	07:00-19:00	C2.16	75	12	2	2	3	2		
compactor: 32t: Caterpillar 825G	100	0	0	80	07:00-19:00	C2.39	80	12	1	2				
Grader: 26t: 222kW: Caterpillar 16M Articulated	100	0	0	80	07:00-19:00	C6.31	86	12	2	2				
2x Compressor, Diesel	100	0	0	80	07:00-19:00	D3.99	86	12	2	2	2	2		
2x Concrete Pump: Truck: 34m Boom; Max output 90m3/hr plus	100	0	0	80	07:00-19:00	C4.32	78	12		1	2	1		
Crane: All Terrain, 30T	100	0	0	80	07:00-19:00	C4.43	70	12	2	2				
Crane: All Terrain, 50T	100	0	0	80	07:00-19:00	C4.39	77	12			1	1		
Crane: Rough Terrain: 90t: Grove RT9130E-2	100	0	0	80	07:00-19:00	C4.39	77	12						
4 x Articulatedulated dump trucks (e.g. Volvo / Hydrema / Bell / Paus or simlar)	100	0	0	80	07:00-19:00	Average of C4.2, C5.17, C8.14, C10.19 (23 t ADTs).	82	12	4	4	4	2		
Road Sweeper: Truck Mounted: Vacuum	100	0	0	80	07:00-19:00	C4.90	76	12	1	1	1	1		
2x Van: Diesel: Payload: Escort	100	0	0	80	07:00-19:00	N/A	72	12	2	2	2	2		
2x Telehandler: 3t: Rough Terrain: Merlo ROTO 38.16K: Tunnel Rib Handler: Access Basket	100	0	0	80	07:00-19:00	C4.54	79	12			2	2		
Access Platform: 6m: Scissor - Genie model GS-2046	100	0	0	80	07:00-19:00	C4.59	70	12			4	6		
4x Flat Truck: 30,000kg: 18tm Crane: 4x4:	100	0	0	80	07:00-19:00	C11.14	79	12	1	2	4	6		

Plant description	Percentage of plant number working (%)			Percentage (%) of shift working	Plant Working Hours	BS5228 Annex C Reference	Noise level dB L_{Aeq} @10m	Working in Construction Zone / Haul Route	Number of plant working in months					
	07:00 - 19:00	19:00 - 23:00	23:00 - 07:00						7-9	10-12	19-21	31-33	58-60	100-102
3x Generator 500 kVA	100	0	0	80	07:00-19:00	C2.44	77	12	1	2	3	3		
6x Truck Mixer	100	0	0	80	07:00-19:00	C4.27	79	12	4	4	6	6		
Bowser: Water: Truck mounted: 10,000lt: 4x2	100	0	0	80	07:00-19:00	C11.4	83	12	1	1	1	1		
2x CAT H45 D rock breaker / hammer	100	0	0	80	07:00-19:00	C9.13	95	12	1	2	2	2		
300 Tonne Crawler Crane (eg: Leibherr LR1300)	100	0	0	80	07:00-19:00	C4.38	78	12						1
3x 35 Tonne Excavator (eg: Cat335)	100	0	0	80	07:00-19:00	C2.16	75	12						2
compactor: 32t: Caterpillar 825G	100	0	0	80	07:00-19:00	C2.39	80	12						1
Grader: 26t: 222kW: Caterpillar 16M Articulated	100	0	0	80	07:00-19:00	C6.31	86	12						1
2x Compressor, Diesel	100	0	0	80	07:00-19:00	D3.99	86	12						2
2x Concrete Pump: Truck: 34m Boom; Max output 90m3/hr plus	100	0	0	80	07:00-19:00	C4.32	78	12						1
Crane: All Terrain, 30T	100	0	0	80	07:00-19:00	C4.43	70	12						1
Crane: All Terrain, 50T	100	0	0	80	07:00-19:00	C4.39	77	12						1
Crane: Rough Terrain: 90t: Grove RT9130E-2	100	0	0	80	07:00-19:00	C4.39	77	12						
4 x Articulatedulated dump trucks (e.g. Volvo / Hydrema / Bell / Paus or simlar)	100	0	0	80	07:00-19:00	Average of C4.2, C5.17, C8.14, C10.19 (23 t ADTs).	82	12						3
Road Sweeper: Truck Mounted: Vacuum	100	0	0	80	07:00-19:00	C4.90	76	12						1
2x Van: Diesel: Payload: Escort	100	0	0	80	07:00-19:00	N/A	72	12						2
2x Telehandler: 3t: Rough Terrain: Merlo ROTO 38.16K: Tunnel Rib Handler: Access Basket	100	0	0	80	07:00-19:00	C4.54	79	12						2
Access Platform: 6m: Scissor - Genie model GS-2046	100	0	0	80	07:00-19:00	C4.59	70	12						6
4x Flat Truck: 30,000kg: 18tm Crane: 4x4:	100	0	0	80	07:00-19:00	C11.14	79	12						4
3x Generator 500 kVA	100	0	0	80	07:00-19:00	C2.44	77	12						3
6x Truck Mixer	100	0	0	80	07:00-19:00	C4.27	79	12						6
Bowser: Water: Truck mounted: 10,000lt: 4x2	100	0	0	80	07:00-19:00	C11.4	83	12						1
2x CAT H45 D rock breaker / hammer	100	0	0	80	07:00-19:00	C9.13	95	12						2
Final re-instatement / landscape formation														
Zone 9 and Mound A														
Tracked Excavator: 75t: 352kW: Cat374FLME: 5000lt bucket: Mass excavation	100	50	0	80	07:00-19:00	C2.2	77	A						4

Plant description	Percentage of plant number working (%)			Percentage (%) of shift working	Plant Working Hours	BS5228 Annex C Reference	Noise level dB L_{Aeq} @10m	Working in Construction Zone / Haul Route	Number of plant working in months					
	07:00 - 19:00	19:00 - 23:00	23:00 - 07:00						7-9	10-12	19-21	31-33	58-60	100-102
Articulated Dump Truck: 39.5t: 365kW: 6x6: Caterpillar 740B	100	50	0	80	07:00-19:00	C6.26	79	HR-007						18
Tractor: Track: 228kW: D8T	100	50	0	80	07:00-23:00	C6.30	86	9						3
Tractor: Track: 228kW: D8T	100	0	0	80	07:00-19:00	C6.30	86	A						2
Roller: Steel/Rubber: 16t: 129kW: Caterpillar CS74B	100	50	0	80	07:00-23:00	C5.21	80	9						3
Roller: Steel/Rubber: 16t: 129kW: Caterpillar CS74B	100	0	0	80	07:00-19:00	C5.21	80	A						1
Compactor: 32t: Caterpillar 825G	100	50	0	80	07:00-23:00	C2.39	80	9						3
Compactor: 32t: Caterpillar 825G	100	0	0	80	07:00-19:00	C2.39	80	A						1
Tractor: Track: 123kW: Caterpillar D6T LGP	100	50	0	80	07:00-23:00	C5.15	83	9						2
Tractor: Track: 123kW: Caterpillar D6T LGP	100	0	0	80	07:00-19:00	C5.15	83	A						1
35 Tonne Excavator (eg: Cat335)	100	50	0	80	07:00-23:00	C2.16	75	9						2
Grader: 26t: 222kW: Caterpillar 16M Articulated	100	0	0	80	07:00-19:00	C6.31	86	HR-007						1
Zone 5 and Mound E														
Tracked Excavator: 75t: 352kW: Cat374FLME: 5000lt bucket: Mass excavation	100	50	0	80	07:00-23:00	C2.2	77	E						3
Articulated Dump Truck: 39.5t: 365kW: 6x6: Caterpillar 740B	100	50	0	80	07:00-23:00	C6.26	79	HR-011						12
Tractor: Track: 228kW: D8T	100	50	0	80	07:00-23:00	C6.30	86	E						1
Tractor: Track: 228kW: D8T	100	50	0	80	07:00-23:00	C6.30	86	5						2
Roller: Steel/Rubber: 16t: 129kW: Caterpillar CS74B	100	50	0	80	07:00-23:00	C5.21	80	E						1
Roller: Steel/Rubber: 16t: 129kW: Caterpillar CS74B	100	50	0	80	07:00-23:00	C5.21	80	5						2
Compactor: 32t: Caterpillar 825G	100	50	0	80	07:00-23:00	C2.39	80	E						1
Compactor: 32t: Caterpillar 825G	100	50	0	80	07:00-23:00	C2.39	80	5						2
35 Tonne Excavator (eg: Cat335)	100	50	0	80	07:00-23:00	C2.16	75	5						2
Tractor: Track: 123kW: Caterpillar D6T LGP	100	50	0	80	07:00-23:00	C5.15	83	E						1
Tractor: Track: 123kW: Caterpillar D6T LGP	100	50	0	80	07:00-23:00	C5.15	83	5						1
Grader: 26t: 222kW: Caterpillar 16M Articulated	100	50	0	80	07:00-23:00	C6.31	86	HR-011						1

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HORIZON NUCLEAR POWER

WYLFA NEWYDD

ENERGY WORKING FOR BRITAIN

Wylfa Newydd Project

Environmental Statement Addendum Appendix D8-A (Previously part of REP6-010 Appendix 1-6)

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Contents

1 Introduction 1
1.1 Purpose of this report 1
1.2 Scope of this report 1
2 WNDA Flood Consequences Assessment 2
2.1 Summary of the WNDA FCA 2
3 Basis of Assessment 3
3.1 Introduction 3
WNDA Hydraulic Modelling 3
Preliminary Drainage Design 3
Summary 4
3.2 Afon Cafnan 4
WNDA Hydraulic Modelling 4
Preliminary Drainage Design 5
Discussion 7
3.3 Nant Caerdegog Isaf (draining to the Afon Cafnan) 8
WNDA Hydraulic Modelling 8
Preliminary Drainage Design 9
Discussion 10
3.4 Cemaes Stream 10
WNDA Hydraulic Modelling 10
Preliminary Drainage Design 11
Discussion 12
3.5 Nant Cemlyn 13
WNDA Hydraulic Modelling 13
Preliminary Drainage Design 14
Discussion 15
4 Siltbuster locations 16
4.1 Introduction 16
4.2 General Requirements 16
4.3 Relevant Issues 16
Head and Losses 17
Pump Failure 17
5 Conclusions 18
5.1 Drainage Strategy and Flood Risk 18
5.2 Location of Siltbuster® type units 18

List of Tables

Table 3-1 Modelled Peak Flows, Afon Cafnan 4
Table 3-2 Key aspects of the Afon Cafnan drainage catchments 6
Table 3-3 Modelled Peak Discharges, Afon Cafnan 6
Table 3-4 Modelled Peak Flows, Nant Caerdegog Isaf 8

Table 3-5 Key aspects of the Nant Caerdegog Isaf drainage catchment 9
Table 3-6 Modelled Peak Discharges, Nant Caerdegog Isaf..... 9
Table 3-7 Modelled Peak Flows, Cemaes Stream 10
Table 3-8 Key aspects of the Cemaes Stream drainage catchment..... 11
Table 3-9 Modelled Peak Discharges, Cemaes Stream..... 12
Table 3-10 Modelled Peak Flows, Nant Cemlyn..... 13
Table 3-11 Key aspects of the Nant Cemlyn drainage catchment..... 14
Table 3-12 Modelled Peak Discharges, Nant Cemlyn 14

1 Introduction

1.1 Purpose of this report

1.1.1 This report provides a response to a request for further information by the Examining Authority at the Issue Specific Hearing on Biodiversity (Coastal Change, Climate Change, Transboundary Impacts) on 11th January 2019.

1.1.2 The request for further information by the Examining Authority followed an indication by Natural Resources Wales (NRW) that further information was required on the impact that the development of the Wylfa Newydd Development Area (WNDA) appears to have on flood risk at key receptors, namely those adjacent to Cemaes Stream, the Afon Cafnan and Nant Cemlyn.

1.2 Scope of this report

1.2.1 This report collates information drawn from existing DCO application documents, as well as presenting new information on elements of the drainage design and flood risk to modelling in order to clarify the issues raised by NRW and the Examining Authority on the conclusions presented within the WNDA Flood Consequences Assessment (FCA) [APP-150 to APP-157] and supporting documents [APP-160 to APP-167].

1.2.2 This report firstly summarises the key conclusions of the WNDA FCA, highlighting why NRW has residual concerns with respect to flood risk.

1.2.3 This report will present information on the approach taken in order to represent the drainage scheme for the WNDA within the hydraulic modelling to support the WNDA FCA.

1.2.4 This report will then focus on the preliminary drainage design for the WNDA, drawing on and supplementing information presented in Appendix D8-8 Summary of preliminary design for construction surface water drainage [APP-167] and draw out the key conclusions with respect to impacts on flows in receiving watercourses and therefore flood risk.

1.2.5 Concluding remarks will draw this information together and the implications for flood risks at key receptors will be clearly identified.

1.2.6 Additional comment will also be provided on the positioning of Siltbuster® type units, particularly in relation to Mound E discharge points.

2 WNDA Flood Consequences Assessment

2.1 Summary of the WNDA FCA

2.1.1 The WNDA FCA [APP-150] and its supporting documents [APP-151 to APP-157 and APP-160 to APP-167], concludes that the WNDA development would result in residual impacts on flood risk at a number of locations, including to:

- properties upstream of Cemaes (Brookside Garage and adjacent residential properties) on Nant Cemaes;
- Cemlyn Road and land from the Afon Cafnan; and
- Cemlyn Road and land (including land within Cestyll Gardens) from Nant Cemlyn.

2.1.2 These conclusions were drawn primarily from both pluvial and fluvial flood risk modelling of the natural and drainage catchments draining to these watercourses and they were assessed as occurring in both construction phases and the operational phase, though the effect on the operational phase was to a lesser degree.

2.1.3 Horizon acknowledges that these conclusions are non-compliant with TAN15, however, Horizon maintains that any residual impact on flood risk would be dealt with through the development of a detailed drainage design that builds on and enhances, where necessary, the preliminary drainage design presented in Appendix D8-8 [APP-167].

2.1.4 Chapter D8 of the Environmental Statement [APP-127] concluded that with the development of a detailed drainage design these impacts were negligible.

2.1.5 It is understood that the position of NRW, Isle of Anglesey County Council (IACC), and the Welsh Government (WG) is that without further detail being provided by Horizon, including further modelling and mitigation design detail, they cannot be satisfied that following mitigation flood risk will be negligible. The information presented within this report will provide further clarification on the anticipated impacts on flood risk and will provide support to Horizon's current position that the FCA is robust and any residual issues can be dealt with at the detailed design stage.

3 Basis of Assessment

3.1 Introduction

3.1.1 The conclusions of the FCA with respect to flood risk on Cemaes Stream, the Afon Cafnan and Nant Cemlyn are drawn from flood risk modelling of the natural and drainage catchments draining to these watercourses.

WNDA Hydraulic Modelling

3.1.2 The conceptualisation of the hydraulic model is described in Appendix D8-7 (Part 1 of 7) [APP-160] of the Environmental Statement. Appendix D8-7 identifies the model nodes at which inflows are applied to the baseline, construction and operational versions of the hydraulic models and the proportion of each flow applied at specific nodes under those different scenarios. The flows applied at each of these locations is described in Appendix D8-7 (Part 7 of 7) [APP-166] of the Environmental Statement.

3.1.3 The hydraulic modelling undertaken to support the WNDA FCA includes a formal representation of the site's surface water drainage system. This is achieved, as described in Appendix D8-7 (Part 1 of 7), through the assumption that the drainage system will manage runoff for all events up to and including a 30-year event. As a result, runoff for areas that are formally drained within the WNDA (except the Nuclear Platform, which drains directly to the coast) are represented by greenfield flows to mimic the effect of the drainage system. Above this threshold, runoff from these areas is unrestricted.

3.1.4 These effects are incorporated into the hydraulic model through the inflows that were developed for the study, which are described in more detail in Appendix D8-7 (Part 7 of 7) [APP-166].

Preliminary Drainage Design

3.1.5 Having described the approach to representing the site's surface water drainage system taken within the hydraulic modelling, it is important to understand the principles of the preliminary surface water drainage system described in Appendix D8-8 [APP-167].

3.1.6 The preliminary drainage design was based on several simple premises:

- Swales and channels within the sites are designed to convey a 30-year event plus a 20% allowance for climate change without flooding;
- Attenuation ponds are sized to provide storage for a 100-year event plus an allowance for climate change without overtopping; and
- Maximum discharge rates from the attenuation ponds are limited to the existing greenfield 30-year event with an allowance for climate change.

3.1.7 The effectiveness of the proposed drainage system was modelled within MicroDrainage v2015.1 for the 1, 2, 5, 30 plus climate change, 100 and 100 plus climate change scenarios. The predicted discharge rates at each discharge point for the Baseline and Construction scenarios was calculated

and an indication of the performance of each element of the proposed drainage system was produced.

3.1.8 Despite the simplicity of the principles of the design, it was not possible to explicitly represent the drainage system as described above within the hydraulic model, hence the approach described in Sections 3.1.3 and 3.1.4. This has had the effect of overestimating the discharge from mound drainage, as is indicated in the following sections.

Summary

3.1.9 The following sections present the hydraulic modelling inflows for each catchment separately, splitting out upstream and downstream catchments as required. Where the hydraulic modelling simulated an increase or decrease in flows this is indicated, including the scale of change simulated.

3.1.10 Similar information for each drainage catchment from the preliminary drainage design is also presented.

3.1.11 The intention of this section of the report is to highlight where the outputs of the preliminary drainage design differ to the flows adopted within the hydraulic modelling. Comment is made on which is more valid and the implications for the conclusions of the flood risk assessment.

3.1.12 It should be noted that, all flows presented in the sections below represent reasonably foreseeable climate change projections and do not include credible maximum climate change scenarios. This is because comparisons can reasonably be made between the flood risk modelling flows and preliminary drainage design discharge rates for the reasonably foreseeable scenarios whilst no credible maximum climate change scenario results are currently available for the preliminary drainage design. Further details on reasonable. Foreseeable, and credible maximum climate change scenarios can be found in Section 3.1 (p.12) of Appendix D8-7 (Part 7 of 7) [APP-166].

3.2 Afon Cafnan

WNDA Hydraulic Modelling

3.2.2 The following table summarises the flows applied within the hydraulic models under each of the scenarios. Increases relative to the baseline are highlighted in red text, reductions are in green.

Table 3-1 Modelled Peak Flows, Afon Cafnan

Scenario/ Return Period	Baseline (m^3/s)		Construction (Point 4) (m^3/s)		Operation (Point 5) (m^3/s)	
2020	U/S	D/S	U/S	D/S	U/S	D/S
2	4.5	0.4	4.5	0.6		
30	10.0	1.0	10.0	1.4		
100	14.5	1.4	14.5	1.9		

1000	25.2	2.5	25.2	3.1		
2080	**U/S**	**D/S**	**U/S**	**D/S**	**U/S**	**D/S**
2	5.1	0.5			5.1	0.4
30	11.3	1.1			11.3	0.9
100	16.4	1.6			16.4	1.3
1000	28.5	2.9			28.5	2.2
2180	**U/S**	**D/S**	**U/S**	**D/S**	**U/S**	**D/S**
2	8.2	0.8			8.2	0.6
30	18.3	1.8			18.3	1.4
100	26.5	2.6			26.5	2.1
1000	46.0	4.6			46.0	3.6

3.2.3 As can be seen from the above, no changes are predicted in the upstream catchment of the Afon Cafnan. Changes in flows are, however, simulated in the downstream catchment.

3.2.4 For reference, catchments are identified within Figure 4.1 of Appendix E to the Hydraulic Modelling Report for the WNDA [p44, APP-167]. The upstream catchment (U/S) within APP-167 is referenced as Catchment 3, whilst the downstream catchment (D/S) is referenced as Catchment 2.

3.2.5 Table 5.5 (p.50) of the Hydraulic Modelling Report [APP-160] indicates that between the Baseline and Construction (Point 4) scenarios additional inflows representing discharges from Mound D (D1 and D2) and Mound E (E2) supplement the flows to the Afon Cafnan. The overall effect of these changes is an increase in peak flows to the watercourse, equivalent to between 0.2m^3/s in the 2-year event and 0.6m^3/s in the 1000-year event, as indicated in Table 3-1 above. At Point 5, flows to the Afon Cafnan revert to those of the Baseline (See Table 6.5 (p.68) of the Hydraulic Modelling Report).

Preliminary Drainage Design

3.2.6 The preliminary drainage design of the surface water drainage system to the Afon Cafnan includes discharges from Mound D and the eastern side of Mound E. During construction, runoff from the western side of Mound E (E1) will also be pumped to the Afon Cafnan, to avoid any potential impacts on the Cemlyn Lagoon SAC.

3.2.7 The landform changes introduced within the WNDA have resulted in changes in catchment area, runoff rates and the need for management of runoff rates and provision of attenuation. The following table summarises the key changes within the catchments drainage to the Afon Cafnan.

Table 3-2 Key aspects of the Afon Cafnan drainage catchments

Discharge Point	Existing catchment area (ha)	Proposed catchment area (ha)	Catchment area increase (ha)	Maximum greenfield discharge rate (l/s)	Attenuation Volume (m^3)
D1	3.46	4.39	+0.93	178.4	1,235
D2	8.77	8.77	0.00	419.2	2,420
E1 (construction only)	13.42	14.58	+1.16	960.6	4,198
E2	14.68	14.68	0.00	769.5	4,003

3.2.8 The following table summarises the discharges calculated within the preliminary drainage design at each of these discharge points for the Baseline and Construction scenarios. Increases relative to the baseline are highlighted in red text, reductions are in green.

Table 3-3 Modelled Peak Discharges, Afon Cafnan

Discharge Point	Return Period				
Baseline Flows (l/s)	**1-year**	**5-year**	**30-year + CC**	**100-year**	**100-year + CC**
D1	89.9	150.5	258.6	274.5	329.4
D2	259.2	262.6	624.8	664.4	797.3
E1 (construction only)	352.0	589.4	1012.3	1074.2	1289.0
E2	323.3	545.2	944.9	1008.4	1210.1
Construction (Point 4) Flows (l/s)	**1-year**	**5-year**	**30-year + CC**	**100-year**	**100-year + CC**
D1	71.7	109.5	178.4	189.7	227.6
D2	163.3	267.3	419.2	458.8	550.6
E1 (construction only)	331.3	552.3	968.1	1047.0	1256.4
E2	267.3	442.4	769.5	828.7	994.4
Difference (l/s)	**1-year**	**5-year**	**30-year + CC**	**100-year**	**100-year + CC**
D1	-18.2	-41.0	-80.2	-84.8	-101.8

D2	-95.9	4.7	-205.6	-205.6	-246.7
E1 (construction only)	-20.7	-37.1	-44.2	-27.2	-32.6
E2	-56.0	-102.8	-175.4	-179.7	-215.6

3.2.9 As can be seen from the above, discharge rates are shown to reduce across each of the drainage catchments and for all return periods (bar an anomaly in the 5-year event in catchment D2). These reductions are despite the increases in catchment area identified in Table 3-2, and the benefits for events above the 30-year event are principally a result of the 100-year plus climate change storage being provided.

3.2.10 The MicroDrainage modelling indicates that there would be no flooding, i.e. exceedance of the proposed channel capacities, in any of the above return periods.

Discussion

3.2.11 The reductions in runoff identified in Table 3-3 are the outcome of simulating the preliminary drainage design within industry standard hydraulic modelling software. However, as can be seen in Table 3-1, these reductions in runoff are not reflected within the inflows utilised within the hydraulic modelling, which increase by 0.2m^3/s to 0.6m^3/s. Further, the outcome of the flood risk modelling presented within the FCA and its supporting documents, which shows an increased flood risk to Cemlyn Road and to land downstream because of the Wylfa Newydd DCO Project, also does not reflect this important aspect of the drainage design.

3.2.12 Collectively, the discharges from catchments D1, D2 and E2 are shown in Table 3-3 to reduce peak flow rates into the Afon Cafnan by between 170l/s and 564l/s, depending upon return period. Were this to be simulated within the hydraulic modelling under an operational scenario, allowing for the lack of changes in upstream catchments and the minor changes in other lateral catchments, the outcome would be expected to show a beneficial impact on flood risk in the Afon Cafnan and at receptors downstream.

3.2.13 The collective benefits indicated for discharge points D1, D2 and E2, would not fully off-set the additional, albeit temporary, discharge of catchment E1 into the Afon Cafnan during construction, even when allowing for the benefits seen at discharge point C1 (see Table 3-6, below). The proposed pumping rate from E1 to the Afon Cafnan will be limited, however, Chapter D8 of the ES [APP-127] indicates that the likely method to avoid an impact to the Afon Cafnan would be to amend the storage volume provided at E1 at the detailed design stage, increasing it above the 4,198m^3 already proposed so that a lower discharge rate could be adopted that would avoid an increase in flood risk. There is space for expansion of the attenuation pond at E1 towards the north east and north west, however, this would need to be confirmed by further

analysis, as it may be possible to deepen the pond to provide the required attenuation.

3.3 Nant Caerdegog Isaf (draining to the Afon Cafnan)

WNDA Hydraulic Modelling

3.3.2 The following tables summarise the flows applied within the hydraulic models under each of the scenarios. Increases relative to the baseline are highlighted in red text, reductions are in green.

Table 3-4 Modelled Peak Flows, Nant Caerdegog Isaf

Scenario/ Return Period	Baseline (m^3/s)		Construction (Point 4) (m^3/s)		Operation (Point 5) (m^3/s)	
2020	**U/S**	**D/S**	**U/S**	**D/S**	**U/S**	**D/S**
2	0.6	0.4	0.6	0.4		
30	1.4	0.9	1.3	0.8		
100	2.0	1.3	1.8	1.1		
1000	3.6	2.3	3.0	1.9		
2080	**U/S**	**D/S**	**U/S**	**D/S**	**U/S**	**D/S**
2	0.7	0.4			0.7	0.4
30	1.6	1.0			1.6	0.8
100	2.2	1.5			2.3	1.2
1000	4.0	2.6			4.0	2.1
2180	**U/S**	**D/S**	**U/S**	**D/S**	**U/S**	**D/S**
2	1.1	0.7			1.1	0.6
30	2.5	1.6			2.6	1.3
100	3.7	2.4			3.7	1.9
1000	6.5	4.2			6.4	3.3

3.3.3 As can be from the above, both positive and negative changes in flows are simulated in both the upstream (east) and downstream (west) catchments.

3.3.4 For reference, catchments are identified within Figure 4.1 of Appendix E to the Hydraulic Modelling Report for the WNDA [p44, APP-167]. The upstream catchment (U/S) within APP-167 is referenced as Catchment 5, whilst the downstream catchment (D/S) is referenced as Catchment 4.

3.3.5 Table 5.6 (p.50) of the Hydraulic Modelling Report [APP-160] indicates that between the Baseline and Construction (Point 4) scenarios, additional inflows representing discharges from Mound C and an area referred to as the

Mochda. At Point 5, these flows are redistributed to those of the Baseline and Mochda (See Table 6.6 (p.68) of the Hydraulic Modelling Report).

3.3.6 The overall effect of these changes are minor increases in peak flows to the upper catchment of the watercourse, equivalent to 0.1m^3/s, as indicated in Table 3-1 above. Most significantly, there are larger reductions in peak flows to the downstream catchment, amounting to between -0.1m^3/s and -0.9m^3/s.

Preliminary Drainage Design

3.3.7 The preliminary drainage design of the surface water drainage system to the Nant Caerdegog Isaf, which ultimately drains to the Afon Cafnan, includes discharges from Mound C.

3.3.8 The landform changes introduced within the WNDA have resulted in changes in catchment area, runoff rates and the need for management of runoff rates and provision of attenuation. The following table summarises the key changes within the catchments drainage to the Nant Caerdegog Isaf.

Table 3-5 Key aspects of the Nant Caerdegog Isaf drainage catchment

Discharge Point	Existing catchment area (ha)	Proposed catchment area (ha)	Catchment area increase (ha)	Maximum greenfield discharge rate (l/s)	Attenuation Volume (m^3)
C1	10.80	14.54	+3.74	1,001.2	5,728

3.3.9 The following table summarises the discharges calculated within the preliminary drainage design at each of these discharge points for the Baseline and Construction scenarios. Increases relative to the baseline are highlighted in red text, reductions are in green.

Table 3-6 Modelled Peak Discharges, Nant Caerdegog Isaf

Discharge Point	Return Period				
Baseline Flows (l/s)	**1-year**	**5-year**	**30-year + CC**	**100-year**	**100-year + CC**
C1	370.2	612.9	1037.5	1090.8	1309.0
Construction (Point 4) Flows (l/s)	**1-year**	**5-year**	**30-year + CC**	**100-year**	**100-year + CC**
C1	284.5	395.2	1001.2	1085.9	1303.1
Difference (l/s)	**1-year**	**5-year**	**30-year + CC**	**100-year**	**100-year + CC**
C1	-85.7	-217.7	-36.3	-4.9	-5.9

3.3.10 As can be seen from the above, discharge rates are shown to reduce for all return periods. These reductions are despite the increases in catchment area identified in Table 3-5.

3.3.11 The MicroDrainage modelling indicates that there would be no flooding, i.e. exceedance of the proposed channel capacities, in any of the above return periods.

Discussion

3.3.12 The reductions in runoff identified in Table 3-6 are the outcome of simulating the preliminary drainage design within industry standard hydraulic modelling software. It can be seen in Table 3-4, reductions in runoff are reflected within the inflows utilised within the hydraulic modelling, which generally reduce in the construction and operational stages, though to a larger degree than the preliminary drainage design would suggest.

3.3.13 The flows from this catchment are not shown to be an issue within the site, however, discharges here will contribute to the simulated flooding issues at Cemlyn Road and further downstream on the Afon Cafnan, therefore this potential overestimate of the benefits provided could off-set some of the benefits noted in Section 3.2.12 above on the Afon Cafnan itself.

3.3.14 As indicated above, the benefits indicated could contribute towards off-setting the adverse, albeit temporary, effect of pumping runoff from discharge point E1 into the Afon Cafnan and would go some way to minimising any increase in flood attenuation that needs to be provided at the detailed design stage.

3.4 Cemaes Stream

WNDA Hydraulic Modelling

3.4.2 The following tables summarise the flows applied within the hydraulic models under each of the scenarios. Increases relative to the baseline are highlighted in red text, reductions are in green.

Table 3-7 Modelled Peak Flows, Cemaes Stream

Scenario/ Return Period	Baseline (m^3/s)		Construction (Point 4) (m^3/s)		Operation (Point 5) (m^3/s)	
2020	U/S	D/S	U/S	D/S	U/S	D/S
2	1.8	0.3	1.8	0.5		
30	4.1	0.7	4.0	1.0		
100	6	1	5.9	1.4		
1000	10.3	1.7	10.2	2.4		
2080	U/S	D/S	U/S	D/S	U/S	D/S
2	2	0.3			2	0.4
30	4.6	0.8			4.6	0.8
100	6.7	1.1			6.7	1.2
1000	11.7	1.9			11.7	2.0

2180	U/S	D/S	U/S	D/S	U/S	D/S
2	3.3	0.5			3.3	0.6
30	7.5	1.2			7.5	1.3
100	10.9	1.8			10.9	1.9
1000	18.9	3.1			18.9	3.3

3.4.3 As can be seen from the above table, both positive and negative changes in flows are simulated in both the upstream and downstream catchments, the more significant of which are in the downstream catchment.

3.4.4 For reference, catchments are identified within Figure 4.1 of Appendix E to the Hydraulic Modelling Report for the WNDA [p44, APP-167]. The upstream catchment (U/S) within APP-167 is referenced as Catchment 7, whilst the downstream catchment (D/S) is referenced as Catchment 6.

3.4.5 The Table 5.7 (p.51) of the Hydraulic Modelling Report [APP-160] indicates that between the Baseline and Construction (Point 4) scenarios additional inflows representing discharges from Mound A (A3). At Point 5, these flows are redistributed to those of the Baseline (See Table 6.7 (p.69) of the Hydraulic Modelling Report).

3.4.6 The overall effect of these changes are minor increases in peak flows to the lower catchment of the watercourse of between 0.2m^3/s and 0.7m^3/s, most notably in the construction phase, as indicated in Table 3-1 above. Minor reductions in peak flows of -0.1m^3/s are predicted in the upper catchment in the construction phase.

Preliminary Drainage Design

3.4.7 The preliminary drainage design of the surface water drainage system to Cemaes Stream includes discharges from Mound A, though this is limited to discharge point A3.

3.4.8 The landform changes introduced within the WNDA have resulted in changes in catchment area, runoff rates and the need for management of runoff rates and provision of attenuation. The following table summarises the key changes within the catchments drainage to the Nant Caerdegog Isaf.

Table 3-8 Key aspects of the Cemaes Stream drainage catchment

Discharge Point	Existing catchment area (ha)	Proposed catchment area (ha)	Catchment area increase (ha)	Maximum greenfield discharge rate (l/s)	Attenuation Volume (m^3)
A3	6.22	9.40	3.18	273.5	2,564

3.4.9 The following table summarises the discharges calculated within the preliminary drainage design at each of these discharge points for the Baseline

and Construction scenarios. Increases relative to the baseline are highlighted in red text, reductions are in green.

Table 3-9 Modelled Peak Discharges, Cemaes Stream

Discharge Point	Return Period				
Baseline Flows (l/s)	**1-year**	**5-year**	**30-year + CC**	**100-year**	**100-year + CC**
A3	139.4	235.0	406.9	434.0	520.8
Construction (Point 4) Flows (l/s)	**1-year**	**5-year**	**30-year + CC**	**100-year**	**100-year + CC**
A3	120.8	179.7	273.5	289.6	347.5
Difference (l/s)	**1-year**	**5-year**	**30-year + CC**	**100-year**	**100-year + CC**
A3	-18.6	-55.3	-133.4	-144.4	-173.3

3.4.10 As can be seen from the above, discharge rates are shown to reduce for all return periods. These reductions are despite the increases in catchment area identified in Table 3-8.

3.4.11 The MicroDrainage modelling indicates that there could be minor flooding, i.e. exceedance of the proposed channel capacities, at two locations in the 100-year plus climate change scenario. The flood volumes concerned were 12m^3 and 2.5m^3 respectively, which is expected to be localised.

Discussion

3.4.12 The reductions in runoff identified in Table 3-9 are the outcome of simulating the preliminary drainage design within industry standard hydraulic modelling software. It can be seen in Table 3-7, reductions in runoff indicated by the preliminary drainage design are not reflected within the downstream catchment inflows utilised within the hydraulic modelling. This is significant, as the only changes to the hydraulic modelling of Cemaes Stream are those indicated in Table 3-7, which indicates that these changes are the primary cause of the increased flood risk to properties upstream of Cemaes that are shown in the FCA.

3.4.13 If, as is indicated by Table 3-9, the flows from the site do not increase above existing flow rates, then a key target agreed between Horizon and NRW, that there should be no increase in flow to Cemaes Stream, is already met by the preliminary drainage design and no further mitigation would be required to reduce flood risk at this key receptor.

3.5 Nant Cemlyn

WNDA Hydraulic Modelling

3.5.2 The following tables summarise the flows applied within the hydraulic models under each of the scenarios. Increases relative to the baseline are highlighted in red text, reductions are in green.

Table 3-10 Modelled Peak Flows, Nant Cemlyn

Scenario/ Return Period	Baseline (m^3/s)		Construction (Point 4) (m^3/s)		Operation (Point 5) (m^3/s)	
2020	**U/S**	**D/S**	**U/S**	**D/S**	**U/S**	**D/S**
2	1.4	0.4	1.4	0.6		
30	3.4	1.0	3.4	1.3		
100	5.0	1.5	5.0	2		
1000	9.0	2.7	9.0	3.4		
2080	**U/S**	**D/S**	**U/S**	**D/S**	**U/S**	**D/S**
2	1.6	0.5			1.6	0.5
30	3.8	1.1			3.8	1.2
100	5.6	1.7			5.6	1.8
1000	10.1	3.1			10.1	3.2
2180	**U/S**	**D/S**	**U/S**	**D/S**	**U/S**	**D/S**
2	2.6	0.8			2.6	0.8
30	6.1	1.8			6.1	1.9
100	9.1	2.7			9.1	2.8
1000	16.3	5.0			16.3	5.1

3.5.3 As can be seen from the above there are negative changes in flows simulated in downstream catchments, the more significant of which are in the construction phase.

3.5.4 For reference, catchments are identified within Figure 4.1 of Appendix E to the Hydraulic Modelling Report for the WNDA [p44, APP-167]. The upstream catchment (U/S) within APP-167 is referenced as Catchment 9, whilst the downstream catchment (D/S) is referenced as Catchment 8.

3.5.5 The Table 5.8 (p.52) of the Hydraulic Modelling Report [APP-160] indicates that between the Baseline and Construction (Point 4) scenarios additional inflows representing discharges from Mound E (E1). At Point 5, these flows are redistributed to those of the Baseline (See Table 6.8 (p.70) of the Hydraulic Modelling Report).

3.5.6 The overall effect of these changes are minor increases in peak flows to the lower catchment of the watercourse of between 0.2m^3/s and 0.7m^3/s, most notably in the construction phase, as indicated in Table 3-1 above.

Preliminary Drainage Design

3.5.7 The preliminary drainage design of the surface water drainage system to Nant Cemlyn includes discharges from Mound E, though this is limited to discharge point E1 once the landform has revegetated and stabilised (for the purposes of the discussion here, it is assumed that this is post-construction).

3.5.8 The landform changes introduced within the WNDA have resulted in changes in catchment area, runoff rates and the need for management of runoff rates and provision of attenuation. The following table summarises the key changes within the catchments drainage to the Nant Cemlyn.

Table 3-11 Key aspects of the Nant Cemlyn drainage catchment

Discharge Point	Existing catchment area (ha)	Proposed catchment area (ha)	Catchment area increase (ha)	Maximum greenfield discharge rate (l/s)	Attenuation Volume (m^3)
E1	13.42	14.58	+1.16	960.6	4,198

3.5.9 The following table summarises the discharges calculated within the preliminary drainage design at each of these discharge points for the Baseline and Construction scenarios. Increases relative to the baseline are highlighted in red text, reductions are in green.

Table 3-12 Modelled Peak Discharges, Nant Cemlyn

Discharge Point	Return Period				
Baseline Flows (l/s)	**1-year**	**5-year**	**30-year + CC**	**100-year**	**100-year + CC**
E1	352.0	589.4	1012.3	1074.2	1289.0
Construction (Point 4) Flows (l/s)	**1-year**	**5-year**	**30-year + CC**	**100-year**	**100-year + CC**
E1	331.3	552.3	968.1	1047.0	1256.4
Difference (l/s)	**1-year**	**5-year**	**30-year + CC**	**100-year**	**100-year + CC**
E1	-20.7	-37.1	-44.2	-27.2	-32.6

3.5.10 As can be seen from the above, discharge rates are shown to marginally reduce for all return periods. These reductions are despite the increases in catchment area identified in Table 3-11.

3.5.11 The MicroDrainage modelling indicates that there would be no flooding, i.e. exceedance of the proposed channel capacities, in any scenario simulated.

Discussion

3.5.12 The reductions in runoff identified in Table 3-12 are the outcome of simulating the preliminary drainage design within industry standard hydraulic modelling software. It can be seen in Table 3-10 that reductions in runoff indicated by the preliminary drainage design are not reflected within the downstream catchment inflows utilised within the hydraulic modelling, which increase by $0.2m^3/s$ to $0.7m^3/s$. Further, the outcome of the flood risk modelling presented within the FCA and its supporting documents, which shows an increased flood risk to Cemlyn Road and to land downstream at Cestyll Gardens because of the Wylfa Newydd DCO Project, also does not reflect this important aspect of the drainage design.

3.5.13 If, as is indicated by Table 3-12, the flows from the site do not increase above existing flow rates and were this to be simulated within the hydraulic modelling, the outcome would be expected to show a negligible to beneficial impact on flood risk in Nant Cemlyn and at receptors downstream.

4 Siltbuster locations

4.1 Introduction

4.1.1 It is understood that there is some uncertainty over the proposed location of Siltbuster® type units, should they be required, associated with Mound E discharge locations and particularly in respect to discharge point E1, which lies on the western side of Mound E.

4.1.2 The following seeks to clarify the specific requirements and issues around the use of Siltbuster® type units and the location, though essentially it is concluded that that the precise location of the Siltbuster® type units will be determined at the detailed design stage.

4.2 General Requirements

4.2.1 In general, the treatment train for sediment management within the WNDA will consist of source control measures (soil management, silt fences, silt traps), conveyance control measures (swales), settlement within a settlement pond followed, if necessary, by treatment in a Siltbuster® type dosing facility prior to discharge.

4.2.2 As a result of this treatment train the general position of Siltbuster® type units will be downstream of the location of settlement ponds. The Siltbuster® type unit will consequently apply polyelectrolyte coagulants to the discharge from the settlement pond, the amount of which will be driven by the suspended sediment content of the discharge, that will then promote the further settlement of sediment in the water column prior to it reaching Cemlyn Lagoon.

4.2.3 With respect to discharge point E1, this would typically place the Siltbuster® type unit adjacent to the Afon Cafnan on the north eastern side of Mound E. With respect to discharge point E2, this would typically place the Siltbuster® type unit adjacent to the Nant Cemlyn on the western side of Mound E. These latter areas are understood to be more sensitive, hence the concern and uncertainty over location of these units.

4.3 Relevant Issues

4.3.1 The location downstream of the settlement pond and near the discharge point means that the pumps involved in moving water from the settlement pond, through the Siltbuster® type unit, and into the nearby watercourse need only be designed for relatively low-head situations; that is, they will not need to pump water vertically up a significant height.

4.3.2 As described above, it is proposed to pump water from discharge point E1 to the Afon Cafnan at discharge point E2 during construction periods and specifically during periods in which the vegetation of Mound E has not yet stabilised and where there is a risk of suspended sediment pollution to the downstream Cemlyn Lagoon.

4.3.3 In theory it should be possible to locate the pumps and Siltbuster® type units adjacent to either the Nant Cemlyn or adjacent to the Afon Cafnan during the construction phase when discharge at discharge point E1 is being pumped to

discharge point E2. Several issues exist when pumping sediment-laden water over horizontal and vertical distance, though most apply in both situations and will need to be considered at the detailed design. It is possible that a pump and associated pipework that 'sucks' sediment laden water from a settlement pond may need to be more robust than one that 'pushes' sediment laden water to the Afon Cafnan, which will also need to be considered at the detailed design.

Head and Losses

4.3.4 Pumping sediment laden water over a horizontal and vertical distance could pose operational issues associated with the pipeline route from discharge point E1 to discharge point E2. Topographical plans suggest that the pipeline would rise in the region of +6m to cross the northern flank of Mound E. The issue of head primarily relates to the vertical elevation that the pumped water would need to travel. Losses are driven by the friction created between the pipe material and the water, and it is affected by the length of the pipework and factors such as the number of joints and bends. It is understood that there are limits to the head that can be overcome with 'pull' arrangements, which rely on creation of a vacuum, as opposed to 'push' type arrangements, which create pressure to push water through the pipework. A 'push' arrangement would be preferred for robustness, placing the pump for discharge E1 to the west of Mound E.

Pump Failure

4.3.5 The need to pump over distance and with +6m of head would also pose operation and maintenance issues in the event of failure. Should there be a pump failure, all water currently contained in the pipeline would stop and the sediment within the water column would immediately start to settle out (particularly as it would have been dosed with coagulant), blocking the outlet of the Siltbuster® type unit. Blockage of the pipe work in situations like this could require significant effort to correct and avoidance would be recommended through the addition of a mechanism to drain the pipework back into the settlement pond. This is an issue that would affect both 'pull' and 'push' arrangements.

5 Conclusions

5.1 Drainage Strategy and Flood Risk

5.1.1 Section 3 of this report summarises the hydrological inputs used within the hydraulic modelling that supported the conclusions of the FCA for the Wylfa Newydd DCO Project.

5.1.2 Section 3 also presents additional information from the preliminary drainage strategy, including modelled discharge rates for a range of return periods associated with drainage of the WNDA, and it is demonstrated that, in virtually all scenarios, the drainage strategy will result in a reduction in discharge rates, despite catchments that experience a significant increase in catchment area.

5.1.3 As indicated in Section 3, it was not possible to fully represent the proposed drainage system within the hydraulic modelling and as such the hydraulic modelling does not fully represent the drainage design submitted with the DCO application. The outcome of this is that the FCA, and consequently Chapter D8 of the Environmental Statement, conclude that there is an increased flood risk on several watercourses associated with the Wylfa Newydd DCO Project, including Cemaes Stream, the Afon Cafnan and Nant Cemlyn. The former was shown to affect properties upstream of Cemaes, whilst the latter two were shown to affect Cemlyn Road and land adjacent to these watercourses.

5.1.4 The conclusions that can be drawn by the provision of additional information on the preliminary drainage strategy is that the impacts on flood risk predicted on Cemaes Stream, Afon Cafnan and Nant Cemlyn are expected to be largely beneficial, and at worst neutral. The exception is during construction, when the additional transfer of water from discharge point E1 on Nant Cemlyn to the Afon Cafnan could continue to result in an increase in peak discharge rates and some increase in flood levels. It is proposed that provision of additional attenuation storage, for which there is adequate space, be investigated at the detailed design stage.

5.1.5 The outcome of the provision of this additional information and clarification is that the impacts on flood risk at Cemaes, Cemlyn Road and to land at Cestyll Gardens and adjacent to the Afon Cafnan and Nant Cemlyn is avoided. Furthermore, the overall conclusion of the Environmental Statement, that the issues can be dealt with at the detailed design, is considered by Horizon to continue to be a robust position.

5.2 Location of Siltbuster® type units

5.2.1 A final conclusion of this report is that the location of Siltbuster® type units is largely driven by their location along the treatment pathway for sediment management. It may, as identified above, be possible to locate those associated with Mound E in less sensitive areas, however, this will depend upon the constraints identified, amongst others, and design decisions taken at the detailed design stage.

HORIZON NUCLEAR POWER

WYLFA NEWYDD

ENERGY WORKING FOR BRITAIN

Wylfa Newydd Project

Environmental Statement Addendum
Appendix D15-1-A
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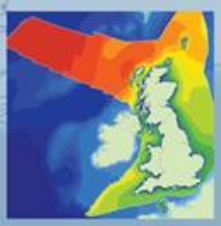
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Creating sustainable solutions for the marine environment




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Executive Summary

ABPmer has been commissioned by Jacobs to undertake a Navigational Risk Assessment (NRA), which details the marine risk associated with the construction and operational phases of the marine works for the Wylfa Newydd Project.

A risk workshop was held to draw out expert opinion from the local stakeholders. Relevant guidance and information published by industry bodies and regulators has also been reviewed and incorporated into the NRA process. To inform the stakeholder group, information defining the baseline navigational environment was provided, which included a traffic assessment using Automatic Identification System data collected in 2015, augmented by published and anecdotal information on recreational vessel use.

In total, 44 hazard scenarios were identified and assessed. A total of 23 hazard scenarios were identified for the construction of the Marine Off-Loading Facility (MOLF), breakwaters, Cooling Water intake and Cooling Water outfall and 21 hazard scenarios for the operational phase.

From the NRA process, 42 mitigation measures were identified, split between the construction and operational phases of the marine works. Following implementation of appropriate mitigation, marine risk to navigational receptors can be maintained within a level that is 'As Low As Reasonably Practicable'.

Contents

1 Introduction 1
1.1 Background to the Wylfa Newydd Project 1
1.2 Study area overview 1
1.3 Legislation and guidance 1
2 Data Sources 3
2.1 Automatic identification system data 3
2.2 Recreational activity 4
2.3 Navigational features 4
2.4 Maritime incidents 4
2.5 MetOcean 4
3 Navigational Baseline 5
3.1 Navigational environment 5
3.2 Statutory responsibilities and management procedures 5
3.3 Recreational facilities 5
3.4 Fishing activities 6
3.5 Aids to navigation 6
3.6 Emergency response 6
3.7 Marine incidents 7
3.8 Holyhead north disposal site 7
4 MetOcean 10
4.1 Tides 10
4.2 Waves 11
4.3 Wind conditions 12
5 Marine Traffic Analysis 13
5.1 Recreational vessel movements 13
5.2 Fishing vessel transits 14
5.3 Commercial transit routes 14
5.4 Traffic density 16
5.5 Future traffic 16
6 Wylfa Newydd Project Details 20
6.1 Construction 20
6.2 Operational phase of the MOLF 23
6.3 Decommissioning 25
7 Navigational Risk Assessment Process 26
7.1 Regulator meetings 26
7.2 Hazard observation workshop 27
7.3 Hazard workshop process 27
8 Formal Safety Assessment 41
8.1 Significance criteria 41
8.2 Construction impacts 43
8.3 Operational impacts 51
9 Cumulative Impacts 59

10 Mitigation Measures Summary 61
10.1 Project-specific mitigation measures 61
11 Summary 64
12 References 65
13 Abbreviations/Acronyms 66
14 Glossary 68

Appendices

A Accident Incident Table A1
B Tidal Flow Atlas B1
B.1 High Water Minus 6 Hours B1
B.2 High Water Minus 5 Hours B2
B.3 High Water Minus 4 Hours B3
B.4 High Water Minus 3 Hours B4
B.5 High Water Minus 2 Hours B5
B.6 High Water Minus 1 Hour B6
B.7 High Water B7
B.8 High Water Plus 1 Hour B8
B.9 High Water Plus 2 Hours B9
B.10 High Water Plus 3 Hours B10
B.11 High Water Plus 4 Hours B11
B.12 High Water Plus 5 Hours B12
B.13 High Water Plus 6 Hours B13
C Construction Phase Navigational Risk Assessments C1
D Operation Phase Navigational Risk Assessments D1

Images

Image 1. Rose plot of wave height against direction 11
Image 2. Wind rose for RAF Valley 12
Image 3. Annual ship calls: Holyhead, Liverpool, Mostyn 17
Image 4. Wind farm developments 19

Tables

Table 3.1 Annual disposal quantities for Holyhead Deep Disposal Site 7
Table 3.2 Marine incident summary for the study area (2006 to 2015) 8
Table 3.3 Marine incident summary for the marine works area (2006 to 2015) 8
Table 4.1 Summary of current flow results 10
Table 5.1 Vessel transits by ship type group in the study area 15
Table 5.2 Vessel transits by ship type group in the marine works area 15
Table 5.3 Port statistics by vessel type 17
Table 5.4 Annual ship calls: Holyhead, Liverpool, Mostyn 18
Table 5.5 Future traffic prediction 18
Table 6.1 Dredge disposal assumed number of loads 21

Table 6.2 MOLF operational use 23
Table 6.3 Vessel simulation objectives 24
Table 7.1 MCA meeting attendees 26
Table 7.2 Trinity House meeting attendees 26
Table 7.3 Hazard risk workshop attendees 27
Table 7.4 Hazard definitions 28
Table 7.5 Hazard log for the construction of breakwaters, MOLF, Cooling Water intake and Cooling Water outflow 29
Table 7.6 Hazard log MOLF operational phase 30
Table 7.7 Cause frequency for the construction phase 31
Table 7.8 Cause frequency for the MOLF operational phase 32
Table 7.9 Embedded risk controls for the construction phase 34
Table 7.10 Embedded risk controls for the MOLF operational phase 34
Table 7.11 Ranked hazard scenarios for the construction phase 35
Table 7.12 Ranked hazard scenarios for the MOLF operational phase 36
Table 7.13 Risk score rating 37
Table 7.14 Additional controls for the construction phase 37
Table 7.15 Additional controls for the MOLF operational phase 38
Table 7.16 Final risk for the construction phase 39
Table 7.17 Final risk for the MOLF operational phase 40
Table 8.1 Receptor sensitivity 41
Table 8.2 Effect magnitude 42
Table 8.3 Significance classification 42
Table 8.4 NRAs brought forward into the impact assessment 44
Table 8.5 NRAs brought forward into the impact assessment 51
Table 9.1 In-combination activities and projects 59

Figures

Figure 1. Study Area 71
Figure 2. Navigational Features 72
Figure 3. RYA Recreational Boating 73
Figure 4. Navigational Accidents/Incidents 74
Figure 5. MetOcean Observation Locations 75
Figure 6. Vessel Transits through the Study Area 76
Figure 7. Vessel Transits through the Study Area by Ship Type 77
Figure 8. Recreational Transits through the Marine Works Area 78
Figure 9. High Speed Craft Transits through the Marine Works Area 79
Figure 10. Fishing Vessel Transits through the Marine Works Area 80
Figure 11. Port Service Craft Transits through the Marine Works Area 81
Figure 12. Non-Port Service Craft Transits through the Marine Works Area 82
Figure 13. Training, Research, Passenger and Cargo Vessel Transits through the Marine Works Area 83
Figure 14. Dredging, Underwater Operations, Military, Law Enforcement and Tanker Transits through the Marine Works Area 84
Figure 15. Vessel Transit Density Grid 85
Figure 16. Vessel Monitoring System Information 86
Figure 17. Passage between the Wylfa Marine Development Area and Holyhead North Disposal Site 87

1 Introduction

1.1 Background to the Wylfa Newydd Project

A Development Consent Order (DCO) will be applied for in respect of the Wylfa Newydd DCO Project. The Power Station would be located on a site identified by the UK Government through the National Policy Statement for Nuclear Power Generation (EN-6), referred to as the Wylfa National Policy Statement (NPS) Site. The Wylfa NPS Site is located on the north coast of Anglesey adjacent to the Existing Power Station. Marine facilities would be used during construction and operation of the Power Station. These marine facilities include the MOLF, breakwaters, Cooling Water intake and Cooling Water outfall for the Power Station. The marine development is referred to collectively as 'Wylfa Marine Development Area' throughout the report.

1.2 Study area overview

For the purposes of this NRA, the study area includes the Skerries traffic separation scheme (TSS) to the west and north of the Wylfa NPS Site, Dulas Bay to the east and the Holyhead North marine disposal site to the south. The marine works area extends to the Skerries lighthouse in the west, north to the Skerries TSS and east to the Middle Mouse rock. Figure 1 shows the full extent of the study area and marine works area.

1.3 Legislation and guidance

The following section identifies relevant legislation relating to navigational assessments for marine developments.

1.3.1 Primary legislation

International protocols and conventions relating to safety, laws of the sea and pollution apply to shipping and ports. The UK Government has a responsibility to ensure that measures are implemented in order to honour its commitments to these protocols, not least of these is the UK's responsibility under Article 60(7) of the United Nations Convention on the Law of the Sea (UNCLOS) relating to provisions for 'Artificial islands, installations and structures in the exclusive economic zone'. An NRA is one process by which the necessary considerations of developments can be evaluated.

Within UK territorial waters, the UK Government upholds the right of innocent passage, as defined in Article 17 of UNCLOS. Beyond the 12-nautical-mile limit of UK territorial waters, shipping has the freedom of navigation. The regulation of shipping should be carried out by the 'flag state control' operated by the country to which the ship is registered. As this has proved unsatisfactory, 'port state control' has become common in national jurisdictions. Under this regime, the UK Government represented by the inspection division of the Maritime and Coastguard Agency (MCA) exercises the rights of the port state to inspect and, if appropriate, detain sub-standard ships.

Sea ports and harbours provide the interface between the land, near shore and open sea. The UK Marine Policy Statement (UK Government, 2011) identifies in relation to port developments and marine safety that:

"*Marine plan authorities and decision makers should take into account and seek to minimise any negative impacts on shipping activity, freedom of navigation and navigational safety; and ensure that their decisions are in compliance with international maritime law"* (HM Government, 2011)

A Statutory Harbour Authority (SHA) is self-governed, with specific legislation (normally acts of Parliament) creating the SHA as an entity, with further powers and amendments made over time in response to the changing scope and remit of the SHA. Underpinning the powers of an SHA is a range of national legislation which places statutory responsibility on the SHA to ensure navigation and safety within the harbour limits; this includes the 'Harbours Act 1964', 'Harbours, Docks and Piers Clauses Act 1847' and the 'British Transport Docks Act 1972'. Under such legislation, the Harbour Master, as defined in the Harbours, Docks and Piers Clauses Act 1847, may issue general or specific directions to control movements of vessels within their SHA area in order to ensure safety.

The DCO in respect of the Wylfa Newydd DCO Project will establish Horizon Nuclear Power Wylfa as a SHA. The SHA area would include the extent of the marine works. .

1.3.2 Secondary guidance

In the absence of specific navigational guidance relating to the development and operation of marine works, including the creation of a MOLF, breakwaters, Cooling Water intake and Cooling Water outfall inside of an SHA area, the following secondary guidance documents have been used in preparation of the NRA tables. These documents provide information regarding the issues that should be considered when assessing the effect on navigational safety:

- International Maritime Organization (IMO) Revised Guidelines for Formal Safety Assessment (FSA) for use in the IMO rule making process (IMO, 2013);
- MCA, Marine Guidance Note 543 (MGN 543 Merchant + Fishing) Safety of Navigation: Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response (MCA, 2016);
- Department for Transport (DfT) and MCA; Methodology for Assessing the Marine Navigational Safety and Emergency Response Risks of Offshore Renewable Energy Installations (OREI) (DfT/MCA, 2013); and
- Port Marine Safety Code (PMSC) (DfT/MCA, 2016).

As the regulator for marine safety, the MCA has been consulted in the planning and creation of the supporting NRA. In addition, in its capacity as the General Lighthouse Authority, Trinity House has been consulted with respect to the lighting and marking of marine structures and marine works associated with the MOLF, breakwaters, Cooling Water intake and Cooling Water outfall.

1.3.3 ALARP principle

Within the PMSC, the term ALARP is defined; this stands for 'As Low As Reasonably Practicable'. It is an industry-wide concept applying to both health and safety and port marine safety. The core concept is that of 'reasonably practicable', which involves weighing up risk against the effort, time and money needed to control it. The PMSC specifically references ALARP in respect of the Marine Safety Management System (MSMS) and NRAs.

2 Data Sources

The following section details where the data required to inform the baseline information and NRAs have been compiled from.

2.1 Automatic identification system data

Automatic Identification System (AIS) data has been used for the 2015 period. The data has been provided through agreement with the Marine Management Organisation and decoded by ABPmer to create a geodatabase of anonymised vessel transits. The data was collected by the UK MCA using their network of AIS receivers. The data represent a composite of 84 days of AIS data collected in 2015. The following periods of time form the dataset:

- 1 to 7 from each of the following: January, February, March, April, May, June, July, August and November 2015;
- 8 to 14 of October 2015;
- 29 August to 4 September 2015; and
- 3 to 9 December 2015.

The minimum requirements for vessel traffic data from the OREI methodology (DfT/MCA, 2013) is 28 days split between peak and off-peak periods (typically 14 days in the winter and 14 days in the summer). The data used for this assessment consists of a sample of seven days for each month of the year. This provides for 84 days of AIS data from 2015, which is the most recent set of data available from the MCA. This approach ensures that seasonality is captured within the full 84-day dataset, with the NRA making use of the latest national AIS dataset. This provides greater confidence that the vessel traffic routeing has more fully taken into account transient vessel patterns. This approach was agreed with the MCA at the start-up meeting preceding the NRA (see Section 7.1.1).

AIS signals are broadly classified as 'Class A' and 'Class B', where AIS-A is carried by international voyaging ships with gross tonnage of 300 or more tonnes, and all passenger ships regardless of size. AIS-B is carried by smaller vessels and is aimed at smaller commercial vessels, the fishing sector and recreational vessel users; however, the use of AIS-B is non-compulsory. Both AIS-A and AIS-B data have been used within this study.

The AIS data has been broken down using the following vessel categories, which are taken directly from the AIS data transmissions:

- Non-port service craft;
- Port service craft;
- Vessels engaged in dredging or underwater operations;
- High speed craft;
- Military or law enforcement vessels;
- Passenger vessels;
- Cargo vessels;
- Tankers;
- Fishing; and
- Recreational.

2.2 Recreational activity

Data for recreational activity in the study area has been collated using a variety of methods. Quantitative data has been derived from AIS-B records. However, it is recognised that only a small percentage of recreational craft carry AIS transceivers, as use of AIS-B is non-mandatory. Therefore, patterns of activity by recreational craft from AIS sources alone were considered to significantly underplay their true frequency and routeing patterns. To provide a more comprehensive set of information to define recreational use, anecdotal and website information has been compiled; this included information from local yacht and sailing clubs, Royal Yachting Association (RYA) routeing information, race route maps, analysis of passage plans and yachting guides.

2.3 Navigational features

Navigational features have been considered in Section 3.1. These features have been identified using information from Admiralty Chart number 1977 titled 'Holyhead to Great Orme's Head'.

2.4 Maritime incidents

To characterise maritime incidents occurring within the study area, available data has been pooled from a number of sources. This includes call out data records held by the Royal National Lifeboat Institution (RNLI) and Marine Accident Investigation Branch (MAIB) incident records.

2.5 MetOcean

Information relating to the MetOcean environment, relevant to navigational interests with the study area has been drawn from surveys completed by Titan Environmental Surveys. Tidal information is published via Admiralty Total Tide; the current flows were measured at intervals on a neap and spring tide and presented in the Wylfa Oceanography Interpretive Report (Titan Environmental Surveys, 2012). Wind information has been taken from observations at RAF Valley since 1 January 1960 and has been summarised using a wind rose. Wave information was provided by the Wylfa Newydd Development Site Further wave modelling, Phase 1 (Amec, 2015).

3 Navigational Baseline

The following sections review the baseline conditions for commercial shipping and recreational navigation within the study area. Where relevant, factors relating to Wylfa Marine Development Area have been drawn out. The following elements are covered in the baseline:

- Navigational environment;
- Statutory responsibilities and management procedures;
- Recreational facilities;
- Fishing activities;
- Aids to navigation;
- Emergency response; and
- Marine incidents.

3.1 Navigational environment

This section presents a description of the navigational features in the study area (Figure 2). Cemlyn Bay in which the Wylfa Marine Development Area is situated is not currently used by commercial vessels, and due to the navigational features in the area, large vessels typically navigate around 4 Nautical Miles (nm) from the coastline. The largest port within the study area is Holyhead, which is operated by Stena Line Ports Ltd; the port has ferry services to Ireland operated by Stena Line and Irish ferries. The other harbours located within the study area are at Cemaes Bay and Amlwch. These harbours are mainly used by smaller recreational and fishing vessels. However, it should be noted that a pilot service for vessels navigating to and from Liverpool is located at Amlwch; the associated pilot boarding station is located 2 nm north of Point Lynas (see Figure 2).

A significant feature within the study area is the Skerries TSS. This TSS is regularly used by vessels transiting to and from ports on the north coast of Wales and the north-west coast of England, in particular Liverpool. The TSS is located 4.2 nm from the Wylfa Marine Development Area at its closest point, meaning that large commercial vessels are unlikely to transit close to the Wylfa Marine Development Area. There is a deep-water anchorage located 2 nm north-east of Moelfre, close to Dulas Bay. This anchorage is routinely used by commercial vessels before proceeding to the Port of Mostyn. For locations, see Figure 2.

3.2 Statutory responsibilities and management procedures

There are no SHAs that currently cover any part of the marine works area. Recreational vessels regularly report their departure and intentions to the coastguard station situated at Holyhead, and vessels navigating to or from Holyhead contact Holyhead Port Control which is operated by Stena Line Ports Ltd.

3.3 Recreational facilities

Within the study area there are recreational facilities available at Holyhead Marina. The marina has approximately 350 berths and a large number of swinging moorings. Holyhead Sailing Club operates out of Holyhead marina; the sailing club is RYA accredited and offers courses in the area (see Figure 3 for locations).

The bays and inlets along the north coast of Anglesey provide sheltered anchorages for recreational craft in the area when the wind is in a south-west, through to south-easterly direction. The bays do

not provide permanent mooring facilities and are mainly used for cruising as a stop-off point for overnight anchoring or a short break to wait for tide or wind during a transit.

3.4 Fishing activities

Recreational fishing regularly takes place in the area to the north of Anglesey with vessels based at Cemaes Harbour and Amlwch Harbour. These harbours are both home to vessels that regularly fish in Cemlyn Bay (the Wylfa Marine Development Area is located in the east of Cemlyn Bay). There are approximately seven vessels fishing within Cemlyn Bay, some of which currently lay pots and shoot lines within the Wylfa Marine Development Area. There are no commercial fishing activities taking place in the vicinity of the Wylfa Marine Development Area.

3.5 Aids to navigation

A range of Aids to Navigation are used within the study area; Figure 2 identifies their locations. There are a number of cardinal marker buoys to the east of the Wylfa Marine Development Area that mark areas where there are rocks close to the surface. The cardinal marker buoys are situated at the extremity of a navigational hazard with the buoy indicating which direction is safe for vessels to pass.

A Racon is in operation at the Skerries lighthouse. The Racon will be shown on a vessel's radar as the Morse Code for the corresponding letter shown on the nautical chart. The purpose of the Racon is to present a visual representation on the vessel's radar screen highlighting, in this case, the location of the lighthouse. This is widely used so that in periods of reduced visibility vessels can navigate safely in the area.

A differential global positioning system station is located at Point Lynas. This station transmits a correction to the global positioning system receivers within a maximum range of approximately 300 nm to increase the positional accuracy of the system.

The existing Magnox jetty located within the Wylfa Marine Development Area has port lateral marks to aid vessels navigating to berth at the jetty.

3.6 Emergency response

A range of emergency response is available within the study area. The following organisations provide resources to render assistance in the instance that a marine emergency occurs.

3.6.1 HM Coastguard

The MCA is responsible for the initiation and coordination of all civilian maritime search and rescue operations within the UK Maritime Search and Rescue Region. This includes the mobilisation, organisation and tasking of adequate resources to respond to persons in distress at sea, or to persons at risk of injury or death along the shoreline within the UK. HM Coastguard has access to a range of resources including aircraft and coastal search teams. The study area falls within the jurisdiction of the Holyhead Coastguard Operations Centre.

3.6.2 Local rescue organisations

There are two lifeboat stations in the vicinity of Wylfa Marine Development Area, located at Holyhead and Moelfre, shown on Figure 2. The coverage area for the two lifeboat stations is sufficient to cover the north coast of Anglesey. The following provides a brief overview:

- **Holyhead RNLI** is manned by a voluntary crew and the station operates both an all-weather Severn class lifeboat and an inshore D class lifeboat.
- **Moelfre RNLI** is manned by a voluntary crew operating a Tamar class lifeboat and an inshore D class lifeboat.

3.7 Marine incidents

This section reviews marine incidents that have occurred within the study area over the past 10 years (subject to the availability of data). The analysis is intended to provide a general indication as to whether the study area is in an area of low or high risk in terms of marine incidents. Data from the MAIB and the RNLI has been obtained, covering the following timescale:

- MAIB: information includes accidents to ships and personnel reports to the MAIB within the period of 2006 to 2015 inclusive.
- RNLI: complete dataset of all callouts from 2006 to 2015 inclusive.

Given that the datasets cover slightly different time periods, and use different classifications for identifying accidents and incidents, the study team has amalgamated datasets to create the best available 10 years of information. Where possible, duplication of data has been removed (as the same incident may have been recorded by both organisations). The complete combined dataset has been presented spatially in Figure 4. Due to the size and complexity of the data record, the tabulated information has been included in Appendix A. Table 3.2 and Table 3.3 provide a compiled view of marine incidents within the study area and marine works area addressed by this document.

3.8 Holyhead north disposal site

Excess dredge material from the Wylfa Marine Development Area will be disposed at Holyhead North marine disposal site (IS043). This is a newly designated site to the north-west of Holyhead (see Figure 2) replacing Holyhead Deep Disposal Site (IS040). The Holyhead Deep site has been closed due to the tidal power project in the southern half of the disposal site planned by Minesto. This project involves deploying tidal turbines and was granted consent in April 2017. The northern half of the Holyhead Deep Disposal Site has been designated as Holyhead North.

As Holyhead North is a newly designated site, there is no historical information for disposal quantities. To indicate possible future levels of disposal at Holyhead North, Table 3.1 presents annual disposal quantities for Holyhead Deep from 2006 to 2015. The disposal quantities are used to determine the number of vessels that are likely to be navigating to/from Holyhead North over a period.

Table 3.1 Annual disposal quantities for Holyhead Deep Disposal Site

Year	Disposal Quantity (wet tonnes)
2006	12,750
2007	52,513
2008	44,937
2009	65,964
2010	0
2011	88,535
2012	87,568
2013	41,678
2014	0
2015	89,320

Table 3.2 Marine incident summary for the study area (2006 to 2015)

Incident Category	Year										Total	Annual Frequency
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015		
Capsize/sinking	3	4	2	3	2	1	4	4	4	3	30	3
Collision	3	2	0	0	0	0	0	0	4	2	11	1.1
Equipment failure (vessel)	22	18	14	23	17	12	14	15	20	18	173	17.3
Fire/explosion	3	1	0	0	0	1	1	2	0	0	8	0.8
Grounding	5	1	2	3	0	4	0	3	2	1	21	2.1
Impact with structure	0	1	1	1	3	1	0	1	1	2	11	1.1
Leaks/swamping	0	2	0	0	1	0	1	2	1	2	9	0.9
Other nautical safety	5	6	5	10	1	3	5	10	9	7	61	6.1
Person in distress	1	6	3	3	2	1	3	0	3	3	25	2.5
Person(s) in the water	4	1	2	3	1	1	2	1	1	1	17	1.7
Total	**46**	**42**	**29**	**46**	**27**	**24**	**30**	**38**	**45**	**39**	**366**	**36.6**

Table 3.3 Marine incident summary for the marine works area (2006 to 2015)

Incident Category	Year										Total	Annual Frequency
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015		
Capsize/sinking	1	0	1	0	0	0	0	0	0	1	3	0.3
Collision	0	2	0	0	0	0	0	0	0	0	2	0.2
Equipment failure (vessel)	1	0	0	3	1	1	2	1	0	2	11	1.1
Fire/explosion	0	0	0	0	0	0	0	1	0	0	1	0.1
Grounding	1	1	1	0	0	0	0	1	0	0	4	0.4
Leaks/swamping	0	0	0	0	0	0	0	0	1	0	1	0.1
Other nautical safety	0	0	0	1	0	0	0	0	1	0	2	0.2
Person(s) in the water	0	1	1	0	0	0	0	0	1	1	4	0.4
Total	**3**	**4**	**3**	**4**	**1**	**1**	**2**	**3**	**3**	**4**	**28**	**2.8**

From Table 3.2, it can be noted that the most commonly occurring incident within the study area is that of 'equipment failure (vessel)' followed by 'other nautical safety' and 'capsize/sinking'. When the location of these is examined on Figure 5, it can be seen that incidents generally occur in larger concentrations at Holyhead and Moelfre, then to a lesser extent along the coastline of Anglesey.

Incidents within the marine works area are shown in Table 3.3. The most common incident is again 'equipment failure (vessel)' with an average annual frequency of 1.1 occurrences per year. The next most frequent type of incident within the marine works area is 'grounding' with four occurrences within the 10-year period. Figure 5 shows that most of the groundings occur on the shallow rocks and reefs between the Skerries Lighthouse and the Anglesey coastline; there was one grounding on the north-western side of Cemlyn Bay.

The more serious marine incidents of ship-to-ship collision, fire/explosion and capsize/sinking occur very infrequently within the marine works area with five reported occurrences within the 10-year period. There were three reported 'capsize/sinking' incidents of which two were a canoe or kayak capsizing and one was the capsize of a dinghy which led to a fatality. There was one 'fire/explosion' incident which involved an engine fire on board a workboat whilst on passage and one collision, which was a near miss event between a small cargo vessel and a recreational yacht.

4 MetOcean

4.1 Tides

A study of the oceanography for the area surrounding the Wylfa Peninsula was commissioned by Horizon Nuclear Power Wylfa and carried out by Titan Environmental Surveys. The oceanographic study shows that the spring and neap tidal ranges at the Wylfa Peninsula are 7 m and 2.5 m respectively. In this area, the flood tide will flow in an easterly direction and the ebb tide in a westerly direction. The proposed location of the MOLF and breakwaters is partially sheltered in Cemlyn Bay within which the current forms rotational eddies. The maximum current speed and direction for spring and neap tides are shown in Table 4.1.

Table 4.1 Summary of current flow results

Site Number	Location	Spring Tide		Neap Tide	
		Maximum Current (ms^{-1})	Direction of Maximum Current (°N)	Maximum Current (ms^{-1})	Direction of Maximum Current (°N)
S2	Seabed	1.82	258	1.33	094
S2	Surface	2.12	263	1.85	086
S4	Seabed	1.95	269	1.33	097
S4	Surface	1.93	256	1.34	262
S9	Seabed	1.01	249	0.75	252
S9	Surface	1.03	256	0.71	248
1 m/s is 1.94 knots					

Source: Titan Environmental Surveys, 2012

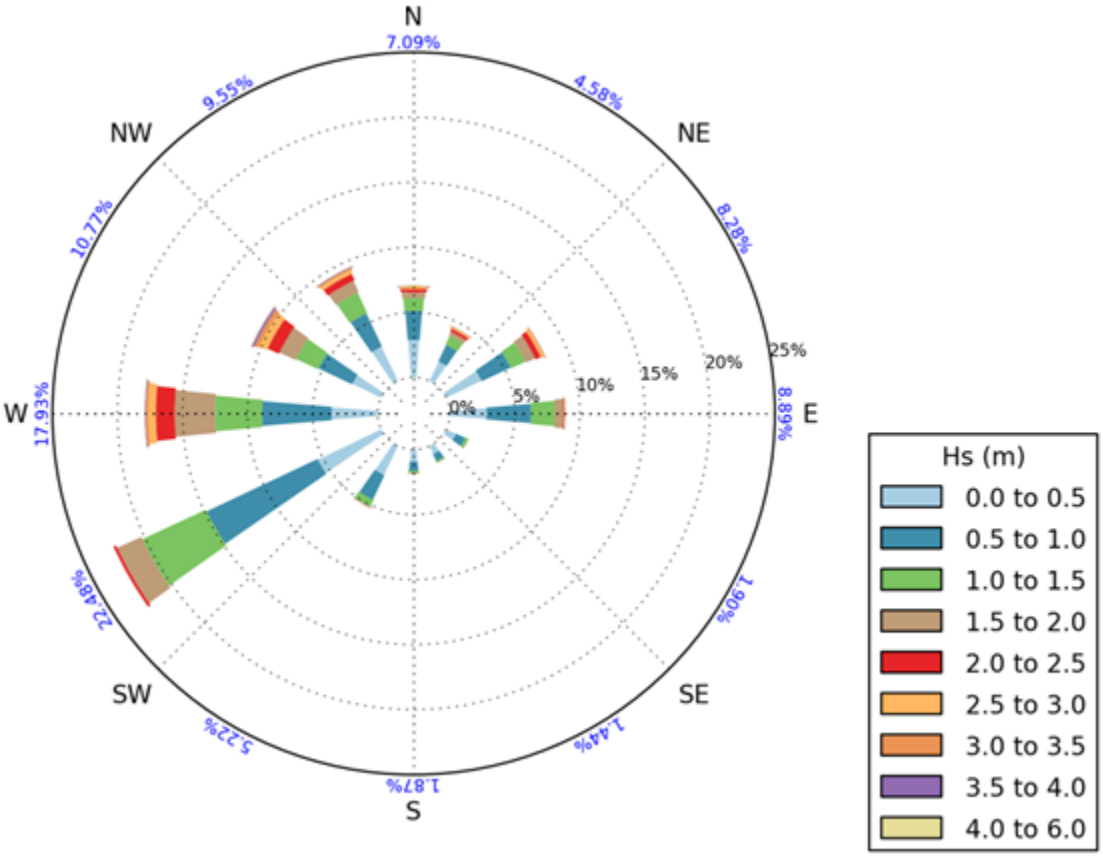
It can be seen from Table 4.1 that the strongest flow for the current occurs during a spring tide flowing in a westerly direction indicating that this is during an ebb tide.

MetOcean observations were taken from a set of locations in the vicinity of the Wylfa Marine Development Area (see Figure 5). The maximum surface current is similar for sites S4 and S9 but is marginally faster (0.3 ms^{-1}) at site S2. The location of site S2 means that the water will be much deeper in this area so the current at the seabed is unlikely to affect navigation. The maximum current for each part of the tidal cycle involves an approximate easterly or westerly direction, parallel to the shoreline.

Information gained through survey has been used to inform a hydrodynamic model created by RWE. The outputs from the Wylfa Hydrodynamic Model (RWE, 2016) have been used to create a tidal stream atlas showing current flow for hourly intervals from high water minus six hours to high water plus six hours for spring and neap tides. The tidal stream atlas is presented in Appendix B and identifies strong currents running east west to the north of Wylfa Head, with multiple eddies forming at various states of the tide within Cemlyn Bay.

4.2 Waves

Image 1 shows a wave rose diagram for a point approximately 1.1 nm north of the Wylfa Marine Development Area (see Figure 5). This provides an indication of wave activity for the area vessels would be transiting when proceeding to or from Wylfa Marine Development Area.



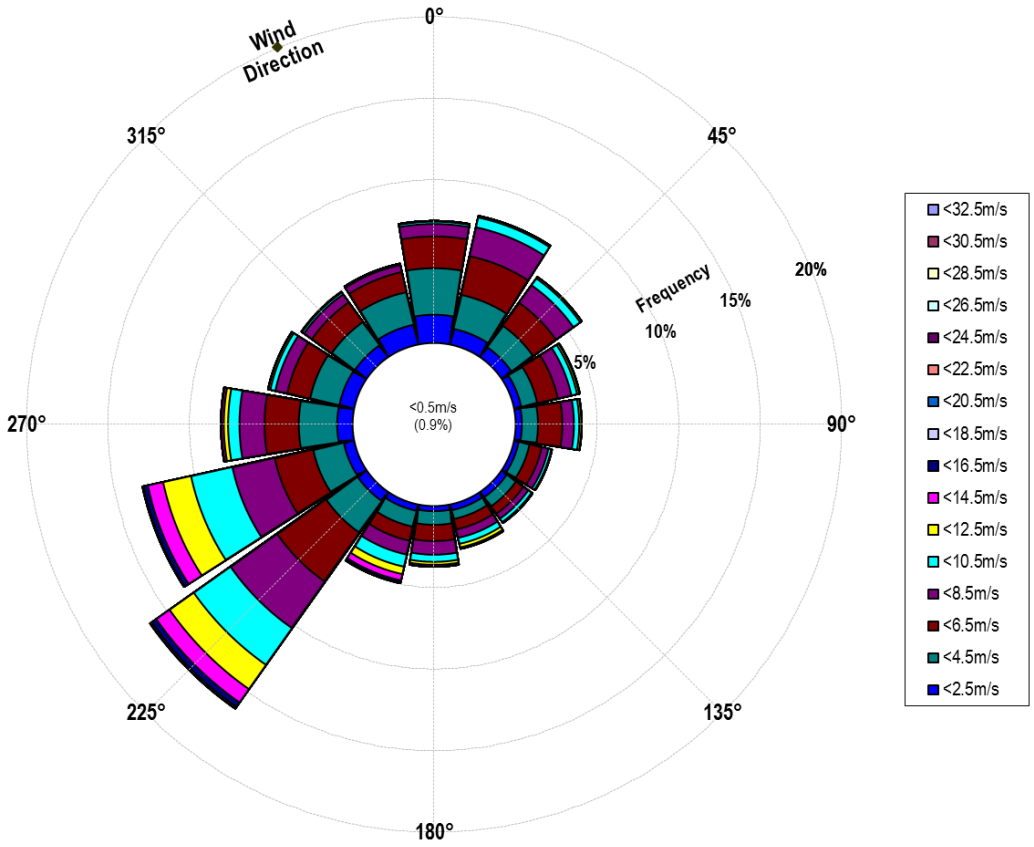
Source: Amec, 2015

Image 1. Rose plot of wave height against direction

It can be seen from Image 1 that a significant proportion of waves are from the south-west and west where the wave height is most frequently 0.5 m to 1.0 m. The highest frequency of larger waves (2.0 m to 3.5 m) comes from the south-west through to north-west direction. The waves from these sectors have the longest fetch distance and are therefore larger.

4.3 Wind conditions

Image 2 shows a wind rose comprising data from 2009 to 2014 inclusive recorded at RAF Valley on Anglesey. RAF Valley is located on the south-west side of Anglesey near the town of Rhosneigr (see Figure 5 for location). Image 2 provides indicative wind characteristics for the Anglesey area.



UK Met Office, 2015

Image 2. Wind rose for RAF Valley

Image 2 identifies that the wind is predominantly from the south-west and to a lesser extent westerly. The strongest winds of up to 16.5 m/s (Beaufort wind force 7) are also predominantly from the south-west and west. The Wylfa Marine Development Area is sheltered from these directions by the surrounding land and is likely to experience lighter wind from these directions.

5 Marine Traffic Analysis

This section presents both recreational navigation and commercial shipping traffic within the study area, using information collated from vessel traffic survey analysis, augmented by written information regarding recreational use and anecdotal information from the recreational and fishing community. Information on commercial shipping is presented in Figure 6 to Figure 15 and recreational boating is presented in Figure 3 and Figure 8.

5.1 Recreational vessel movements

5.1.1 Recreational vessel transits/cruising areas/racing areas

Through analysis of yacht club information and anecdotal discussions with recreational boaters, the recreational usage of the area has been determined. Transits of recreational craft using AIS-A or AIS-B are shown in Figure 8. In addition, Figure 3 provides a heat-map (density grid) of recreational vessel sea area published by the RYA. This heat-map has been created from AIS data collected over the summers of 2011 to 2013; the resulting heat-map is presented as a grid of 1 nm by 1 nm squares. Information denoting typical cruising routes, which are classified as medium and light use, is also shown. It should be noted that not all recreational craft will carry AIS and so anecdotal information has been obtained from users of the local area to determine inshore transit routes for recreational vessels (per comms. Kim Argyle, 2016) and these have been included on Figure 8.

5.1.2 Yachting

Yachting covers a variety of boating activities, which for the purposes of this assessment include motor boating, keelboat cruising and racing. In general, cruising takes place all year round with increased intensity in the summer months; any recreational sailing will also be heavily biased towards the weekend. The Holyhead Sailing Club organises yacht racing between April and October with several of their racing routes following the north coast of Anglesey. These events include a range of yacht sizes and types, all of which are large enough to navigate within coastal area. The marine works area is not used by any smaller (non-powered) dinghies or keelboats.

Figure 3 identifies indicative routes for recreational vessels and cruising areas using the RYA UK Coastal Atlas of Recreational Boating (RYA, 2016). The information in Figure 3 accompanied by analysis of yacht club information and anecdotal information received from stakeholders gives a representation of recreational yacht activity in the area. It can be seen from Figure 8 that during the period when the AIS data was recorded, recreational vessels generally transited approximately 1.0 nm to the north of the Wylfa Marine Development Area. A transit line can be seen entering Cemaes Bay before continuing out of the marine works area. This was likely to anchor to either gain shelter from weather conditions or as a rest stop.

Anecdotal information from Holyhead Sailing Club (per comms. Kim Argyle, 2016) suggests that vessels typically navigate between the mainland and Middle Mouse Rock on the eastern side of the marine works area. They would then remain close to the coastline, making use of back eddies and tidal currents to progress along track. Vessels may then navigate outside of Furlong Green Starboard hand marker buoy, and then inshore of Victoria Bank and West Mouse, before leaving the marine works area at the south-western corner. This route is shown on Figure 8 as a dark purple line.

5.1.3 Sea kayaking

The study area is a popular location for sea kayaking due to the quality of the scenery and challenges of navigating a small unpowered craft in the strong tidal flows and wave conditions. There is a range of training centres located on Anglesey that offer courses including the circumnavigation of Anglesey. Kayaks that navigate along the coast, past the Wylfa Marine Development Area, will keep close to the shoreline (within approximately 10 m) to gain protection from wind conditions under any steep-sided foreshore. If there are any waves at the time of the passage, sea kayaks will stand further out to sea, beyond any shore breaks. Nearly all transits by sea kayaks will be carried out in daylight hours.

5.2 Fishing vessel transits

Fishing vessel activity is provided on Figure 10, which depicts AIS fishing vessel transits, and on Figure 16 which shows Vessel Monitoring System (VMS) information obtained from the Marine Management Organisation. All UK commercial fishing vessels 12 m or more in overall length must have a UK government-approved satellite-tracking device. The device allows a vessel to be automatically located and identified through VMS by transmitting position data every two hours when at sea (Marine Management Organisation, 2014). This information is not representative of smaller fishing vessels under 12 m in length as they are unlikely to use either AIS or VMS systems. Anecdotal information has been used to provide information on fishing vessels under 12 m in length.

Figure 10 and Figure 16 show that there is no recorded fishing traffic currently using Cemlyn Bay. Anecdotal information (per comms, David Williams, 2016) suggests that up to seven local vessels under 12 m in length use the area. These vessels are trawling, potting and line fishing within Cemlyn Bay. The vessels are operated for either recreational fishing or for commercial purposes such as chartered fishing. Figure 10 identifies the typical navigational routes used by these fishing vessels, which are classified as 'Inshore Fishing Routes'.

5.3 Commercial transit routes

AIS data, representative of 84 days of AIS collected in 2015, have been used to create transit lines shown in Figure 6 to Figure 14 (see Section 2.1 for data description). The following text provides a description of commercial vessel routeing.

Vessel transits through the study area are shown in Figure 6 where it can be seen that the majority of vessels proceed offshore of Anglesey with routes that run through the Skerries TSS and do not cross into the marine works study area. Vessels that navigate closer inshore, transit to the north of the Skerries Lighthouse to avoid the shallow rocks and banks closer inshore. These vessels would proceed past the Wylfa Marine Development Area at a distance of approximately 1.7 nm. Vessels with shallower draughts such as high speed craft and port service craft regularly pass to the south of the Skerries and so would be approximately 0.5 nm offshore as they pass the Wylfa Marine Development Area. Table 5.1 shows the count of vessel transits entering the study area from the 84 days of recorded AIS data in 2015. This count is then uplifted to provide a representative yearly vessel count.

The majority of vessels navigating within the study area transit through the Skerries TSS meaning that they pass the Wylfa Marine Development Area at approximately 4 nm. To assess the vessels that navigate closer to the Wylfa Marine Development Area location, a count of the vessel transits entering the marine works area is given in Table 5.2. This number was then uplifted to give a representative yearly figure for vessel transits which will enter the marine works area.

Table 5.1 Vessel transits by ship type group in the study area

Vessel Category	Transit Line Count (84 days)	Uplifted (Yearly) Transit Count	Transit Count Percentage
Unknown*	202	878	1.1
Non-port service	266	1,156	1.5
Port service	252	1,095	1.4
Dredging/underwater	357	1,551	2
High speed craft	3,777	16,412	21.2
Military/law	524	2,277	2.9
Passenger	7,355	31,959	41.2
Cargo	2,955	12,840	16.5
Tanker	1,422	6,179	8
Fishing	280	1,217	1.6
Recreational	465	2,021	2.6
Grand Total	**17,855**	**77,585**	**100**

* Vessel type 'unknown' is an AIS record which is not correctly transmitting its vessel type at the time of data collection, and cannot therefore be assigned a vessel type. It is included in the dataset to ensure full representation of known vessel activity.

Data Source: Data is representative of 84 days of AIS-A and AIS-B data from MCA terrestrial AIS receivers:
- 1 to 7 from January, February, March, April, May, June, July, August, November 2015;
- 29 August to 04 September 2015;
- 08 to 14 October 2015; and
- 03 to 09 December 2015.

See Section 2.1 for more information.

Table 5.2 Vessel transits by ship type group in the marine works area

Vessel Category	Transit Line Count (84 days)	Uplifted (Yearly) Transit Count	Transit Count Percentage
Unknown*	34	148	5.6
Non-port service	41	178	6.7
Port service	45	196	7.4
Dredging/underwater	5	22	0.8
High speed craft	261	1,134	42.9
Military/law	11	48	1.8
Passenger	30	130	4.9
Cargo	33	143	5.4
Tanker	26	113	4.3
Fishing	55	239	9
Recreational	68	295	11.2
Grand Total	**609**	**2,646**	**100**

* Vessel type 'unknown' is an AIS record which is not correctly transmitting its vessel type at the time of data collection, and cannot therefore be assigned a vessel type. It is included in the dataset to ensure full representation of known vessel activity.

Data Source: Data is representative of 84 days of AIS-A and AIS-B data from MCA terrestrial AIS receivers:
- 1 to 7 from January, February, March, April, May, June, July, August, November 2015;
- 29 August to 04 September 2015;
- 08 to 14 October 2015; and
- 03 to 09 December 2015.

See Section 2.1 for more information.

It can be seen from Table 5.2 that there were 609 vessel transits through the marine works area during the 84-day period when the AIS data was recorded. This is represented by 121 individual vessels. A large proportion of vessels transiting through the marine works area are high speed craft (42.9%). These vessels are predominantly wind farm transfer vessels operating between Holyhead and the Irish Sea wind farms. These vessels have a shallow draught and are highly manoeuvrable, so can safely

navigate inshore of the TSS. The second highest proportion of vessels transiting the marine works area are recreational vessels (11.2%). The recreational vessel movements are detailed within Section 5.1. The next highest proportion of vessel traffic was fishing vessels (9%).

5.4 Traffic density

By combining AIS vessel transit data, a density grid with a cell size of 250 m by 250 m has been produced (Figure 15). This is an 'all up density' and includes all vessel type classifications. The peak density shown by the density grid is due to regular passenger services operating between Holyhead and Dublin. Other areas that show a large density of vessel traffic are the two lanes of the Skerries TSS and where vessels leave the TSS heading for the Liverpool pilot station to the north of Amlwch. It can be seen from Figure 15 that the area of vessel traffic with highest density within the marine works area is from vessels transiting between the Skerries Lighthouse and Anglesey. From analysis of the AIS vessel transits, these are fishing, recreational and high speed craft.

5.5 Future traffic

The future growth and development of ports and shipping on a macro level is intrinsically linked to world trade patterns and the economic climate, and is reactive to changing economic circumstances. Shipping volumes bear a direct relationship to the global economic market. As markets react to the changing financial situation, shipping lines respond with services to move goods and people. Economic growth and increasing world trade results in higher levels of shipping and growth of port operations; economic slowdown and recession results in lower levels of global trade and of shipping as a result.

To provide a local context, changes to the trends of shipping can be assessed by looking at the vessel trends of nearby ports and the potential for projects that might affect shipping traffic. To provide a comparison with historic data for the area, port arrival statistics from the DfT have been presented in Table 5.3. It should be noted that traffic for the port of Holyhead predominantly uses routes connecting north Wales with Ireland; therefore, most of the traffic from Holyhead does not pass the Wylfa Marine Development Area. Traffic for the ports of Liverpool and Mostyn will predominantly pass Anglesey in an east-west direction. However, the route for larger ships will use the Skerries TSS located 5 nm to the north of the Wylfa frontage. Other Anglesey ports such as Amlwch do not provide DfT statistics due to their vessel use and port size. Hence comparison information for smaller ports is not available.

From Table 5.3 the main trades and vessel types for each port can be determined. The vessel counts have been collated in Table 5.4 to give an annual vessel traffic count for each port; this can then be brought forward to estimate future traffic levels.

When considering the period from 2009 to 2015, the minimum traffic total (all ports combined) was 9,226 in 2009 with a peak value of 11,749 in 2010; a range of 2,523. Between 2009 and 2015, the annual traffic total fluctuates within this range. Image 3 shows the fluctuating port data. From Image 3 it can be noted that ship calls at Liverpool rise by *circa* 1,000 between 2009 and 2010, then drop back over a two-year period, followed by another rise in 2014. It would be expected that the opening of Liverpool2 in 2016 will provide a change in ship calls as new berthing space has been created at the port. Holyhead demonstrates a slight increase in ship calls over the seven-year period, with a rise of around 500 calls over the period. The port of Mostyn shows an overall rise in vessel calls, with the peak in 2014 reflecting the change of use by P&O ferries.

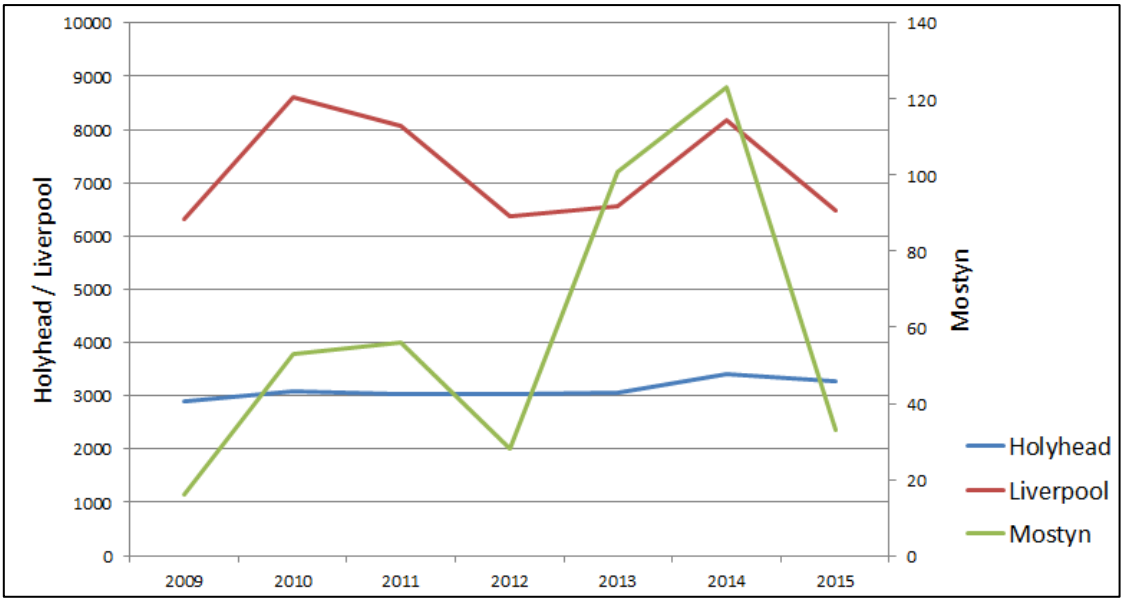


Image 3. Annual ship calls: Holyhead, Liverpool, Mostyn

Table 5.2 identifies the 2015 vessel traffic based on 84 days of AIS data, uplifted to present an annual value. It is not possible to directly compare the DfT information (Table 5.3 and Table 5.4) with vessel movements summarised from AIS information (Table 5.1). DfT information identifies ship calls, as a direct count; whereas the AIS data counts all vessel transit within the defined study area. The transit count will always be much greater as it includes a count of '1' for each vessel movement (for example, from anchorage to berth) plus transits from support craft, fishing vessels and the recreational community. The DfT values deal with commercial ship arrivals only. However, the DfT values provide the only government-published long-term trend information, and have therefore been interpreted to provide a correlation for the anticipated future baseline.

Table 5.3 Port statistics by vessel type

Port	Vessel Type	2009	2010	2011	2012	2013	2014	2015
Holyhead	Tankers	3	12	47	55	58	63	64
	Roll on Roll off (Ro-Ro) vessels	2,886	3,076	2,958	2,950	2,959	3,326	3,163
	Container vessels	0	0	0	1	0	0	0
	Cargo vessels	13	9	13	18	10	2	0
	Passenger vessels	0	2	12	17	16	13	24
	Other vessels	0	0	4	3	9	9	17
Liverpool	Tankers	1,171	1,643	1,638	1,211	1,219	1,523	1,216
	Ro-Ro vessels	3,212	4,149	3,372	2,624	2,627	3,474	2,848
	Container vessels	471	644	710	597	671	916	706
	Cargo vessels	1,359	2,053	2,035	1,667	1,689	1,873	1,391
	Passenger vessels	39	29	140	44	35	48	59
	Other vessels	56	79	185	225	307	346	248
Mostyn	Tankers	1	0	0	0	0	0	0
	Ro-Ro vessels	12	15	36	24	82	47	27
	Container vessels	0	0	0	0	0	0	0
	Cargo vessels	3	33	17	3	3	2	3
	Passenger vessels	0	0	0	0	0	0	1
	Other vessels	0	5	3	1	16	74	2

Data Source: (DfT, 2016)

Based on the values in Table 5.3, it can be summarised that a 360 ship call per year difference could be seen over a seven-year period (range of 2,523 over seven years). However, as demonstrated in the total values per year in Table 5.3, this range can occur year to year, without any increasing or decreasing trend. The guidance from the DfT/MCA Methodology for Assessing the Marine Navigational Safety and Emergency Response Risks of Offshore Renewable Energy Installations (OREI) (DfT/MCA, 2013) identifies that a future baseline should cover the development. Vessel traffic associated with the Wylfa Marine Development Area is possible up to the point the reactor becomes operational (although the intensity of traffic would occur over the 5-year build of the Power Station).

Table 5.4 Annual ship calls: Holyhead, Liverpool, Mostyn

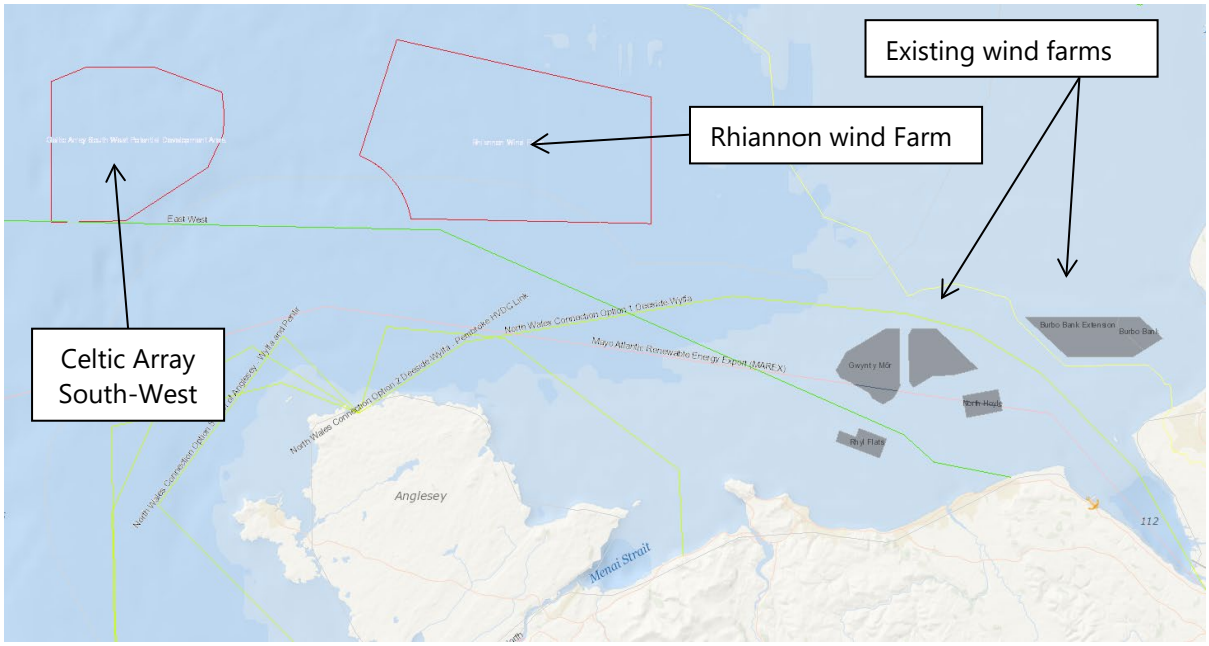
Port	2009	2010	2011	2012	2013	2014	2015
Holyhead	2,902	3,099	3,034	3,044	3,052	3,413	3,268
Liverpool	6,308	8,597	8,080	6,368	6,548	8,180	6,468
Mostyn	16	53	56	28	101	123	33
Total	**9,226**	**11,749**	**11,170**	**9,440**	**9,701**	**11,716**	**9,769**

The future prediction uses the rationale of an approximate 3% increase in vessel transits over the period of the Wylfa Newydd Project. The future prediction completes at the point the reactor becomes operational. Two scenarios are presented in Table 5.5, the first as a cumulative increase, the second as a fixed increase based on a 3% traffic increase value calculated from the baseline.

Table 5.5 Future traffic prediction

Year Count	Year	3% Vessel Uplift (cumulative)	3% Vessel Uplift (baseline)	Scheme Milestone
1	2015	77,585	77,585	Baseline – vessel transit
2	2016	79,965	79,965	
3	2017	82,418	82,345	
4	2018	84,947	84,798	MOLF build
5	2019	87,553	87,324	MOLF operational
6	2020	90,238	89,926	
7	2021	93,007	92,605	
8	2022	95,860	95,363	
9	2023	98,801	98,204	Last vessel use of MOLF
10	2024	101,832	101,130	
11	2025	104,956	104,142	Reactor operational

It should be noted however, as demonstrated by the fluctuation in ship calls in the DfT data, vessel use is highly dependent on national and international economic conditions. Not least of these is the effect of the UK withdrawing its membership of Europe, and any implications for border controls, with implications for Irish Sea ferry services running from Liverpool, Mostyn and Holyhead. Another controlling factor is the further development of offshore activity associated with wind farms. There are two potential offshore wind farm locations that would affect the high speed vessel traffic in the area indicated in Image 4. At the time of writing this NRA report, both the Celtic Array South-West and Rhiannon wind farms have been cancelled and so there will be no associated change in vessel traffic due to high speed craft. However, should this decision be revised, this could lead to an increase in high speed vessels. The best knowledge available at this time suggests that high speed vessel movements recorded in 2015, as part of the baseline, are indicative of the future level of vessel transits from the operations and maintenance phase of the established wind farms.



Source: Global Offshore Wind Farms Database

Image 4. Wind farm developments

6 Wylfa Newydd Project Details

The marine development aspects of the Power Station would create a MOLF, breakwaters, Cooling Water intake and Cooling Water outfall for the Power Station. The marine development is considered in this report in terms of construction and operation of these facilities.
There are four phases to the scheme, namely construction of the marine works, operation of the MOLF, operation of the Power Station and decommissioning. The following outlines the phases as applied within the NRA.

Construction of the marine works

- Marine works deliveries and use of marine construction plant during construction of the marine works.
- Deliveries for Power Station construction (in conjunction with marine works deliveries, and marine construction plant).

Operational phase of the MOLF

- Deliveries for Power Station construction (with the marine works fully complete).

Operational phase of the Power Station

- Operation of the Power Station, with approximately one vessel every year for replacement of plant and equipment.

Decommissioning phase

- This phase is not considered within the scope of the NRA.

The assessments carried out in this NRA have considered the operational phase of the MOLF and the operational phase of the Power Station together. These have been referred to in following sections as the operational phase.

6.1 Construction

The MOLF would provide two purpose-built quays: a bulk quay (with two berths); and a Ro-Ro quay to allow delivery by sea of bulk materials, such as aggregates, cement and reinforcing steel, and the large pre-fabricated elements required for the construction of the Power Station, including Abnormal Indivisible Loads (AILs).

The MOLF's use would offset the need for the delivery of a considerable quantity of construction materials by road and, therefore, would reduce the volume of road traffic and the associated environmental effects.

The bulk quay would extend between the eastern breakwater and the Ro-Ro quay and comprise two berthing platforms, each with four mooring dolphins (i.e. eight on total). It would provide berthing facilities for bulk vessels and unloading facilities for bulk materials. The two berthing platforms would have approximate surface area dimensions of 65 m by 30 m. The area behind the platforms and dolphins would be filled to a platform level of between +5 m AOD or +6 m AOD, and would be protected by a rock armour revetment.

The Ro-Ro quay would extend eastwards from the southern end of the bulk quay (i.e. towards the shoreline) and comprise a quayside used primarily for Ro-Ro vessels and Lift-on Lift-off (Lo-Lo) vessels, incorporating a ramp for ship to shore transfer of AILs, and Lo-Lo of equipment and materials by cranes. Its quay wall would be approximately 100 m in length and its quay surface would be set at a platform level of between +5 m AOD or +6 m AOD.

The quay wall for the Ro-Ro ramp would be set at the same level as the bulk berth quay surface level with the toe of the sloping ramp used to receive AILs being at approximately +3.5 m AOD, thereby providing a shallow gradient up to the general quay level. The quay wall would continue towards the Cooling Water System intake and the base of the wall would match the level required for the Cooling Water System intake.

In addition to the bulk and Ro-Ro quays, the MOLF would include a temporary lay-by berth that vessels could be moored against for short-term waiting until the destination bulk or Ro-Ro berth is available. The berth would be located at the southern end of the western breakwater and consist of a series of berthing and mooring dolphin structures. The berth is remote from the land and would be accessed by small boats.

6.1.1 Dredging

Dredging would be required to form the inner harbour and access channel for vessel navigation, along with the required depth for the Cooling Water channel and intake facility. For the purposes of the NRA, it has been assumed that the dredging works could generate up to 242,000 m^3 of soft sediment which may be removed by cutter suction dredge methods and up to approximately 368,000 m^3 of fractured bedrock removed through drill and blast methods, with backhoe excavation to barges. It is anticipated that the majority of rock could be used within the breakwater, cofferdam and backfill for the berthing areas. However, for the purposes of assessment, the worst case is assessed, which assumes that all dredged material (i.e. 610,000 m^3) is disposed of at sea at Holyhead North marine disposal site (IS043). In either scenario, material would be transported via barge from the site and generate vessel moves. For further details on the dredge and disposal considerations, refer to the Horizon Nuclear Power Wylfa "Marine Works Volumes" memo (HNP-S4-SDE-MEM-00005) (Horizon, 2016) for assumptions on the volume of marine excavated materials requiring disposal for different scenarios.

For the purposes of this assessment, it is assumed that all of the 242,000 m^3 of superficial material would be transported by dredger, and all of the rock (368,000 m^3) would transported by barge away from the site. Table 6.1 estimates the number of vessel movements associated with the disposal of dredged material, assuming the below vessel capacities.

Table 6.1 Dredge disposal assumed number of loads

Vessel Type	Assumed Hopper Capacity	Volume (in situ) m^3	Assumed Number of Loads	Number of Movements
Inshore Cutter Suction Dredger	3,600 m^3	100,000	28	56
Offshore Cutter Suction Dredger	9,000 m^3	142,000	16	32
Barge	900 m^3	368,000	409	818

6.1.2 Disposal at sea

Dredge arising that cannot be used within the marine works would be taken to the Holyhead North marine disposal site either within the onboard hopper of the dredger or on a hopper barge. A number of routeing options are possible for dredge vessels moving between the Wylfa Newydd Project construction area and the disposal site. To provide a basis to carry out this NRA, an assumed transit route has been identified on Figure 17. There are other routes that could be used to complete the passage, based on vessel size, tidal state, weather conditions and sea state. The route shown on Figure 17 has a journey distance of 13.4 nm which would take approximately 2.5 hours to complete. The hazard scenarios associated with this passage have been included in Appendix C.

6.1.3 MOLF

For the purposes of this assessment, it is assumed that the MOLF would be constructed in the wet, and therefore require construction plant, platforms with spud moorings, a variety of cranes and barges for transporting works material. Tugs and workboats would also be required to move non-powered barges and platforms into location, along with safety boats and crew transfer vessels. This marine plant would arrive on-site at predetermined points in the construction programme, and remain on-site until discharged to other operations. Therefore, movements into, and out of, the site are limited to occasional transits. Where possible, construction material would be delivered to site via tug and tow (until the MOLF is constructed).

A section of the MOLF would be completed early in the marine construction programme. The intent of completing this section early is to allow for access to vessels, and for delivery of materials required for marine construction (e.g. pre-cast concrete elements for the MOLF, and pre-cast concrete armour units for the breakwater).

6.1.4 Breakwaters

There would be two breakwaters extending out into Porth-y-pistyll that would provide protection and create acceptable wave conditions for operation of the cooling water intake equipment; hereafter referred to as the western breakwater and the eastern breakwater. The breakwaters would also provide sheltered conditions for vessels accessing and berthing at the MOLF.

Construction of the breakwater structures in principle, introduces permanent new hard surfaces, which could potentially have the capacity to function as an artificial rocky reef providing a new colonisation surface for species dependent on hard substrate. The development of habitats and species on the breakwater structures could also potentially provide habitat, food and refuge resources for seabirds. They also provide intertidal areas for grey seals to haul out.

The western breakwater would not be connected to the shore. From its landward end it would be aligned approximately south-west to north-east and then kinked approximately south to north. The eastern breakwater would be connected to the shore. From its landward end, it would be aligned approximately south-east to north-west.

6.1.5 Cooling Water intake and outfall

The Cooling Water intake is located on the southern side of the MOLF whereas the Cooling Water outfall is located to the north in a small embayment surrounded by rocky outcroppings. The Cooling Water intake and outfall would be constructed during the marine works and become operational whilst the MOLF is in use and continues to operate through the operational phase of the Power Station.

6.2 Operational phase of the MOLF

Construction of the marine facilities would be complete by 2020 to support the main site construction. It is anticipated that up to 60-80% of construction materials for the Power Station would be delivered via sea. The anticipated number of vessel arrivals at the MOLF is summarised in Table 6.2.

Table 6.2 MOLF operational use

MOLF	Total Number of Movements
Bulk materials	3,142
Abnormal Indivisible Loads barges	660

It is anticipated that the highest frequency of vessels berthing at the MOLF during a 24 hour period will be eight. This is based on four vessels being unloaded per 12 hour shift, with three berths available to unload cargo and one lay-by berth.

Each delivery vessel movement (either arrival or departure) will have associated port service craft movements. In some circumstances, and subject to navigational risk review, some vessels may not require tug support and some vessel may not require a pilot (if for example, a Pilot Exemption Certificate (PEC) holder is on board). Hence, each delivery vessel movement could need up to four port service craft movements (two movements for the tug and two for the pilot boat). However, the port service craft movements could be considerably less depending on the specifics of the delivery vessel and PEC status.

6.2.1 Vessel simulation study

To support the development of the MOLF and breakwater design, a navigation simulation study has been carried out by BMT Argoss (BMT Argoss, 2016) to investigate the feasibility and risks when using the proposed harbour and MOLF facilities during the operational phase. This study used models of a bulk vessel, Ro-Ro barge and Lift on-Lift off vessel to determine whether they could safely operate within the harbour area. There were two harbour layouts considered:

- Layout A – 400 m breakwater; and
- Layout B – 500 m breakwater.

The study had 15 objectives detailed within Table 6.3.

A total of 77 vessel simulation runs were completed and were used to inform key recommendations and conclusions for navigation at the project location. These conclusions are summarised below:

- All vessels can be safely berthed in wind conditions up to 30 knots from any direction.
- The most challenging approach is during the ebb tide.
- A set of lateral buoys marking an approach channel would limit the sea room available for manoeuvring and would not provide benefit to a vessel navigating to berth.
- A set of leading lights would provide the most useful indication of distance off track.
- A number of approach runs required the aid of a harbour tug to aid with passing the breakwaters and berthing.
- To maintain a vessels position at pilot station, a full sea going tug would be required.

These recommendations have been used to inform the NRA in respect of control measures applied as mitigation.

Table 6.3 Vessel simulation objectives

Vessel Type	No.	Objective
Tug power requirement	1	Determine tug power required to hold large Ro-Ro barge in position, at pilot station, in worst expected MetOcean conditions
	2	Determine tug power required to hold bulk vessel in position in worst expected MetOcean conditions
Bulk vessel operations – Layout A	3	Determine limiting MetOcean conditions in which the bulk vessel can enter the port and berth at the bulk berth starboard side alongside
	4	Determine limiting MetOcean conditions in which the bulk vessel can depart the port from starboard side alongside
	5	Determine limiting MetOcean conditions in which the bulk vessel can enter the port and berth port side alongside
	6	Determine limiting MetOcean conditions in which the bulk vessel can depart the port from the bulk berth port side alongside
Large Ro-Ro barge – Layout A	7	Determine limiting MetOcean conditions in which the large Ro-Ro barge can enter the port. Within the limits two hours before high water to two hours after high water and berth at the Ro-Ro berth
	8	Determine limiting MetOcean conditions in which the large Ro-Ro barge can depart the port
Lo-Lo vessel operations – Layout A	9	Determine limiting MetOcean conditions in which the Lo-Lo vessel can enter the port and berth at the Ro-Ro berth starboard side alongside
	10	Determine limiting MetOcean conditions in which the Lo-Lo vessel can depart the port from the Ro-Ro berth starboard side alongside
	11	Determine limiting MetOcean conditions in which the Lo-Lo vessel can enter the port and berth at the bulk berth starboard side alongside
	12	Determine limiting MetOcean conditions in which the Lo-Lo vessel can depart the port from the bulk berth starboard side alongside
	13	Determine limiting MetOcean conditions in which the Lo-Lo vessel can enter the port and berth at the bulk berth port side alongside
	14	Determine limiting MetOcean conditions in which the Lo-Lo vessel can depart the port from the bulk berth port side alongside
All vessels – Layout B	15	Determine by repeating previous failed runs, if layout B is an improvement over layout A

6.2.2 Maintenance dredging

The requirement for maintenance dredging will be informed by hydrographic survey to determine rates of sedimentation. Currently a low rate of sediment accretion is expected at the Wylfa Marine Development Area.

6.2.3 Operational phase of the Wylfa Newydd Power Station

Once the construction phase of the Power Station is complete, there is no planned usage of the MOLF. The MOLF would be maintained to allow usage should this be required during the operational phase of the Power Station.

6.3 Decommissioning

Decommissioning the Power Station has been assessed at a qualitative level. The decommissioning process is not anticipated to occur for approximately 60(+) years and would require a further Environmental Impact Assessment under the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999 (as amended).

Whilst the potential use of the MOLF during the decommissioning phase is currently unknown, it is likely that a proportion of demolished materials may be transported to/from the Wylfa Newydd Project site during this phase. Vessel volumes are likely to be enveloped by those of the main site construction phase and activity would occur over a significantly longer period of time. It should be noted that vessel movements can only be assumed at this stage.

This NRA does not further consider the decommissioning phase, due to the large timescale of operation and the requirement for a further Environmental Impact Assessment to be completed for decommissioning of the facilities. This approach was agreed with the MCA during the meeting held on 30 September 2016 (see Section 7.1.1). However, further consideration is given to the decommissioning phase in chapter D15 of the Environmental Statement.

7 Navigational Risk Assessment Process

This section presents the methodology and lists consultation for the NRA.

7.1 Regulator meetings

7.1.1 Maritime and Coastguard Agency

A meeting with the MCA was held on 30 September 2016. The aim of this meeting was to present the Wylfa Newydd Project and agree a methodology for completing the NRA. Table 7.1 lists the attendees of the meeting.

Table 7.1 MCA meeting attendees

Attendee	Organisation
Nick Salter	MCA
Heloise Warner	MCA
Emma Beagley	Horizon Nuclear Power
Rob Bromley	Jacobs
Jane Templeton	Jacobs
Colin Trigg	Jacobs
Natalie Frost	ABPmer
Monty Smedley	ABPmer
Adam Fitzpatrick	ABPmer

During this meeting, the approach to collection of baseline data and the methodology for carrying out the NRA was confirmed as appropriate by the MCA.

7.1.2 Trinity House

A meeting with Trinity House was held on 22 May 2017. The aim of this meeting was to discuss and agree aids to navigation that would be required for the Wylfa Marine Development Area. Table 7.2 lists the attendees of the meeting.

Table 7.2 Trinity House meeting attendees

Attendee	Organisation
Trevor Harris	Trinity House
Steve Vanstone	Trinity House
Martin Thomas	Trinity House
Richard Potter	Royal Haskoning DHV
Bas Wijdeven	Royal Haskoning DHV
Jane Templeton	Jacobs
Adam Fitzpatrick	ABPmer

7.2 Hazard observation workshop

In order to provide an assessment of navigational risk during the construction and operational phases of the proposed MOLF, breakwaters, Cooling Water intake and Cooling Water outflow, a hazard workshop with maritime community stakeholders was undertaken. The hazard identification workshop was held on 24 October 2016 at Horizon Nuclear Power Wylfa's offices at Wylfa. During the workshop, a presentation was given of the available baseline data and exercises were carried out to identify potential hazards associated with the Wylfa Newydd Project.

The aim of the workshop was to identify navigational safety concerns relative to the study's scope. In addition, attendees at the workshop provided anecdotal information regarding marine use of the study area, which enhanced the level of detail collected through the navigation baseline activities.

The output from the workshop was documented and shared with attendees. A total of 23 hazard scenarios were identified for the construction phase and 21 hazard scenarios for the operational phase.

7.2.1 Attendance

The attendees at the hazard workshops are shown in Table 7.3. This list was drawn from known stakeholders and from those identified through local consultation. This list is not exhaustive, but is representative of those with interests in the area.

Table 7.3 Hazard risk workshop attendees

Attendee	Organisation
Kevin Riley - Harbour Master	Stena Line Ports Ltd
Wyn Parry - Port Manager	Stena Line Ports Ltd
Neil Humphreys - Pilot	Stena Line Ports Ltd
Trever Harris - Aids to Navigation Manager	Trinity House
Tony Hilliard - Marine Surveyor	MCA
Geoff Price - Harbour Master	Amlwch Harbour
David Williams	Cemaes Harbour Committee
Sue James	Holyhead Sailing Club
Kim Argyle	Holyhead Sailing Club
Mike Butterfield	RYA
Emma Beagley	Horizon Nuclear Power Wylfa
Ifer Gwyn	Horizon Nuclear Power Wylfa
Jane Templeton	Jacobs
Monty Smedley	ABPmer
Adam Fitzpatrick	ABPmer

7.3 Hazard workshop process

As part of the workshops, key marine hazards associated with the construction and operation were discussed and noted (see Section 6 for details of the build and operation of the facility). Where appropriate, vessel types were considered separately to ensure the risk levels were assessed accurately and so that the control options could be identified on a type-specific basis, for example, risk control measures for construction craft which may be floating platforms with spud legs used as anchors present different risks to operating recreational vessels. Other general hazards associated with the

construction and operational phases, such as dropped objects, man overboard, pollution incidents and search and rescue operations were also discussed. Table 7.4 details definitions of specific hazard types taken from DfT/MCA (2013); Methodology for Assessing the Marine Navigational Safety and Emergency Response Risks of Offshore Renewable Energy Installations (OREI).

Table 7.4 Hazard definitions

Category	Description
Foundering	To sink below the surface of the water.
Collision	Collision is defined as a vessel striking, or being struck by, another vessel, regardless of whether either vessel is under way, anchored or moored; but excludes hitting underwater wrecks.
Allision	Defined as a violent contact between a vessel and a fixed structure.
Contact	Contact is defined as a vessel striking, or being struck by, an external object that is not another vessel or the sea bottom.
Fire	Fire is defined as the uncontrolled process of combustion characterised by heat or smoke or flame or any combination of these.
Explosion	An explosion is defined as an uncontrolled release of energy which causes a pressure discontinuity or blast wave.
Loss of hull integrity	Loss of hull integrity is defined as the consequence of certain initiating events that result in damage to the external hull, or to internal structure and sub-division, such that any compartment or space within the hull is opened to the sea or to any other compartment or space.
Flooding	Flooding is defined as sea water, or water ballast, entering a space, from which it should be excluded, in such a quantity that there is a possibility of loss of stability leading to capsizing or sinking of the vessel.
Grounding	Grounding is defined as the ship coming to rest on, or riding across underwater features or objects, but where the vessel can be freed from the obstruction by lightening and/or assistance from another vessel (e.g. tug) or by floating off on the next tide.
Stranding	Stranding is defined as being a greater hazard than grounding and is defined as the ship becoming fixed on an underwater feature or object such that the vessel cannot readily be moved by lightening, floating off or with assistance from other vessels (e.g. tugs).
Machinery related accidents	Machinery related accidents are defined as any failure of equipment, plant and associated systems which prevent, or could prevent if circumstances dictate, the ship from manoeuvring or being propelled or controlling its stability.
Payload related accidents	Payload related accidents include loss of stability due to cargo shifting and damage to the vessel's structure resulting from the method employed for loading or discharging the cargo. This category does not include incidents which can be categorised as hazardous substance, fires, explosions, loss of hull integrity, flooding accidents etc.
Hazardous substance accidents	Hazardous substance accidents are defined as any substance which, if generated as a result of a fire, accidental release, human error, failure of process equipment, loss of containment, or overheating of electrical equipment, can cause impairment of the health and/or functioning of people or damage to the vessel. These materials may be toxic or flammable gases, vapours, liquids, dusts or solid substances.

Category	Description
Accidents to personnel	Accidents to personnel are defined as those accidents which cause harm to any person on-board the vessel e.g. crew, passengers, stevedores, which do not arise as a result of one of the other accident categories. Essentially, it refers to accidents to individuals, though this does not preclude multiple human casualties as a result of the same hazard, and typically includes harm caused by the movement of the vessel when underway, slips, trips, falls, electrocution and confined space accidents, food poisoning incidents, etc.
Accidents to the general public	Accidents to the general public are defined as those accidents which lead to injury, death or loss of property amongst the population ashore resulting from one of the other ship accident categories.
Capsizing	The overturning of a vessel after attaining negative stability.

After the workshop, the risks associated with the hazards were ranked based on the discussions held during the workshop and mitigation measures were identified. A combined total of 44 hazard scenarios were identified during the workshop; these are shown alphabetically in Table 7.5 and Table 7.6

From the 44 hazard scenarios identified in Table 7.5 and Table 7.6 , the attendees considered the possible outcome for each hazard scenario according to the 'most likely' and 'worst credible' outcome. Theses outcomes included the consequences to the receptors of people, property, environment and the port business. A likely frequency of occurrence was assigned to the 'Most Likely' and 'Worst Credible' outcome for each hazard scenario, as informed by the accident/incident records identified in Section 3.7 along with knowledge gained from working on projects of similar scale and complexity. These frequency and consequence descriptors from the 'Most Likely' and 'Worst Credible' outcomes were used on a 5-by-5 matrix to determine the summative risk.

Table 7.5 Hazard log for the construction of breakwaters, MOLF, Cooling Water intake and Cooling Water outflow

Assessment Number	Hazard Category	Hazard Scenario
1	Accidents to personnel	Diving operations associated with the marine works
2	Accidents to personnel	Man overboard during dredge/construction works
3	Allision	Dredge/construction plant impact with marine works during construction phase
4	Collision	Dredge/construction plant collision with recreational vessel
5	Collision	Dredge/construction plant collision with commercial vessel
6	Collision	Dredger or barge on passage to Holyhead North disposal site with another vessel
7	Collision	Dredger or barge depositing load at Holyhead North with vessel transiting
8	Collision	Tug and tow collision with commercial vessel
9	Fire/explosion	Dredge/construction plant on-board fire
10	Fire/explosion	Ordnance found during dredge/construction
11	Fire/explosion	Pressure waves caused by explosives during dredging operations
12	Flooding	Dredger flooding whilst engaged in operations
13	Grounding	Dredge/construction plant grounding due to

Assessment Number	Hazard Category	Hazard Scenario
		marine works
14	Grounding	Dredger/barge on passage to Holyhead North disposal site
15	Grounding	Tug and tow grounding due to steering/propulsion failure
16	Hazardous substance accidents	Accidental spill
17	Machinery related accidents	Heavy lift failure or failure of lifting gear
18	Other	Malicious actions by third parties
19	Other	Vessel damage due to weather conditions
20	Other	Ranging of construction craft on temporary moorings
21	Other	Displacement of vessels
22	Payload related accidents	Incorrect loading or unloading of barge transporting rock affects vessel stability
23	Stranding	Small recreational vessel on breakwater

Table 7.6 Hazard log MOLF operational phase

Assessment Number	Hazard Category	Hazard Scenario
1	Accidents to personnel	Man overboard
2	Allision	Vessel with breakwaters
3	Allision	Vessel with the MOLF
4	Collision	With moored vessel
5	Collision	Recreation/fishing/high speed/harbour vessel with vessel transiting to or from the Wylfa Marine Development Area
6	Collision	Tanker with vessel transiting to or from the Wylfa Marine Development Area
7	Collision	Cargo vessel with vessel transiting to or from Wylfa Newydd
8	Fire/explosion	Vessel alongside the MOLF
9	Flooding	Vessel within the harbour
10	Grounding	Vessel within the harbour
11	Hazardous substance accidents	Accidental spill within the harbour
12	Machinery related accidents	Steering/propulsion failure entering or leaving the harbour
13	Machinery related accidents	Lifting equipment failure alongside the MOLF
14	Other	Towage operations within the harbour
15	Other	Malicious actions by third party
16	Other	Displacement of vessels
17	Other	Berth unavailable
18	Payload related accidents	Vessel unloaded incorrectly alongside the MOLF
19	Ranging	Vessel on bulk quay ranging due to interaction
20	Ranging	Adverse weather conditions affecting moored vessels
21	Stranding	Small recreational vessel on breakwater

7.3.1 Hazard scenario causes

Each hazard scenario was considered to determine the possible causes both individually or in combination. Table 7.7 and Table 7.8 give a frequency of the causes identified during the hazard scenario process for the construction and MOLF operational phases of the Wylfa Newydd Project.

Table 7.7 Cause frequency for the construction phase

Cause	Frequency
Human error/fatigue - Ship personnel	19
Inadequate procedures in place onboard vessel	17
Adverse weather conditions	17
Competence	17
Human error	16
Inadequate bridge resource management	14
Vessel breakdown or malfunction	13
Communication failure - Personnel	13
Risk assessment, incomplete/not reviewed	11
Inadequate training/competence - Others	11
Restricted visibility	10
Failure to comply with Vessel Traffic Services/Local Port Services/Standard Operating Procedures	8
Inadequate procedures shore side	8
Failure to follow passage plan	8
Excessive vessel speed	8
Vessel has unreported defect	7
Communication failure - Operational/procedural	7
Communication failure - Equipment	7
Failure to observe standing notices	7
Failure to comply with safe systems of work	7
Incorrect assessment of tidal flow	7
Inadequate maintenance/inspection	7
Human error/fatigue - Port/marine personnel	6
Fire/explosion	6
High traffic density	6
Incapacitated master (drugs/alcohol)	6
Ship/tug/launch failure	6
Unplanned interaction with recreational/fishing craft	5
Malicious action by external parties	5
COLREGS failure to comply	5
AIS failure	5
Language problems	5
Tug failure towing equipment	4
Protest by external parties	4
Navigation equipment failure	4
Failure to observe byelaws/local regulations	3
Non-attendance of boatmen	3
Interaction	3
Loss of watertight integrity	2
Failure to comply with towage guidelines	2

Cause	Frequency
Failure of aid to navigation (out of position/unlit)	2
Shore side light backscatter	2
Loss of vessel's stability (due to other than loss of watertight integrity)	2
Port equipment (inc. craft) mechanical breakdown/system malfunction	2
Weather and hydro failure - equipment	2
Tugs - Inadequate/unavailable	2
Notice to mariners failure to observe	2
Inadequate surveying at planning stage	2
Vessel fails to notify hazardous cargo	1
Unexpected shoaling	1
Failure of berth mooring systems	1
Vessel ramps or hatches not secure	1
Illegal discharges into the water	1
Breach of security at berth/terminal/ship	1
Port infrastructure failure	1
Inadequate Personal Protective Equipment	1

The top identified cause for the construction phase is 'human error/fatigue - ship personnel' with a frequency of 19, the second highest selected cause is 'inadequate procedures in place onboard vessel' with a frequency of 17 and the third highest cause is 'adverse weather conditions' with a frequency of 17.

Table 7.8 Cause frequency for the MOLF operational phase

Cause	Frequency
Human error	19
Inadequate procedures in place onboard vessel	18
Human error/fatigue - Ship Personnel	18
Adverse weather conditions	15
Communication failure - Personnel	14
Inadequate bridge resource management	12
Vessel breakdown or malfunction	11
Competence	10
Inadequate training/competence - Others	9
Restricted visibility	9
Excessive vessel speed	9
Incorrect assessment of tidal flow	8
Vessel has unreported defect	7
Communication failure - Operational/procedural	7
Failure to comply with safe systems of work	7
Ship/Tug/Launch failure	7
Failure to observe standing notices	6
Inadequate maintenance/inspection	6
Incapacitated master (drugs/alcohol)	6
Human error/fatigue - Port/Marine Personnel	6
Inadequate procedures shoreside	5
Communication failure - Equipment	5
Language problems	5

Cause	Frequency
Failure to follow passage plan	4
Fire/Explosion	4
Malicious action by external parties	4
COLREGS failure to comply	4
Shoreside light backscatter	4
Port Equipment (inc. craft) mechanical breakdown/system malfunction	4
Risk Assessment, Incomplete/not reviewed	3
Failure to observe Byelaws/local regulations	3
Loss of watertight integrity	3
Failure to comply with VTS/LPS/SOPs	3
Unplanned interaction with recreational/fishing craft	2
Failure of Aid to Navigation (out of position/unlit)	2
Tugs - Inadequate/unavailable	2
Notice to Mariners failure to observe	2
Failure of berth mooring systems	2
High traffic density	2
Tug failure towing equipment	1
Protest by external parties	1
Navigation equipment failure	1
Failure to comply with Towage guidelines	1
Loss of vessels stability (due to other than loss of watertight integrity)	1
Vessel Ramps or Hatches not secure	1
Illegal discharges into the water	1
Breach of security at berth/terminal/ship	1
Incorrect draught advised/promulgated	1
Non-attendance of boatmen	1

The top selected causes for the operational phase is 'human error' with a frequency of 19, 'inadequate procedures in place onboard vessel' and 'human error/fatigue - Ship personnel' are jointly the second highest frequency cause with a frequency of 18. As with the causes for the construction phase, the top selected causes can be described as human factors relating to errors of judgement or competence. As these causes are created from expert judgement of marine professionals, it would be prudent to consider the controls that reduced these potential causes through the application of suitable mitigation.

7.3.2 Risk controls

Each of the 44 hazard scenarios were then considered in light of embedded risk controls (these include mandatory measures such as compliance with international regulations and good practice such as review of weather forecasts). These controls are available at, or can be deployed by, the Wylfa Newydd Project in response to a marine emergency. It should be noted that embedded mitigation, in the context of marine safety, relates to processes, practices and available safety resources that are in existence irrespective of the Wylfa Newydd Project. These might include (for example) international regulations (such as the International Regulations for Preventing Collisions at Sea 1972) or training of personnel (such as the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW)) or search and rescue provision (such as the UK Coastguard service.

Table 7.9 and Table 7.10 detail the embedded risk controls that identified in the risk assessments.

Table 7.9 Embedded risk controls for the construction phase

Control	Frequency
Standing orders/SOPs	14
Emergency services equipment - shore side	13
International COLREGS 1972 (as amended)	9
Standards of Training, Certification and Watchkeeping for Seafarers (STCW)	8
Passage planning	7
Communications equipment	7
Safe systems of work (H&S)	7
Notices to mariners	5
Vessel maintenance	5
Vessel inspection/survey	5
International Convention for the Safety of Life at Sea (SOLAS) 1974	5
Visual observation (clear line of sight)	3
Weather forecasting	3
Communications - Traffic broadcast	2
AIS coverage	2
Training of pollution response personnel	2
Vessel secured for sea	2
Draught, accurate, declared and within max limits	1
Hydrographic surveying program	1
Oil spill contingency plans	1
Contingency plan exercises	1
Availability of latest hydrographic information	1
Availability of pollution response equipment	1
Aids to navigation, provision and maintenance of	1
Signage	1
Ramps/hatches closed when underway	1
Unexploded ordnance investigation and reported risk levels	1
Loading/unloading plan	1
Vessel safety management system (ISM code)	1
Personal Protective Equipment	1
Marine warranty survey	1

Table 7.10 Embedded risk controls for the MOLF operational phase

Control	Frequency
Passage planning	12
Emergency services equipment - shore side	11
Standing Orders/SOPs	9
Communications equipment	8
Standards of Training, Certification and Watchkeeping for Seafarers (STCW)	8
Weather forecasting	8
International COLREGS 1972 (as amended)	5
Visual observation (clear line of sight)	5
Communications - Traffic broadcast	4

Control	Frequency
Dangerous Goods in Harbour Regulations 2016	2
Vessel safety management system (ISM code)	2
Vessel secured for sea	2
Accurate tidal measurements	1
AIS coverage	1
Arrival/Departure, advance notice of	1
Contingency plan exercises	1
Draught, Accurate, declared and within max limits	1
Loading/unloading plan	1
Marine warranty survey	1
Notices to mariners	1
Tug/Workboat certification	1
Vessel inspection/survey	1
Vessel maintenance	1

After determining which controls are applicable to each hazard scenario, an embedded risk score was calculated by determining the reduction in likelihood and consequence for each risk control should it be implemented; these reductions were then applied to the frequency and consequence of the scenario to give the overall risk score. Table 7.11 and Table 7.12 show the hazard scenarios ranked by current risk after embedded risk controls have been considered.

Table 7.11 Ranked hazard scenarios for the construction phase

Hazard Category	Hazard Scenario	Baseline Risk	Current Risk
Collision	Dredge/construction craft collision with commercial vessel	7.59	6.77
Other	Mooring failure on temporary moorings	6.66	6.60
Grounding	Tug and tow grounding due to steering/propulsion failure	7.22	6.51
Other	Vessel damage due to weather conditions.	6.59	6.48
Grounding	Dredge/construction craft grounding due to marine works	7.13	6.28
Collision	Tug and tow collision with commercial vessel	7.59	6.11
Stranding	Small recreational vessel on breakwater	6.47	5.67
Other	Displacement of vessels	6.31	5.66
Collision	Dredge/construction plant collision with recreational vessel	6.59	5.56
Fire/explosion	Dredge/construction plant on-board fire	6.09	5.43
Fire/explosion	Ordnance found during dredge/construction	6.16	5.20
Grounding	Dredger/barge on passage to Holyhead North disposal site	7.22	4.85
Accidents to personnel	Commercial diving operations associated with the marine works	5.09	4.81
Collision	Dredger or barge on passage to Holyhead North disposal site and other vessel	7.13	4.73
Machinery related accidents	Heavy lift failure or failure of lifting gear	5.94	4.65
Flooding	Dredger flooding whilst engaged in operations	6.81	4.64
Payload related accidents	Incorrect loading or unloading of vessel	6.81	4.64

Hazard Category	Hazard Scenario	Baseline Risk	Current Risk
	transporting rock affects vessel stability		
Hazardous substance accidents	Accidental spill	5.91	4.63
Other	Malicious actions by third parties	4.91	4.62
Allision	Dredge/construction plant impact with marine works during construction phase	5.66	4.35
Collision	Dredger or barge depositing load at Holyhead North with vessel transiting	6.19	3.89
Fire/explosion	Pressure waves caused by explosives during dredging operations.	4.41	3.87
Accidents to personnel	Man overboard during dredge/construction works	4.69	2.93

Table 7.12 Ranked hazard scenarios for the MOLF operational phase

Hazard Category	Hazard Scenario	Baseline Risk	Current Risk
Grounding	Vessel within the harbour	7.78	7.63
Allision	Vessel with breakwaters	7.59	6.62
Collision	Recreation/fishing/high speed/harbour vessel with vessel transiting to or from the Wylfa Marine Development Area	7.25	6.52
Other	Berth unavailable	6.41	6.26
Other	Displacement of vessels	6.59	5.92
Stranding	Small recreational vessel on breakwater	6.47	5.67
Machinery related accidents	Steering/propulsion failure entering or leaving the harbour	5.88	5.44
Payload related accidents	Vessel unloaded incorrectly alongside the MOLF	5.97	5.12
Allision	Vessel with the MOLF	5.91	5.10
Flooding	Vessel within the harbour	6.41	4.98
Other	Towage operations within the harbour	5.88	4.96
Collision	With moored vessel	6.19	4.85
Ranging	Adverse weather conditions affecting moored vessels	4.97	4.84
Collision	Tanker with vessel transiting to or from the Wylfa Marine Development Area	7.44	4.70
Collision	Cargo vessel with vessel transiting to or from the Wylfa Marine Development Area	6.94	4.44
Machinery related accidents	Lifting equipment failure alongside the MOLF	5.41	4.44
Ranging	Vessel on bulk quay ranging due to interaction with other vessel	4.53	3.91
Hazardous substance accidents	Accidental spill within the harbour	3.81	3.81
Fire/explosion	Vessel alongside the MOLF	4.27	3.53
Other	Malicious actions by third party	4.28	3.50
Accidents to personnel	Man overboard	4.69	3.11

The risk scores associated with each of the 44 hazard scenarios has been set on a scale of zero to 10. The classification of each score is given in Table 7.13.

Table 7.13 Risk score rating

Classification	Risk score
Very high risk	9.00 – 10.00
High risk	6.00 – 8.99
Significant risk	5.00 – 5.99
Moderate risk	4.00 – 4.99
Low risk	1.00 – 3.99
Negligible risk	0.01 – 0.99

Additional controls identified by the stakeholders were documented to ensure that risk levels were maintained to ALARP. These additional controls are safety recommendations which were then assigned a likelihood and consequence reduction to allow the calculation of a final risk score. The full set of NRAs is shown in Appendix C and Appendix D. Chapter D15 of the Environmental Statement lists those additional controls (mitigations) that are secured. Additionally, the Marine Works sub-Code of Construction Practice includes details of the secured mitigations for shipping and navigation.

Table 7.14 details the additional controls which were identified as recommendations for potential mitigation for the Wylfa Newydd Project construction phase along with the frequency in which they were applied to the hazard scenarios.

Table 7.14 Additional controls for the construction phase

Control	Frequency
LPS Harbour control office	17
PMSC compliance	16
MSMS	15
Contingency plan exercises	14
Port facility emergency plan	11
Oil spill contingency plans	10
LPS broadcast (navigation and safety information)	10
Contractor risk assessment method statement (RAMS)	10
Availability of pollution response equipment	9
AIS coverage	8
Direction (Special) - Powers of Harbour/Pier Master	8
Training of pollution response personnel	7
Dedicated Very High Frequency (VHF) channel	5
Notices to mariners	4
CCTV coverage	4
Training of port marine/operations personnel	4
Requirement for notification of vessel defects	3
Directions (General) - issued by SHA	3
Weather forecasting	2
International Convention for the Safety of Life at Sea (SOLAS) 1974	2
Aids to navigation, provision and maintenance of	2
Safety zone	2
Communications equipment	1

Control	Frequency
Communications - Traffic broadcast	1
Arrival/departure, advance notice of	1
Accurate tidal measurements	1
Safe allocation of berths (depth, available, suitable)	1
Port waste management plan	1
Guidance for small craft	1
Protective fendering	1
ISPS compliance	1
Shore side facility maintenance programme	1
Afloat deterrent	1
Mooring studies and plans	1
Vessel master simulation training	1
Tidal flow atlas	1
Permit to work	1

Table 7.15 details the additional controls which were identified as recommendations for potential mitigation for the Wylfa Newydd Project operational phase along with the frequency in which they were applied to the hazard scenarios.

Table 7.15 Additional controls for the MOLF operational phase

Control	Frequency
Local Port Services - Harbour control office	21
Marine Safety Management System	17
PMSC compliance	17
Contingency plan exercises	12
Port Facility Emergency Plan	12
LPS broadcast (navigation and safety information)	11
Oil spill contingency plans	11
Pilotage service	11
Training of port marine/operations personnel	10
AIS coverage	8
Availability of pollution response equipment	8
Safe systems of work (H&S)	6
CCTV coverage	5
Directions (General) - issued by Harbour Authority	5
Requirement for notification of vessel defects	5
Accurate tidal measurements	4
Arrival/Departure, advance notice of	4
Aids to navigation, Provision & maintenance of	4
Availability of latest hydrographic information	4
Direction (Special) - Powers of Harbour/Pier Master	4
Hazardous cargoes, advance notice of	4
Vessel master simulation training	4
Large scale navigational charts	3
Safe allocation of berths (depth, available, suitable)	3
Tidal flow atlas	3

Control	Frequency
Towage, available and appropriate	3
Byelaws	2
Mooring studies and plans	2
Protective fendering	2
Afloat deterrent	1
Dredging programme	1
Hydrographic surveying program	1
ISPS compliance	1
Port Security Plan	1
Port waste management plan	1
Shore side facility maintenance programme	1
Training of pollution response personnel	1

The additional controls have been assessed and assigned a likelihood reduction and consequence reduction if they will be implemented. These reductions have been used to calculate the final risk for each hazard scenario. Table 7.16 and Table 7.17 present the final risk for the hazard scenarios after the additional controls have been applied.

Table 7.16 Final risk for the construction phase

Hazard Category	Hazard Scenario	Baseline Risk	Current Risk	Final Risk
Collision	Dredge/construction craft collision with commercial vessel	7.59	6.77	5.77
Grounding	Dredger/barge on passage to Holyhead North disposal site	7.22	4.85	5.58
Other	Displacement of vessels	6.31	5.66	5.57
Other	Vessel damage due to weather conditions	6.59	6.48	5.50
Grounding	Tug and tow grounding due to steering/propulsion failure	7.22	6.51	5.35
Collision	Tug and tow collision with commercial vessel	7.59	6.11	5.12
Other	Mooring failure on temporary moorings	6.66	6.60	4.99
Stranding	Small recreational vessel on breakwater	6.47	5.67	4.68
Collision	Dredger or barge depositing load at Holyhead North with vessel transiting	6.19	3.89	3.82
Machinery related accidents	Heavy lift failure or failure of lifting gear	5.94	4.65	3.68
Fire/explosion	Dredge/construction craft on-board fire	6.09	5.43	3.59
Collision	Dredger or barge on passage to Holyhead North disposal site and other vessel	7.13	4.73	3.56
Accidents to personnel	Commercial diving operations associated with the marine works	5.09	4.81	3.54
Collision	Dredge/construction craft collision with recreational vessel	6.59	5.56	3.44
Other	Malicious actions by third parties	4.91	4.62	3.42
Fire/explosion	Pressure waves caused by explosives during dredging operations	4.41	3.87	3.19
Fire/explosion	Ordnance found during dredge/construction	6.16	5.20	2.99

Hazard Category	Hazard Scenario	Baseline Risk	Current Risk	Final Risk
Grounding	Dredge/construction craft grounding due to marine works	7.13	6.28	2.83
Allision	Dredge/construction craft impact with marine works during construction phase	5.66	4.35	2.43
Flooding	Dredger flooding whilst engaged in operations	6.81	4.64	1.68
Hazardous substance accidents	Accidental spill	5.91	4.63	1.46
Payload related accidents	Incorrect loading or unloading of vessel transporting rock affects vessel stability	6.81	4.64	0.98
Accidents to personnel	Man overboard during dredge/construction works	4.69	2.93	0.73

Table 7.17 Final risk for the MOLF operational phase

Hazard Category	Hazard Scenario	Baseline Risk	Current Risk	Final Risk
Other	Displacement of vessels	6.59	5.92	5.80
Collision	Recreation/fishing/high speed/harbour vessel with vessel transiting to or from the Wylfa Marine Development Area	7.25	6.52	5.80
Stranding	Small recreational vessel on breakwater	6.47	5.67	4.68
Collision	Tanker with vessel transiting to or from the Wylfa Marine Development Area	7.44	4.70	4.55
Other	Berth unavailable	6.41	6.26	4.12
Other	Towage operations within the harbour	5.88	4.96	3.87
Grounding	Vessel within the harbour	7.78	7.63	3.85
Ranging	Adverse weather conditions affecting moored vessels	4.97	4.84	3.48
Collision	Cargo vessel with vessel transiting to or from the Wylfa Marine Development Area	6.94	4.44	3.48
Machinery related accidents	Lifting equipment failure alongside the MOLF	5.41	4.44	3.33
Flooding	Vessel within the harbour	6.41	4.98	3.21
Machinery related accidents	Steering/propulsion failure entering or leaving the harbour	5.88	5.44	3.10
Hazardous substance accidents	Accidental spill within the harbour	3.81	3.81	2.56
Collision	With moored vessel	6.19	4.85	2.26
Fire/explosion	Vessel alongside the MOLF	4.27	3.53	2.04
Payload related accidents	Vessel unloaded incorrectly alongside the MOLF	5.97	5.12	1.92
Allision	Vessel with the MOLF	5.91	5.10	1.61
Allision	Vessel with breakwaters	7.59	6.62	1.60
Other	Malicious actions by third party	4.28	3.50	1.33
Accidents to personnel	Man overboard	4.69	3.11	0.98
Ranging	Vessel on bulk quay ranging due to interaction with other vessel	4.53	3.91	0.18

8 Formal Safety Assessment

This section documents the formal safety assessment relating to the construction and the MOLF operational phases of the Wylfa Newydd Project. Hazard scenarios that have been scored as significant risk or higher (see Table 7.13) have been brought forward into the impact assessment.

8.1 Significance criteria

Impacts on shipping and navigation receptors, which were formulated based on hazard scenarios identified at the workshop, were assessed using a consistent scale of sensitivity and magnitude, as described in the following sections.

8.1.1 Sensitivity

A vessel or navigation receptor can be sensitive only if there is a pathway through which an effect can be transmitted between the source activity and the receptor. When a receptor is exposed to an effect, the overall sensitivity of the receptor is determined and that process incorporates a degree of subjectivity. Within the NRA process, expert opinion is used to define the sensitivity of a receptor. This expert judgement is based on professional judgement stemming from experience of the effects to navigation from other similar projects and baseline understanding of the study area. Table 8.1 identifies each definition.

Table 8.1 Receptor sensitivity

Sensitivity	Definition
Very high	Very high level of safety impact for vessels and navigation receptors Very limited ability to adapt to impact
High	High level of safety impact for vessels and navigation receptors Limited ability to adapt to impact
Medium	Medium level of safety impact for vessels and navigation receptors Some ability to adapt to impact
Low	Low level of safety impact for vessels and navigation receptors Ability to adapt to majority of impact
Negligible	Negligible level of safety impact for vessels and navigation receptors Ability to adapt to all of impact
Neutral	No impact for vessels and navigation receptors

For the purposes of assessing the impact to marine receptors, sensitivity must be judged. The criteria ranges from neutral (sensitivity) to very high. The greater the safety effect, and/or the lower the ability to adapt to the effect, the greater the sensitivity. A safety impact is classified as any impact that may influence the navigational safety of the marine receptor.

8.1.2 Magnitude

When assessing the magnitude of an effect, the geographical extent, the duration and the frequency are considered. Determining the overall magnitude of navigational effects also incorporates a degree of subjectivity, as decisions are based on expert opinion, in combination with baseline data. The potential 'effects' of the Wylfa Newydd Project from a navigational perspective, as identified through the hazard workshop and stakeholder feedback, are identified in Table 8.2.

Table 8.2 Effect magnitude

Magnitude	Definition
Large Negative	Impact geographical area beyond the extent of marine works/operational area Impact present on a permanent basis throughout the operational phase Impact occurs very frequently to constantly/permanently
Medium Negative	Impact localised to geographical extent of marine works operational area Impact present on a permanent basis throughout the operational phase Impact occurs frequently
Small Negative	Impact localised to geographical extent of marine works/operational area Impact present on a temporary basis Impact relatively infrequent
Neutral	No impact on vessels or navigational receptors
Positive	Navigation receptors benefit as a result of the impact

8.1.3 Significance

Applying the sensitivity of the receptor and the magnitude of the potential effect, the significance is determined according to the matrix shown in Table 8.3.

Table 8.3 Significance classification

Criteria		Magnitude				
		Large Negative	Medium Negative	Small Negative	Neutral	Positive
Sensitivity	Very high	Major adverse	Major adverse	Moderate to minor adverse	No effect	Major to minor beneficial
	High	Major adverse	Major to moderate adverse	Minor adverse	No effect	Major to minor beneficial
	Medium	Moderate adverse	Moderate to minor adverse	Minor adverse	No effect	Moderate beneficial
	Low	Minor adverse	Minor adverse	Insignificant	No effect	Minor beneficial
	Negligible	Minor/insignificant	Insignificant	Insignificant	No effect	Insignificant
	Neutral	No effect	No effect	No effect	No effect	No effect

The assessment of significance assumes that the embedded risk controls detailed in Table 7.9 and Table 7.10 are in place. In accordance with the requirements of the PMSC, which references the 'ALARP' concept, each hazard scenario is considered in isolation, with further controls added to lower the risk to a point which is 'as low as reasonably practicable'. The following assessment presents the risks that are scored above a 'medium' threshold (see Table 7.13). The assessments then outline

specific mitigation (termed 'Additional controls') identified through stakeholder/workshop engagement and based on expert opinion. However, it should be noted that a control that may be introduced to manage a higher scoring risk (for example, aids to navigation such as lights or buoys) may also apply to reduce risk in lower scoring hazard scenarios. To view the full output of the NRA, Appendices C and D should be viewed.

A number of the identified 'Additional controls' relate to powers available to a SHA for the safe management of a port or harbour. In order to reduce repetition within this assessment, these powers have been summarised in Section 8.1.4 and are referred to as 'Harbour Authority Powers' throughout the rest of the assessment.

8.1.4 Harbour Authority Powers

At the time of producing the NRAs, the intention is to apply for Harbour Authority Powers via the DCO process. Should this decision be revised, the NRA would require modification to update the mitigation measures to match the operation of a port facility outside of an SHA. Within the NRA tables (Appendix C and D) individual SHA controls are individually identified; within this chapter they are collectively referred to, and include (but are not limited to) the following:

- Contingency plan exercises – testing of the SHA's (marine-facing) emergency plan.
- Directions (General) – issued by the SHA as a set of instructions and general rules that all users of the harbour area must follow. This power would be set out within the establishing DCO.
- Directions (Special) – issued by the SHA (or equivalent). This power provides a key control for directing traffic and controlling marine situations within the harbour.
- LPS – application of an LPS provides a harbour control and coordination centre, configured to an agreed standard following guidance in the MCA's Marine Guidance Note (MCA, 2009). An LPS will be staffed by trained operatives using a range of sensor equipment to inform and update vessel masters of the prevalent conditions.
- LPS broadcast (navigation and safety information) – the broadcast of detailed movement information within the harbour, along with local weather conditions and any safety related issues. Information is normally disseminated via VHF radio.
- Notices to mariners – publication of SHA information, detailing ongoing safety and awareness information to harbour users and to local vessels navigation within area.
- Pilotage service – if a SHA is granted competent harbour authority status , under the Pilotage Act 1987, it will have the power to provide a pilotage service. This is a key control for managing the safe transit of vessels within the harbour and its approaches.
- Port emergency plan – a SHA would create or provide detailed plans and procedures to follow in the event of an emergency. A similar plan may be provided by the project/development in the absence of a defined SHA.
- Safety zone – determined and set by the SHA within its harbour area, allows it to restrict or manage access to parts of the harbour for safety reasons.

Within the following Chapter, these controls are referred to collectively as 'Harbour Authority Powers'.

8.2 Construction impacts

The NRAs from Table 7.11 for construction of the MOLF, breakwaters, Cooling Water intake and Cooling Water outfall which have an assessed outcome of significant risk (or above) have been taken forward into this impact assessment. These are summarised in Table 8.4.

Table 8.4 NRAs brought forward into the impact assessment

Hazard Category	Hazard Scenario	Current Risk
Collision	Dredge/construction craft collision with commercial vessel	6.77
Collision	Dredge/construction craft collision with recreational vessel	5.56
Collision	Tug and tow collision with commercial vessel	6.11
Fire/explosion	Dredge/construction craft on-board fire	5.43
Fire/explosion	Ordnance found during dredge/construction	5.20
Grounding	Tug and tow grounding due to steering/propulsion failure	6.51
Grounding	Dredge/construction craft grounding due to marine works	6.28
Other	Mooring failure on temporary moorings	6.60
Other	Vessel damage due to weather conditions	6.48
Other	Displacement of vessels	5.66
Stranding	Small recreational vessel on breakwater	5.67

8.2.1 Collision – Dredge/construction craft with commercial vessel

During the dredge and marine works activity, there would be increased vessel movements to and from the area of the Wylfa Marine Development Area. Dredged material would be taken from the site and transported to Holyhead North marine disposal site. The number of projected loads for disposal of the superficial material totals a maximum of 88 movements (44 loads). This dredge commitment would be completed by a trailing suction hopper dredger, working in combination with split bottom barges. In addition, the transport of excavated and dredge rock to Holyhead North marine disposal site is projected to take 818 movements (409 loads).

There would likely be in the order of 364 vessel movements (182 loads) as a result of transporting the pre-cast concrete elements to the site. These additional transits increase the risk of vessel collision between dredge/construction plant and marine commercial traffic; this risk relates to interaction with other vessels transiting near the shore, or those leaving and entering the traffic routeing measures established further offshore (the TSS). Some of the construction vessels would be restricted in their ability to manoeuvre (e.g. less manoeuvrable construction plant, platforms with spud mooring, barges on tow etc.).

Vessels approaching the Wylfa Marine Development Area or those working on-site are very unlikely to interact with other passing commercial vessels due to the distance between the site and the main east-west shipping routes. AIS analysis shows that there were 541 commercial vessels transiting near the marine works area for the 84 days of AIS data collected in 2015 (see Table 5.2). The vessel transits can be uplifted to give an annual figure of 2,351 commercial vessel transits through the marine works area. Therefore, the scheme's 906 dredge/barge movements and 364 movements associated with transhipment of breakwater pre-cast concrete represents an increase of 50% over the baseline situation.

This potential effect would have a medium level of sensitivity due to the ability of vessels to react to the situation by manoeuvring to avoid a collision situation. This type of incident has the potential to occur throughout the vessel's passage, and, therefore, the volume of additional vessel movements occurs frequently above the baseline volume, and therefore presents a magnitude which is assessed as medium negative. This leads to an overall ranking of **moderate to minor adverse**.
The following further mitigation measures would reduce the risk to ALARP:

- Harbour Authority Powers (see Section 8.1.4).
- AIS coverage – All dredge/construction vessels, including barges to carry AIS (A or B).
- Arrival/departure, advance notice of – To allow LPS to advise vessels operating at the marine works of traffic movements.
- RAMS – Provided to the SHA and agreed prior to commencement of operations.
- Dedicated VHF channel – Licence obtained from OFCOM, information updated in the Admiralty List of Radio Signals (ALRS).
- LPS broadcast (navigation and safety information) – Including weather conditions within the harbour.

Following the implementation of mitigation measures, specifically the use of AIS by all vessels engaged in the construction phase of the works providing greater opportunity for collision avoidance, the sensitivity is reduced to negligible and the residual effect would therefore be **insignificant.**

8.2.2 Collision – Tug and tow collision with commercial vessel

During the dredge and marine works activity, tug and tow operations would operate into, and out of, the Wylfa Marine Development Area. These operations are associated with dredge disposal and/or relocation of dredged material and the transport of build materials (metalwork, rock armour, aggregate, heavy plant and equipment etc.). An increase in the number of vessel movements means that there is an increased likelihood that steering/propulsion failure may occur to tugs and tows as they arrive or depart from the Wylfa Marine Development Area. Should this occur, a drifting tug and tow could be involved in a collision if the steering/propulsion failure occurs in an area used by other vessels.

This potential effect would have a medium level of sensitivity as any vessel subject to steering/propulsion failure would show the appropriate lights and shapes, along with a VHF broadcast to the coastguards and all vessels. This would allow for the reaction of other vessel traffic to the situation. This incident could happen throughout the vessel passage; however, it would be an isolated occurrence. The potential impact would be present for the construction phase only and would occur infrequently throughout the period of the marine works. This leads to an assessed magnitude of small negative and an overall ranking of **minor adverse**.

The following further mitigation measures would reduce the risk to ALARP:

- Harbour Authority Powers (see Section 8.1.4).
- AIS coverage – All dredge/construction vessels, including barges to carry AIS (A or B).
- RAMS – Provided to the SHA and agreed prior to commencement of operations.
- LPS – Harbour control office – Point of contact for Harbour operations.

Following the implementation of mitigation measures, specifically the use of AIS by all vessels engaged in the construction phase of the works providing greater opportunity for collision avoidance, the sensitivity is reduced to negligible and the residual effect would therefore be **insignificant.**

8.2.3 Collision – Dredge/construction craft with recreational vessel

During the dredging and marine works activity, there would be increased dredger movements which have been assessed as a maximum of 906 movements for dredge craft and 364 movements associated with transhipment of breakwater pre-cast concrete material. These additional transits increase the risk of vessel collision between dredge/construction plant and recreational vessel traffic.

This is more likely to occur closer to the coastline, as smaller vessels more typically transit closer to the shore to avoid routes used by commercial vessels and vessels with deeper draughts. Some of the dredge/construction vessels will be restricted in their ability to manoeuvre (e.g. less manoeuvrable construction plant, platforms with spud mooring, dredger or dredge barges).

This potential effect would have a medium level of sensitivity due to the ability of vessels to react to the situation by manoeuvring to avoid a collision situation. This type of incident has the potential to occur throughout the vessel's passage, and therefore the volume of additional vessel movements occurs frequently above the baseline volume, and therefore presents a magnitude which is assessed as medium negative. This leads to an overall ranking of **moderate to minor adverse**.

The following further mitigation measures would reduce the risk to ALARP:

- Harbour Authority Powers (see Section 8.1.4).
- AIS coverage – All dredge/construction vessels, including barges to carry AIS (A or B).
- Availability of pollution response equipment – Harbour and contractors to have equipment available.
- RAMS – Provided to SHA and agreed prior to commencement of operations.
- Dedicated VHF channel – Licence obtained from OFCOM, information updated in ALRS.
- Guidance for small craft – Passive (informative) management of leisure traffic by Development Liaison Team, written information to the RYA and local yacht clubs, and available as a web-based resource.
- MSMS – Established prior to operations based on risk assessment and containing procedures to allow for safe operations within the harbour.
- Oil spill contingency plans – The MCA require an OPRC plan to be in place and approved by them prior to the commencement of marine works at the site.
- PMSC compliance – SHA MSMS applies, which recognises the need for contractor RAMS to be agreed with the SHA in advance of marine works.

Following the implementation of mitigation measures, specifically information dissemination to local recreational users, the sensitivity is reduced to negligible and the residual effect would therefore be **insignificant.**

8.2.4 Fire/explosion – Dredge/construction craft on-board fire

During the construction phase, vessel fire is possible (if uncontained and therefore potentially leading to an explosion). Vessel fires within a marine works site can have onward consequences for other vessels, infrastructure and shore side buildings or equipment in the vicinity. However, given the proximity of shore-side emergency response, uncontrolled situations are rare and will be contained relatively quickly. Immediate action by the crew in response to a fire is the most effective measure to prevent a larger marine emergency. Any response to a fire on board a vessel can lead to pollutants entering the water through the use of various fire suppression methods.

This potential effect would have a medium level of sensitivity due to the type of work being carried out by construction craft (such as hot works) and the range of vessels engaged with the marine works. The potential effects would be localised to the extent of the marine construction area and would be present for the construction phase only. A fire or explosion has the potential to occur throughout the construction phase, but is an infrequent risk, which leads to an assessed magnitude of small negative and an overall ranking of **minor adverse**.

The following further mitigation measures would reduce the risk to ALARP:

- Harbour Authority Powers (see Section 8.1.4).
- Availability of pollution response equipment – Harbour and contractors to have equipment available.
- MSMS – Prior to commencement of marine operations, MSMS established by the SHA.
- Oil spill contingency plan – The MCA require an OPRC plan to be in place and approved by them prior to the commencement of marine works at the site
- PMSC compliance – SHA MSMS applies, which recognises the need for contractors RAMS to be agreed with the SHA in advance of marine works.
- Training of port marine/operations personnel – This should include the use of equipment and implementation of the plans.

Following the implementation of mitigation measures, specifically the MSMS and equipment to clean up any potential spill or pollutant, the sensitivity is reduced to low and the residual effect is therefore assessed as **insignificant.**

8.2.5 Fire/explosion – Ordnance found during dredge/construction

During the dredge/construction phase, unexploded ordnance could be discovered and inadvertently detonated by dredgers or construction plant. The resulting explosion is likely to cause severe damage to the vessel and fatalities to the crew. However, considering the geographic location of the Wylfa Newydd Project and previous military activities, the presence of unexploded ordnance is highly unlikely. The NRA considered these circumstances, but could not rule out the possibility without further investigation.

In the instance that unexploded ordnance was discovered, the potential effect would have a high level of safety impact for vessel safety. The potential outcomes would be limited to the extent of the marine construction area and/or location of the dredge/construction plant. The effect has the potential to occur throughout the construction phase, but would impact infrequently which leads to an assessed magnitude of small negative and an overall ranking of **minor adverse**.

The following further mitigation measures would reduce the risk to ALARP:

- Harbour Authority Powers (see Section 8.1.4).
- Availability of pollution response equipment – Harbour and contractors to have equipment available.
- MSMS – Prior to commencement of marine operations, MSMS established by the SHA.
- Oil spill contingency plan – The MCA require an OPRC plan to be in place and approved by them prior to the commencement of marine works at the site.
- PMSC compliance – SHA MSMS applies, which recognises the need for contractors RAMS to be agreed with the SHA in advance of marine works.

Following the implementation of mitigation measures, specifically the unexploded ordnance desk-based investigation (followed by magnetometer survey if relevant) the magnitude can be quantified. It is expected that this can be reduced to a level which is small negative, or neutral; leading to a residual effect which is **minor/insignificant.**

8.2.6 Grounding – Tug and tow due to steering/propulsion failure

During the dredge and marine works activity, tug and tow operations would operate into, and out of, the Wylfa Marine Development Area. These operations are associated with dredge disposal and/or

relocation of dredged material and the transport of build materials (metalwork, rock armour, aggregate, heavy plant and equipment etc.). An increase in the number of vessel movements means that there is an increased likelihood that steering/propulsion failure may occur to tugs and tows as they arrive or depart from the Wylfa Marine Development Area. Should this occur whilst the tug and tow are close to shore, then they may drift and ground on rocky outcrops in shallow water. The coastline and seabed near the Wylfa Marine Development Area is predominantly rocky, meaning that grounding would lead to major damage to the tug and tow. This damage could lead to loss of life and marine pollution from vessel bunkers and cargo.

The potential effect would have a high level of sensitivity due to the limited time and ability for the vessel crew to react to the situation. There is scope for the vessel crew to anchor the tug and tow; however, there are particularly strong currents in the area off the Wylfa Marine Development Area (see Section 4.1) contributing to a sensitivity which is assessed as high. The potential impact would be localised to the coastline of the local area to the Wylfa Marine Development Area and would be present for the construction phase only. The effect has the potential to occur throughout the construction phase, but would impact infrequently which leads to an assessed magnitude of small negative and an overall ranking of **minor adverse.**

The following further mitigation measures would reduce the risk to ALARP:

- Harbour Authority Powers (see Section 8.1.4).
- Availability of pollution response equipment – Shore side equipment provided by the SHA.
- Oil spill contingency plans – The MCA require an OPRC plan to be in place and approved by them prior to the commencement of marine works at the site.
- Training of pollution response personnel – Response by the SHA.

Following the implementation of mitigation measures, the use of Harbour Authority Powers and coordination, the sensitivity can be reduced to medium; however, the residual effect remains at **minor adverse.**

8.2.7 Grounding – Dredge/construction plant due to marine works

During the dredge and marine works activity which constitutes the construction phase for the marine aspects of the Wylfa Newydd Project, there would be an increased risk of dredge/construction vessels grounding in the vicinity of the marine works due to working close inshore, in complex tidal conditions with limited room to manoeuvre. In addition, the available water depth and nature of the coastline (mainly rocky outcrops with sand embayments) plus the changing morphology of the marine works (breakwater, movement of dredge material etc.) means that there is reduced room to manoeuvre and uncharted topography.

The potential effect would have a high level of sensitivity due to the limited time and ability for the vessel crew to react to the situation. The potential impact would be localised to the extent of the marine construction area and would be present for the construction phase only. The effect has the potential to occur throughout the construction phase, and has the potential to occur frequently which leads to an assessed magnitude of medium negative and an overall ranking of **major to moderate adverse**.

The following further mitigation measures would reduce the risk to ALARP:

- Harbour Authority Powers (see Section 8.1.4).
- Accurate tidal measurements – Tide level observed on-site and made available to vessels.
- Aids to navigation, provision and maintenance of – All marine works are required to be lit.

- Availability of pollution response equipment – Shore side equipment provided by the SHA.
- Oil spill contingency plans – The MCA require an OPRC plan to be in place and approved by them prior to the commencement of marine works at the site.
- PMSC compliance – SHA MSMS applies, which recognises the need for contractors RAMS to be agreed with the SHA in advance of marine works.
- Tidal flow atlas – Covering each hour for spring and neap, scaled for the harbour area, including the combined effect of Cooling Water intake and outflow.
- Requirement for notification of vessel defects – Defects will be reported to the SHA.
- Vessel master simulation training – Ability for vessel masters to practice on a ship simulator prior to navigating on-site.

Following the implementation of mitigation measures, specifically the ability of vessel masters to practice in a simulated environment prior to navigating at the site, and the availability of tidal flow atlases which would provide an ability to adapt to the situation, leading to a sensitivity which is low with a residual effect which is **minor adverse.**

8.2.8 Other – Mooring failure on temporary moorings

The initial moorings available during the construction phase of the MOLF, breakwaters, Cooling Water intake and Cooling Water outfall would be exposed to the prevailing environmental conditions in the area. Large waves from the west and strong winds from the east will place extra strain on mooring systems. This can result in the moorings parting, setting the vessel adrift or damage to the temporary moorings and vessel due to movement and contact.

Weather forecasting services for the area present adequate time for a vessel to leave moorings and anchor in sheltered waters or proceed to local ports. This means that the sensitivity will be low. This impact will be localised to the marine works area and be present on a temporary basis until either the permanent berths are completed or the breakwater reaches a sufficient level of development to provide shelter giving a magnitude of medium negative. This leads to an overall ranking of **minor adverse.**

The following further mitigation measures would reduce the risk to ALARP:

- Harbour Authority Powers (see Section 8.1.4).
- LPS broadcast (navigation and safety information) – Local weather conditions promulgated by LPS.
- RAMS – Method statement identifies practices for establishing temporary moorings.
- MSMS – Prior to commencement of marine operations, MSMS established by the SHA.
- Mooring studies and plans – Berths designed for the prevailing MetOcean conditions and mooring arrangements suitable for vessel size.
- PMSC compliance – SHA MSMS applies, which recognises the need for contractor RAMS to be agreed with the Harbour Authority in advance of marine works.

- Protective fendering – In place on jetties/quays and suitable for vessels being used.
- Safe allocation of berths (depth, available, suitable) – Berths located to minimise ranging due to weather.

Following the implementation of mitigation measures, specifically the procedures in place as part of the contractor RAMS and the harbour MSMS following this incident. would reduce the magnitude to small negative, leading to a sensitivity which is low with a residual effect which is **insignificant**

8.2.9 Other – Vessel damage due to weather conditions

High wind speeds and swell developing from the Irish Sea would affect dredge and construction craft operating at the marine works. The vessels would be operating close to shore in confined locations with shallow water. Any adverse weather conditions can increase the risk of allision with marine works, grounding or collision with other vessels within the dredge/construction area.

This potential impact would have a medium sensitivity due to the ability to react to building swell condition and the time available to move to a more sheltered location. The potential effect would be localised to the extent of the study area and would be present for the construction phase only. However, the impact has the potential to occur frequently throughout the period of the construction, which leads to an assessed magnitude of medium negative and an overall ranking of **moderate to minor adverse**.

The following further mitigation measures would reduce the risk to ALARP:

- Harbour Authority Powers (see Section 8.1.4).
- Availability of pollution response equipment – Shore side equipment provided by the SHA.
- MSMS – Prior to commencement of marine operations, MSMS established by the SHA.
- Oil spill contingency plan – The MCA require an OPRC plan to be in place and approved by them prior to the commencement of marine works at the site.
- PMSC compliance – SHA MSMS applies, which recognises the need for contractors to risk assess marine operations and agree plans with the SHA in advance of marine works.
- Training of pollution response personnel – Response by the SHA.
- Weather forecasting – Sea state model used throughout the build phase of the MOLF to predict weather conditions and downtime.

Following the implementation of mitigation measures, specifically weather predictions, the magnitude would be reduced to small negative with the residual effect being assessed as **minor adverse.**

8.2.10 Other – Displacement of vessels

The dredge and construction operations carried out as part of the marine works and resultant transit routes to and from the Wylfa Marine Development Area would result in recreational and fishing vessels, which currently navigate within that area, being displaced into areas where larger vessels navigate. These vessels would be temporarily displaced either further offshore, or more likely a timing delay would occur to vessel transits to avoid crossing situations (and therefore avoid potential collision situations).

This potential effect would have a medium level of sensitivity due to the potential for safety impacts and vessels with limited ability to manoeuvre and therefore react to the traffic situation. The potential effect would be localised to the extent of the study area and would be present on a permanent basis. This leads to an assessed magnitude of medium negative and an overall ranking of **moderate to minor adverse**.

The following further mitigation measures would reduce the risk to ALARP:

- Harbour Authority Powers (see Section 8.1.4).
- AIS coverage – All dredge/construction vessels, including barges to carry AIS (A or B).

Following the implementation of mitigation measures, specifically the use of AIS, would reduce the magnitude to small negative, and therefore the residual effect will be **minor adverse.**

8.2.11 Stranding –Small recreational vessel on breakwater

The surrounding areas of the Wylfa Marine Development Area are regularly navigated by recreational kayakers and other small craft. These craft can navigate in the embayments and close to the coastline to gain shelter from weather conditions due to the profile of the coastline. During periods of adverse weather conditions, it is possible that these craft will strand on the sloped faces of the breakwaters. The resulting damage would mean it would be unlikely for the vessel to be refloated safely.

The small vessel is likely to have communications equipment available; however, this may not be operational in the conditions that would cause this incident giving a sensitivity of medium. The potential incident would be localised to the footprint of the breakwaters and would be present on a permanent basis giving a magnitude of medium negative. This leads to an overall ranking of **moderate to minor adverse**.

The following further mitigation measures would reduce the risk to ALARP:

- Harbour Authority Powers (see Section 8.1.4).
- CCTV coverage – Monitoring of the harbour area.
- MSMS – Prior to commencement of marine operations, MSMS established by the SHA.
- Safety boat – On call to be available in the event of an emergency.
- PMSC compliance – SHA MSMS applies, which recognises the need for contractor RAMS to be agreed with the SHA in advance of marine works.

Following the implementation of mitigation measures, specifically the use of CCTV to monitor the harbour and operation of an MSMS which will take this risk into account and provide guidance, the magnitude would be reduced to small negative giving an overall ranking of **minor adverse**

8.3 Operational impacts

The NRAs from Table 7.12 for MOLF operational phase of the project that have an outcome of significant risk (or above) have been taken forward into this impact assessment. These are summarised in Table 8.5.

Table 8.5 NRAs brought forward into the impact assessment

Hazard Category	Hazard Scenario	Current Risk
Allision	Vessel with breakwaters	6.62
Allision	Vessel with the MOLF	5.10
Collision	Recreation/fishing/high speed/harbour vessel with vessel transiting to or from the Wylfa Marine Development Area	6.52
Grounding	Vessel within the harbour	7.56
Machinery related accidents	Steering/propulsion failure entering or leaving the harbour	5.44
Other	Displacement of vessels	5.92
Other	Berth unavailable	6.26
Payload related accidents	Vessel unloaded incorrectly alongside the MOLF	5.12
Stranding	Small recreational vessel on breakwater	5.67

8.3.1 Allision – Vessel with breakwaters

Manoeuvring of vessels in close proximity to the breakwaters has the potential for contact with the structure (allision), especially during periods of adverse weather conditions when wind activity and wave action has the potential to adversely affect vessel manoeuvring. In addition, tidal flow conditions require additional consideration depending on the time the vessel is expected to enter or leave the harbour and the tidal conditions during the vessel's transit. Any allision has the potential to cause damage to a vessel, which may lead to a pollution event and injuries to personnel. This risk will diminish with time as crew become familiar with the new berthing locations and the effects of wind and tidal flow at this location. Indicative manoeuvres of vessels passing the breakwaters and berthing are given in Appendix E.

The confined area within the breakwaters means that a vessel has reduced ability to make corrective actions. The slow speed at which an approach to the harbour is made means that there would be sufficient time to make alterations of course through application of engines, rudder and bow thrusters. These factors lead to a medium level of sensitivity. In addition, the potential impact is localised to the area of the marine facilities and would occur throughout the operational phase, leading to a magnitude of medium negative and an overall ranking of **moderate to minor adverse**.

The following further mitigation measures will reduce the risk to ALARP:

- Harbour Authority Powers (see Section 8.1.4).
- Availability of latest hydrographic information – Results of hydrographic survey provided to UK Hydrographic Office (UKHO) for update of navigation charts for the area.
- Accurate tidal measurements – Tide level observed on-site and made available to vessels.
- Arrival/departure, advance notice of – Notification sent to LPS.
- Aids to navigation, provision and maintenance of – Provided after consultation with Trinity House Lighthouse Authority.
- AIS coverage – Monitored by LPS marine personnel.
- Availability of pollution response equipment – Harbour to have equipment to deal with Tier 1 spills.
- MSMS – Provides guidance and procedures based on risk assessments.
- Oil spill contingency plans – Details actions to be taken in the event of oil spill.
- Protective fendering – Along breakwaters to stop vessels making contact with the rock armour.
- PMSC compliance – Ensures all risk is reduced to ALARP.
- Production of large-scale navigational charts – the UKHO can provide large-scale Electronic Navigational Charts (ENCs) for vessels using the Harbour Area.
- Requirement for notification of vessel defects – Details of vessel defects sent to LPS.
- Tidal flow atlas – Covering each hour for spring and neap, scaled for the Harbour Area, including the combined effect of Cooling Water intake and discharge.
- Towage, available and appropriate – Harbour tugs employed to escort vessel through the breakwaters to the berth.
- Training of port marine/operations personnel – This should include the use of equipment and implementation of the plans.
- Large-scale navigational charts – The UKHO production of large-scale ENCs and paper charts for vessels using the Wylfa Marine Development Area.
- Vessel master simulation training – Prior to operations, masters to practice berthing/unberthing using the vessels that will be entering the harbour and representative tidal flow at different states of tide and weather.

Following the implementation of mitigation measures, specifically the training of vessel Masters, availability of the latest hydrographic information and the creation of a tidal flow atlas, the sensitivity is reduced to low and so the residual effect will be **minor adverse**.

8.3.2 Allision – Vessel with the MOLF

The confined area within the harbour created by the breakwaters increases the risk that a vessel will make contact (allision) with the MOLF whilst manoeuvring to berth, especially in periods of adverse weather conditions when wind activity has the potential to adversely affect vessel manoeuvring. Any allision has the potential to cause damage to a vessel, which may lead to a pollution event and injuries to personnel. This risk will diminish with time as crew become familiar with the new berthing locations and the effects of wind and tidal flow at this location. Indicative manoeuvres of vessels passing the breakwaters and berthing are given in Appendix E.

This potential effect would have a moderate level of sensitivity due to the confined area within the breakwaters giving the vessel less space to manoeuvre. However, the low speed at which an approach to the berth is made means that there is adequate time to react to an allision situation by use of the vessel's engines, rudder and bow thruster. In addition, the potential impact is localised to the area of the marine facilities and would occur throughout the operational phase, leading to a magnitude of medium negative and an overall ranking of **moderate adverse**.

The following further mitigation measures will reduce the risk to ALARP:

- Harbour Authority Powers (see Section 8.1.4).
- Availability of latest hydrographic information – Results of hydrographic survey provided to UKHO for update of navigation charts for the area.
- Availability of pollution response equipment – Harbour to have equipment to deal with Tier 1 spills
- Aids to navigation, provision and maintenance of – Provided after consultation with Trinity House Lighthouse Authority.
- Accurate tidal measurements – Tide level observed on-site and made available to vessels.
- AIS coverage - Monitored by LPS marine personnel.
- Arrival/departure, advance notice of – Notification sent to LPS.
- MSMS – Provides guidance and procedures based on risk assessments.
- Oil spill contingency plans – Details actions to be taken in the event of oil spill
- Protective fendering - Along breakwaters to stop vessels making contact structure.
- Production of large-scale navigational charts – the UKHO can provide large-scale ENCs for vessels using the Harbour Area.
- PMSC compliance – Ensures all risk is reduced to ALARP.
- Requirement for notification of vessel defects – Details of vessel defects sent to LPS.
- Large-scale navigational charts – The UKHO production of large-scale ENCs for vessels using the Wylfa Marine Development Area.
- Towage, available and appropriate – Harbour tugs employed to escort vessel through the breakwaters to the berth.
- Training of port marine/operations personnel.
- Tidal flow atlas – Covering each hour for spring and neap, scaled for the harbour area, including the combined effect of Cooling Water intake and discharge.
- Vessel master simulation training – Prior to operations, masters to practice berthing/unberthing using the vessels that will be entering the harbour and representative tidal flow at different states of tide and weather.

Following the implementation of mitigation measures, specifically the training of vessel Masters, availability of the latest hydrographic information and the creation of a tidal flow atlas, the sensitivity is reduced to low, and so the residual effect will be **minor adverse**.

8.3.3 Collision – Recreation/fishing/high speed/harbour vessel with vessel transiting to or from the Wylfa Marine Development Area

Consultation with local stakeholders indicates that recreational fishing and leisure vessels use the bays in the vicinity of the Wylfa Marine Development Area for shelter from the weather, anchoring locations whilst on a passage and for potting. These vessels will generally be navigating close to the shore to avoid traffic in deeper water further to the north of the area. There is potential for one of these vessels to be involved in a collision with a vessel navigating to or from the Wylfa Marine Development Area.

In addition, high speed vessels navigate in the area between the Skerries TSS and the Wylfa Marine Development Area. Analysis of AIS has shown that these vessels are generally crew transfer vessels operating between the wind farms in the area and Holyhead Port. These vessels are generally very manoeuvrable and able to take avoiding action as required.

This potential effect would have a medium level of sensitivity due to the ability of vessels to react to the situation by manoeuvring to avoid a collision situation. This type of incident has the potential to occur throughout the operational phase, and therefore presents a magnitude which is assessed as medium negative. This leads to an overall ranking of **moderate to minor adverse**.

The following further mitigation measures will reduce the risk to ALARP:

- Harbour Authority Powers (see Section 8.1.4).
- AIS coverage – Monitored by LPS marine personnel.
- LPS broadcast (navigation and safety information) – Promulgate conditions and movements within the harbour to approaching vessels on request.

Following the implementation of mitigation measures, specifically the provision of LPS which will act as a central contact point for the Harbour that will be able to supply information on vessel movements to any vessels navigating through the area, the sensitivity is reduced to low and so the residual effect will be **minor adverse**.

8.3.4 Grounding – Vessel within the harbour

Vessels using the harbour area have the potential to ground in the shallower areas towards the south-eastern area, near the Cooling Water intake, especially when manoeuvring to the Ro-Ro berth. The Ro-Ro vessel is likely to enter this area bow first when swinging, before going astern to the berth. Any grounding in this location is likely to involve puncturing of the hull or major damage which could lead to a pollution event and debris entering the Cooling Water intake.

The potential effect would have a high level of sensitivity due to the limited time and ability for the vessel crew to react to the situation and the confined area within the breakwaters limiting possible manoeuvring. The potential impact will be localised to the extent of the harbour area and will be present on a permanent basis. The impact is likely to occur frequently but will diminish with time as vessel crews become more experienced with the harbour conditions leading, to an assessed magnitude of medium negative and an overall ranking of **major to moderate adverse**.

The following further mitigation measures will reduce the risk to ALARP:

- Harbour Authority Powers (see Section 8.1.4).
- Availability of latest hydrographic information – Results of hydrographic survey provided to UKHO for update of navigation charts for the area.
- Availability of pollution response equipment – Harbour and contractors to have equipment available
- Aids to navigation – Buoys and light to identify navigable water.
- Dredging programme – Informed by the results of hydrographic survey.
- Hydrographic surveying program – Regular scheduled surveys in line with PMSC requirements.
- MSMS – Provides guidance and procedures based on risk assessments.
- PMSC compliance – Ensures all risk is reduced to ALARP.
- Requirement for notification of vessel defects – Details of vessel defects sent to LPS.
- Safe allocation of berths (depth, available, suitable) – Should take into account the dimensions of the vessel transiting to the berth.
- Training of port marine/operations personnel – This should include the use of equipment and implementation of the plans
- Oil spill contingency plans – Details actions to be taken in the event of oil spill
- Vessel master simulation training – The strong currents present in the area and reduced sea room for manoeuvre means that masters will need training in order to safely navigate in the area.

Following the implementation of mitigation measures, specifically the training of vessel masters and tidal flow atlas, the sensitivity will be reduced to low and so the residual effect will be **minor adverse.**

8.3.5 Machinery related accidents – Steering/propulsion failure entering or leaving the harbour

There is the potential for engine, thruster or rudder failure whilst a vessel is manoeuvring from the berth and proceeding out of the harbour. The increased use of these systems during these manoeuvres increases the likelihood that these systems may fail. The restricted water available within the harbour means that, should the vessel lose steering or propulsion, there is the possibility the vessel can make contact with the quay or breakwaters.

The potential effect would have a high level of sensitivity due to the limited time and ability for the vessel crew to react to the situation and the confined area within the breakwaters, limiting possible manoeuvring. The potential impact will be localised to the extent of the harbour area and will be present on a permanent basis leading to an assessed magnitude of medium negative and an overall ranking of **major to moderate adverse**.

The following further mitigation measures will reduce the risk to ALARP:

- Harbour Authority Powers (see Section 8.1.4).
- MSMS – Provides guidance and procedures based on risk assessments.
- Oil spill contingency plans – Details actions to be taken in the event of oil spill.
- PMSC compliance – Ensures all risk is reduced to ALARP
- Port Facility Emergency Plan – To include actions in the event of a man overboard.
- Requirement for notification of vessel defects – Details of vessel defects sent to LPS.
- Training of port marine/operations personnel – This should include the use of equipment and implementation of the plans.

Following the implementation of mitigation measures, specifically the use of contingency plans should this event occur and the associated training of marine personnel, the magnitude will be reduced to small negative and so the residual effect will be **minor adverse.**

8.3.6 Other – Displacement of vessels

Transit routes to and from the Wylfa Marine Development Area will result in recreational and fishing vessels that currently navigate within that area being displaced into areas where larger vessels navigate. These vessels will be temporarily displaced either further offshore, or more likely a timing delay will occur to vessel transits to avoid crossing situations (and therefore avoid potential collision situations). Anecdotal information suggests that approximately seven fishing vessels use Cemlyn Bay for potting and line fishing, these vessels will continue to use the bay but may need to time their transits to avoid interaction with vessels leaving or entering the Wylfa Marine Development Area.

This potential effect would have a low level of sensitivity, as there is sufficient sea room to the north of the Wylfa Marine Development Area for vessels to transit safely and perform actions to avoid close quarters situations in accordance with the COLREGS. The potential effect will be localised to the extent of the study area and will be present on a permanent basis. This leads to an assessed magnitude of medium negative and an overall ranking of **minor adverse**.

The following further mitigation measures will reduce the risk to ALARP:

- Harbour Authority Powers (see Section 8.1.4).
- AIS coverage – All dredge/construction vessels, including barges to carry AIS (A or B).

Following the implementation of mitigation measures, the residual effect will be **insignificant.**

8.3.7 Other – Berth unavailable

The highest anticipated number of vessels in a 24 hour period will be eight. With four berths available for vessels, it is possible for a suitable berth to be unavailable due to delays unloading or vessel equipment failure. If an approaching vessel has passed the breakwaters into the harbour area without notification that a berth is available, it has the potential to collide with moored vessels or impact with fixed structures due to the lack of navigable water in the harbour area.

This potential effect would have medium sensitivity because if the vessel is notified in sufficient time then it would be able proceed to anchor in sheltered waters and await berth availability. The effect magnitude would be medium negative as it has the potential to occur frequently. This leads to an overall ranking of **moderate to minor adverse**.

The following further mitigation measures will reduce the risk to ALARP:

- Harbour Authority Powers (see Section 8.1.4)
- MSMS – Provides guidance and procedures based on risk assessments.
- Oil spill contingency plans – Details actions to be taken in the event of oil spill
- PMSC compliance – Provides guidance and procedures based on risk assessments.
- Availability of pollution response equipment – Harbour and contractors to have equipment available.
- Training of port marine/operations personnel – This should include the use of equipment and implementation of the plans.

Following the implementation of mitigation measures, the residual effect will be **minor adverse.**

8.3.8 Payload related accidents – Vessel unloaded incorrectly alongside the MOLF

When unloading vessels, it is possible that the stability will be compromised due to the distribution of weight. This can have several effects including, list, loll, excessive sheer forces or bending moments. These have the potential to cause either severe damage to the vessel or lead it to capsize.

There is sufficient time before unloading operations commence to perform unloading calculations to ensure that stability limits are not exceeded, giving a sensitivity of low. The potential impact will be localised to the extent of the harbour area and will be present on a permanent basis leading to an assessed magnitude of medium negative and an overall ranking of **minor adverse.**

The following further mitigation measures will reduce the risk to ALARP:

- Harbour Authority Powers (see Section 8.1.4).
- Availability of pollution response equipment – Harbour and contractors to have equipment available.
- Hazardous cargoes, advance notice of – Vessels required to notify SHA of any hazardous cargoes in advance.
- MSMS – Provides guidance and procedures based on risk assessments.
- Oil spill contingency plans – Details actions to be taken in the event of oil spill
- PMSC compliance – Provides guidance and procedures based on risk assessments.
- Requirement for notification of vessel defects – Details of vessel defects sent to LPS.
- Safe systems of work (H&S) – Based on risk assessment and industry best practice.
- Safe allocation of berths (depth, available, suitable) – Should take into account the dimensions of the vessel transiting to the berth
- Training of port marine/operations personnel – This should include the use of equipment and implementation of the plans.

Following the implementation of mitigation measures, specifically the use of contingency plans should this event occur and the associated training of marine personnel, the magnitude will be reduced to small negative and so the residual effect will be **insignificant.**

8.3.9 Stranding – Small recreational vessel on breakwater

Recreational kayakers and other small craft regularly navigated in the embayments surrounding the Wylfa Marine Development Area. These craft, due to their size and propulsion, stay close to the coastline to gain shelter from tidal and prevailing weather conditions. During periods of adverse weather, it is possible that these craft will strand on the sloped faces of the breakwaters. The resulting damage would mean it would be unlikely for the vessel to be refloated safely.

The small vessel is likely to have communications equipment available; however, this may not be operational in the conditions that would cause this incident, giving a sensitivity of medium. The potential incident will be localised to the footprint of the breakwaters and will be present on a permanent basis, giving a magnitude of medium negative. This leads to an overall ranking of **moderate to minor adverse**.

The following further mitigation measures will reduce the risk to ALARP:

- Harbour Authority Powers (see Section 8.1.4).
- CCTV coverage – Monitoring harbour area.
- International Convention for the Safety of Life at Sea (SOLAS) 1974 – On call to be available in the event of emergency.
- MSMS – Provides guidance and procedures based on risk assessments.
- PMSC compliance – Ensures all risk is reduced to ALARP.

Following the implementation of mitigation measures, specifically the use of CCTV to monitor the harbour and operation of an MSMS which will take this risk into account and provide guidance, the magnitude will be reduced to small negative, giving an overall ranking of **minor adverse**

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9 Cumulative Impacts

Based on the projects identified for cumulative/in-combination consideration, the following activities and projects shown in Table 9.1 are considered relevant in relation to commercial shipping and recreational navigation. The assessed changes to likelihood and consequence associated with these projects have been used when determining the frequency and consequence levels in the NRA tables detailed in Appendix C and Appendix D.

Table 9.1 In-combination activities and projects

Project Developer and Description	Assessment
Magnox Limited - Decommissioning of the Existing Power Station (Wylfa) including care and maintenance of the existing facilities decommissioning and final site clearance.	**Not Considered**. There are currently no plans for the decommissioning of the Existing Power Station to involve marine operations.
Lateral Power (Orthios Group) - Anglesey Eco Park, including 299 MWe biomass power station within the existing consented scheme, prawn growing facility (aquaculture), large soilless indoor vegetable growing facility (hydroponics), home compostable food packaging facility, the CFP Centre of Excellence, research and development, and a deep-water jetty for bulk import.	The Anglesey Eco Park is expected to use a vessel berth in Holyhead for the import of biomass. This will increase the level of vessel traffic in the area and so **increase the likelihood** of marine incidents. The vessels using this facility are unlikely to transit close to the Wylfa Marine Development Area, so the project is unlikely to have an in-combination effect on vessels navigating in the area.
Conygar / Stena Line Ltd - Holyhead Waterfront Redevelopment A comprehensive mixed-use development on 1.2 km of Holyhead waterfront at Newry Beach and Porth y Felin.	The planned redevelopment of the Holyhead Waterfront includes the development of a 500-berth marina. This increase in recreational capacity is likely to increase the recreational vessel transits near to the Wylfa Marine Development Area. This will **increase the likelihood** of a marine incident. This is most likely to occur at the points where the vessels on passage to or from the Wylfa Marine Development Area cross recreational vessels navigating close to shore.
Amlwch LNG - Tankers would import liquid gas to a mooring 3 km from the Amlwch coast. The gas would then be transferred by an undersea pipeline from the mooring platform to the site near the town of Amlwch, where it would be converted back to natural gas and sent into the UK gas network.	The Amlwch LNG project will increase the number of vessels regularly navigating within the study area. Tankers on passage to or from Amlwch are likely to use the Skerries TSS, which means that they will not interact with traffic associated with the Wylfa Marine Development Area in the confined waters closer to shore. This means that there will be a **minimal increase in likelihood** of a marine incident. Due to the nature of LNG and the low flashpoint, any marine incident causing damage to the hull has the potential to cause fire and explosions. This means that there would be an **increase in consequence** associated with **people** and **property**.

Project Developer and Description	Assessment
Stena Line Ports (Harbour Revision Order) application - An application has also been made to Natural Resources Wales for a marine licence screening and scoping opinion for a three stage development of Holyhead Harbour. The scheme will see **Area A:** reclamation forming approximately 68,230 m^2 of new port land for a deep water multi-purpose berth for larger vessels and cruise vessels. **Area B:** reclaimed forming approximately 25,540 m^2 of new port land, providing an additional multi-purpose berth. **Area C:** reclamation forming approximately 16,830 m^2 of new port land, providing a multi-purpose berth for smaller vessels. The scheme also includes an approach channel dredge to achieve -9 m below Chart Datum resulting in approx. 1 M metres cubed of dredge material. It is anticipated that most of the material will be used in the scheme; a proportion may be taken to Holyhead Deep (IS040) disposal site.	The Stena Line Ports harbour development project has the potential to increase the number of vessels regularly navigating within the study area. Large vessels, including cruise vessels on passage along the Anglesey Coast may pass the Wylfa Marine Development Area , however they will be offshore and not directly affect the harbour area or scheme during construction or operation. Larger vessels will use the Skerries TSS, which means that they will not interact with traffic associated with the in the confined waters closer to shore. Dredging vessels working on the Stena Line Ports harbour development project may interact with dredging vessels on passage between the Wylfa Marine Development Area and the disposal site. This traffic however, will fit into the normal pattern of vessel movement within open sea; hence, the potential for interaction is minimal. Therefore, increased vessel activity from the Stena Line Port harbour development means that there will be a **minimal increase in likelihood** of a marine incident.
Minesto - Holyhead Deep 10 MW Tidal Kite installation off the coast of Holyhead, plus on-land elements and grid connection.	The Tidal Kite project will use a large area of the Holyhead Deep Disposal Site currently being considered for disposal of dredge material associated with the Wylfa Newydd Project. The inter-project effects would cause an **increase in likelihood** of a dredger making contact with a fixed structure when using Holyhead Deep.
Atlantis - Tidal array of up to nine tidal generators at the Skerries off the north-west coast of Anglesey.	**Not Considered**. The Atlantis Tidal Array at the Skerries is currently cancelled.
Dublin Port Company - Alexandra Basin Redevelopment Project. Extension of infrastructure to open up Dublin Port to larger cruise and cargo ships. The port will dredge the River Liffey to increase the depth of its berths and the entrance channel from 7 m to at least 10 m. This will eliminate access issues caused by tides and enable large cruise and cargo ships to turn in Alexandra Basin and dock at East Link Bridge, rather than reversing up the Liffey to their berth as they do now.	**Not Considered.** There will be no interaction between vessels involved with the Dublin Port Company and those associated with the Wylfa Newydd Project.
Dun Laoghaire Harbour Company (Ireland) - Proposed New Cruise Berth For Large Cruise Ships at Dun Laoghaire Harbour Dun Laoghaire Harbour Company is seeking permission for an €18 m cruise berth facility to cater for jumbo cruise ships.	**Not Considered.** There will be no interaction between vessels involved with the Dun Laoghaire Harbour Company and those associated with the Wylfa Newydd Project.

10 Mitigation Measures Summary

The following section summarises existing industry standard risk controls and project-specific mitigation measures identified in Section 8. The NRA process has recognised both existing industry standard risk controls and project-specific mitigation; to view mitigation and controls assigned to individual NRAs, see Appendix C and Appendix D. Existing risk controls are listed in Table 7.9.

10.1 Project-specific mitigation measures

Project-specific mitigation has been summarised against the two phases of the proposed development. The mitigation measures identified that rely on Horizon Nuclear Power Wylfa becoming a SHA have been detailed in 8.1.4. These Harbour Authority Powers have been considered in addition to the mitigation detailed in the following sections for the construction and operational phases.

10.1.1 Construction of the MOLF, breakwaters, Cooling Water intake and Cooling Water outfall

The following 18 project-specific mitigation measures were identified through the NRA process as appropriate risk management controls during the during the construction phase:

- Accurate tidal measurements – Tide level observed on-site by tidal gauges that can be remotely monitored by harbour personnel and made available to vessels
- AIS coverage – All dredge/construction vessels, including barges, to carry AIS (A or B) which will assist in other commercial vessels identifying traffic associated with the Wylfa Newydd Project and therefore taking avoiding action.
- Arrival/Departure, advance notice of – To allow marine personnel to supply accurate and up-to-date traffic movement information to vessels operating at the marine works.
- Availability of pollution response equipment – Harbour and contractors to have equipment available up to Tier 1. A Tier 2 contractor should be available.
- CCTV coverage – passive monitoring of marine operations via cameras covering the marine works will highlight adverse conditions to those monitoring operations.
- RAMS – reviewed and agreed prior to use.
- Dedicated VHF channel – for use by dredge/construction vessels working on the project. This will require a licence from OFCOM.
- Guidance for small craft – passive (informative) management of leisure traffic by Development Liaison Team, written information to the RYA and local yacht clubs, and available as a web based resource.
- MSMS – prior to commencement of marine operations, consideration and creation of a MSMS which details the marine side operations and how these will be managed. Detailed SOPs may also be established to compliment the MSMS.
- Mooring plans and studies – moorings should be designed for the prevailing MetOcean conditions and mooring arrangements suitable for vessel size.
- Oil Spill Contingency Plan – the MCA require an oil spill contingency plan to be in place before the commencement of marine works. Contractor to have spill gear up to Tier 1 which could be used in the event of an incident (if appropriate to the situation).
- PMSC compliance – MSMS applies, which recognises the need for contractor's RAMS to be agreed with the SHA in advance of marine works.
- Protective fendering – In place on jetties/quays and suitable for vessels being used.
- Safe allocation of berths (depth, available, suitable) – Berths located to minimise ranging due to environmental conditions.

- Tidal flow atlas – Provision of a tidal atlas for use on board dredge and construction vessels, which provides tidal flow speed and direction through each hour of the tidal cycle. The information needs to cover flow with the Cooling Water intake/outfall in operation, to provide clarity on expected water velocity and direction.
- Training of port marine/operations personnel – This should include the use of equipment and implementation of the emergency contingency plans
- Vessel master simulation training – Due to the complex currents and confined waters, larger vessel masters will require practice on a ship simulator prior to navigating on-site. This will be a requirement for new vessel masters who do not have experience using the MOLF.
- Weather forecasting – Sea state model can be used throughout the construction phase of the MOLF to predict weather conditions and downtime.
- Safety Boat – On call to be available in the event of emergency.

10.1.2 Operational phase

The following 24 project-specific mitigation measures were identified through the NRA process as appropriate risk management controls during the operational phase:

- Accurate tidal measurements – Tide level observed on-site and made available to vessels.
- Aids to navigation – Provision of lateral marks and leading lights would give visual indication of whether a vessel is likely to proceed clear of the breakwaters and markers to show where vessels should begin their swing and berth lighting to give visual indicators.
- AIS coverage – Monitored by marine personnel with vessel movements promulgated to port users.
- Arrival/departure, advance notice of – To allow marine personnel to supply accurate and up-to-date traffic movement information vessels operating at the marine works.
- Availability of latest hydrographic information – Results of hydrographic survey provided to UKHO for update of navigation charts for the area. This provides required information on the area for a master to plan entry to the harbour.
- Availability of pollution response equipment – Harbour and contractors to have equipment available. A Tier 2 contractor should be available.
- CCTV coverage – Monitoring the harbour area.
- Dredging programme – Informed by the results of hydrographic survey.
- Hazardous cargoes, advance notice of – Vessels required to notify the harbour of any hazardous cargoes in advance.
- Hydrographic surveying program – Regular scheduled surveys in line with PMSC requirements.
- MSMS – Would detail procedures in response to accidents/incidents.
- Oil spill contingency plans – Details actions to be taken in the event of oil spill.
- PMSC compliance – Ensures all risk is reduced to ALARP through risk assessment and subsequent mitigation measures.
- Port Facility Emergency Plan – To include actions in the event of an emergency situation in the harbour.
- Production of large-scale navigational charts – The UKHO can provide large-scale ENCs for vessels using the Harbour Area.
- Protective fendering – Protective measures to reduce the consequence of a vessel making contact with the breakwaters. Protective piles could be installed at key locations around the foot of the breakwaters to prevent vessels making contact with the sloping breakwater sides.
- Requirement for notification of vessel defects – Details of vessel defects sent to harbour.
- Safe allocation of berths (depth, available, suitable) – Should take into account the dimensions of the vessel transiting to the berth.
- Safe systems of work (H&S) – Based on risk assessment and industry best practice.

- Safety Boat – On call to be available in the event of emergency.
- Tidal flow atlas – Detailing current speed and direction for different states of the tide for both spring tides and neap tides. This information will be used at the passage planning stage to inform the master's manoeuvring plans.
- Towage, available and appropriate – Harbour tugs employed to escort vessel through the breakwaters to the berth.
- Training of port marine/operations personnel – This should include the use of equipment and implementation of the plans.
- Vessel Master simulation training – Due to the complex currents and confined waters, masters of larger vessel will require practice on a ship simulator prior to navigating on-site. This will be a requirement for new vessel masters who do not have experience using the MOLF.

11 Summary

These NRAs tables detail the risk generated by the construction (marine works and dredging) and operational phases of the proposed development. In total, 44 hazard scenarios were identified and assessed. A total of 23 hazard scenarios were identified for the construction phase and 21 hazard scenarios for the operational phase.

Through analysis of the causes and embedded mitigation, the hazard scenarios were scored and the 19 assessments that were classified as significant risk or above were brought forward into the formal safety assessment.

From the formal assessment process, 42 mitigation measures were identified, split between the construction and operational phases of the proposed development. Following implementation of appropriate mitigation, the marine risk to navigational receptors can be maintained within a level that is ALARP.

This NRA forms the basis of the assessment to be made as part of the Shipping and Navigation Environmental Statement chapter.

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13 Abbreviations/Acronyms

AIL	Abnormal Indivisible Loads
AIS	Automatic Identification System
ALARP	As Low As Reasonably Practicable
ALRS	Admiralty List of Radio Signals
AOD	Above Ordnance Datum
CCTV	Closed-Circuit Television
CGOC	Coastguard Operations Centre
COLREGS	International Regulations for Preventing Collisions at Sea 1972 (as amended)
DCO	Development Consent Order
DfT	Department for Transport
ENC	Electronic Navigational Chart
FSA	Formal Safety Assessment
HM	Her Majesty's
Hs	Significant Height
H&S	Health and Safety
HSE	Health and Safety Executive
IALA	International Association of Lighthouse Authorities
ID	Identity
IMO	International Maritime Organisation
ISPS	International Ship and Port Facility Security
Lo-Lo	Lift-on/Lift-off
LNG	Liquefied natural gas
LPS	Local Port Service
M+F	Merchant and Fishing
MAIB	Marine Accident Investigation Branch
MCA	Maritime and Coastguard Agency
MGN	Marine Guidance Notes
MoB	Man-overboard
MOLF	Marine Off-Loading Facility
MSMS	Marine Safety Management System
MW	Megawatt
MWe	Megawatt Electrical
NCP	National Contingency Plan
NPS	National Policy Statement
NRA	Navigational Risk Assessment
NtM	Notice to Mariners
OPRC	International Convention on Oil Pollution Preparedness
OREI	Offshore Renewable Energy Installations
PMSC	Port Marine Safety Code
Q	Quarter (of year - e.g. Q1, Q2 of 2016)
RAF	Royal Air Force
RAMS	Risk Assessment Method Statement
RNLI	Royal National Lifeboat Institution
Ro-Ro	Roll-on Roll-off
RYA	Royal Yachting Association
SAR	Search and Rescue
SHA	Statutory Harbour Authority
SLPL	Stena Line Ports Ltd

SMS	Safety Management System
SOLAS	Safety of Life at Sea
SOP	Standard Operating Procedures
SSOW	Safe System of Work
STCW	Standards of Training, Certification and Watchkeeping
Stbd	Starboard
TSS	Traffic Separation Scheme
UK	United Kingdom
UKHO	United Kingdom Hydrographic Office
UNCLOS	United Nations Convention on the Law of the Sea
VHF	Very High Frequency
VMS	Vessel Monitoring System
VTS	Vessel Traffic Service

Cardinal points/directions are used unless otherwise stated.

SI units are used unless otherwise stated.

14 Glossary

AIS	Automatic Identification System. Used for identifying and locating vessels by electronically exchanging data with other nearby ships, AIS base stations, and satellites.
AIS-A	Class A AIS is a carriage requirement for commercial ships of 300 gross tonnage and upwards engaged on international voyages, cargo ships of 500 gross tonnage and upwards not engaged on international voyages and all passenger ships irrespective of size.
AIS-B	Class B AIS is a more simple and lower cost version developed for use on smaller vessels.
ALRS	Admiralty List of Radio Signals. The publication provides comprehensive information on all aspects of Maritime Radio Communications.
Beaufort	A system of estimating and reporting wind speeds using a numerical scale ranging from 0 (calm) to 12 (hurricane).
Bulk Vessel	All vessels designed to carry bulk cargo such as grain, fertilisers, ore and oil.
Bunkers	Fuel used aboard ships.
COLREGS	International Regulations for Preventing Collisions at Sea 1972 (as amended). A set of navigation rules to be followed by ships and other vessels at sea to prevent collisions between two or more vessels.
Girded	A dangerous condition whereby a tow-line becomes near to, or at right angles to a vessel, causing a transverse pulling moment and the potential for loss of stability and capsize.
Hold	A ship's interior storage compartment.
HSE	Health and Safety Executive. The body responsible for the regulation and enforcement of workplace health, safety and welfare, and for research into occupational risks in England and Wales and Scotland.
LPS	Local Port Services. Provision of LPS is designed to improve port safety and coordination of port services within the port community by dissemination of port information to vessels and berth or terminal operators. It is mainly concerned with the management of the port, by the supply of information on berth and port conditions. Provision of LPS can also act as a medium for liaison between vessels and stevedores or allied services, as well as providing a basis for implementing port emergency plans.
MCA	Maritime and Coastguard Agency. The agency responsible for the regulation of the UK maritime industry, prevention of the loss of life on the coast and at sea. They produce legislation and guidance on maritime matters, and provide certification to seafarers.

Marine-SMS	Marine Safety Management System. Manages hazards and risks for a port or marine facility. It should document any practices which are the standard approach to port marine operations.
MOLF	Marine Off-Loading Facility. used as service port and transit point of equipment and materials used during the construction phase of the Wylfa Newydd Project.
OFCOM	The independent regulator and competition authority for the UK communications industries.
OPRC	Convention stating the requirements for a facility's oil spill contingency plan.
Ro-Ro	Roll on-Roll off. A method of ocean cargo service using a vessel with ramps that allow wheeled vehicles to be loaded and discharged without cranes.
SOPs	Standard Operating Procedures. A detailed set of instructions for a vessels crew to perform tasks.
SSOW	Safe Systems of Work. A procedure that results from a systematic examination of a working process. It identifies hazards and specifies work methods designed either to eliminate the hazards or controls and minimise the relevant risks.
Stem the Tide	When a vessel faces the strongest out of wind or current in order to remain in position more effectively.
VMS	Vessel Monitoring System. Allows a vessel to be automatically located and identified through the system by transmitting position data every 2 hours when at sea.

Figures



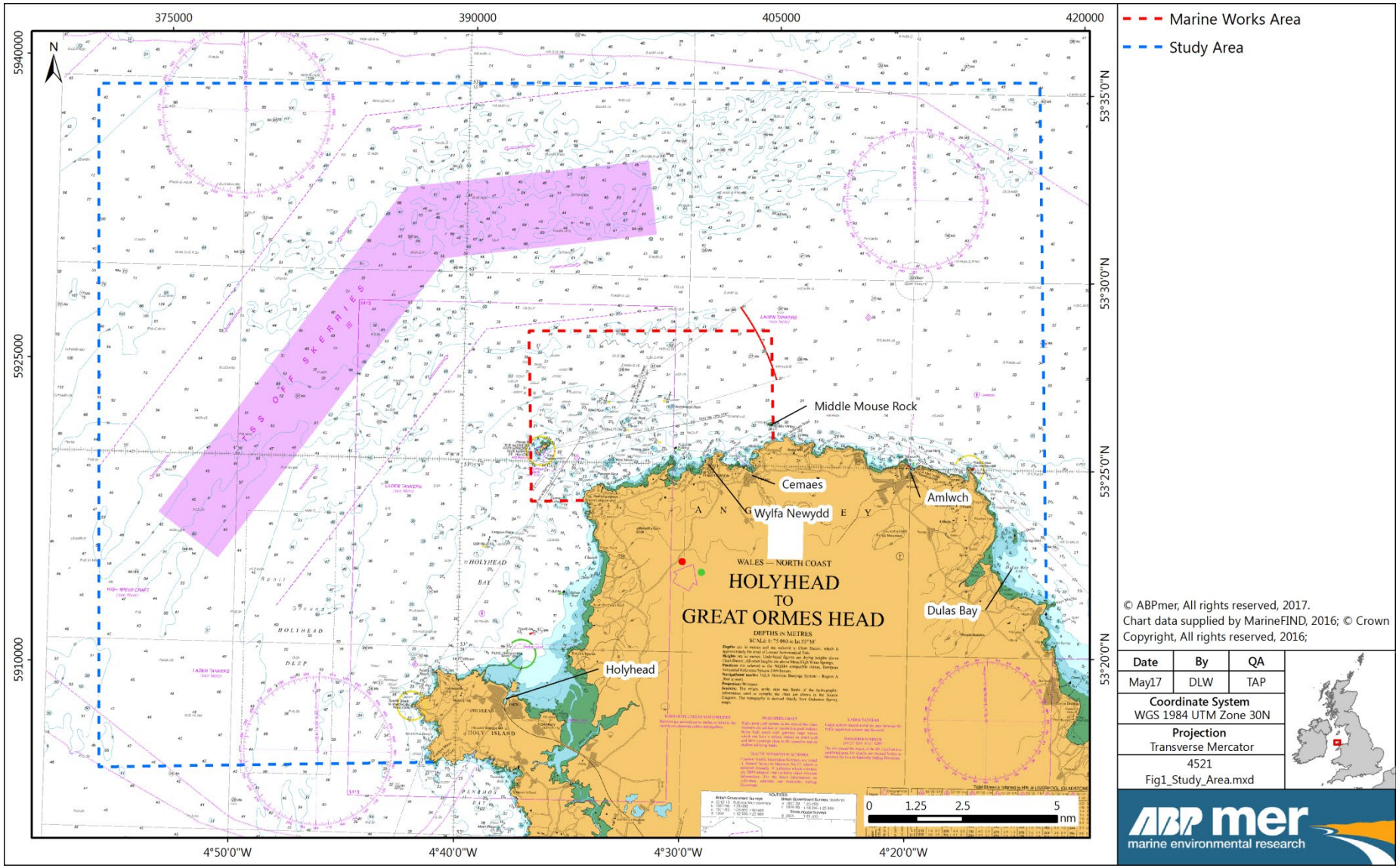


Figure 1. Study Area

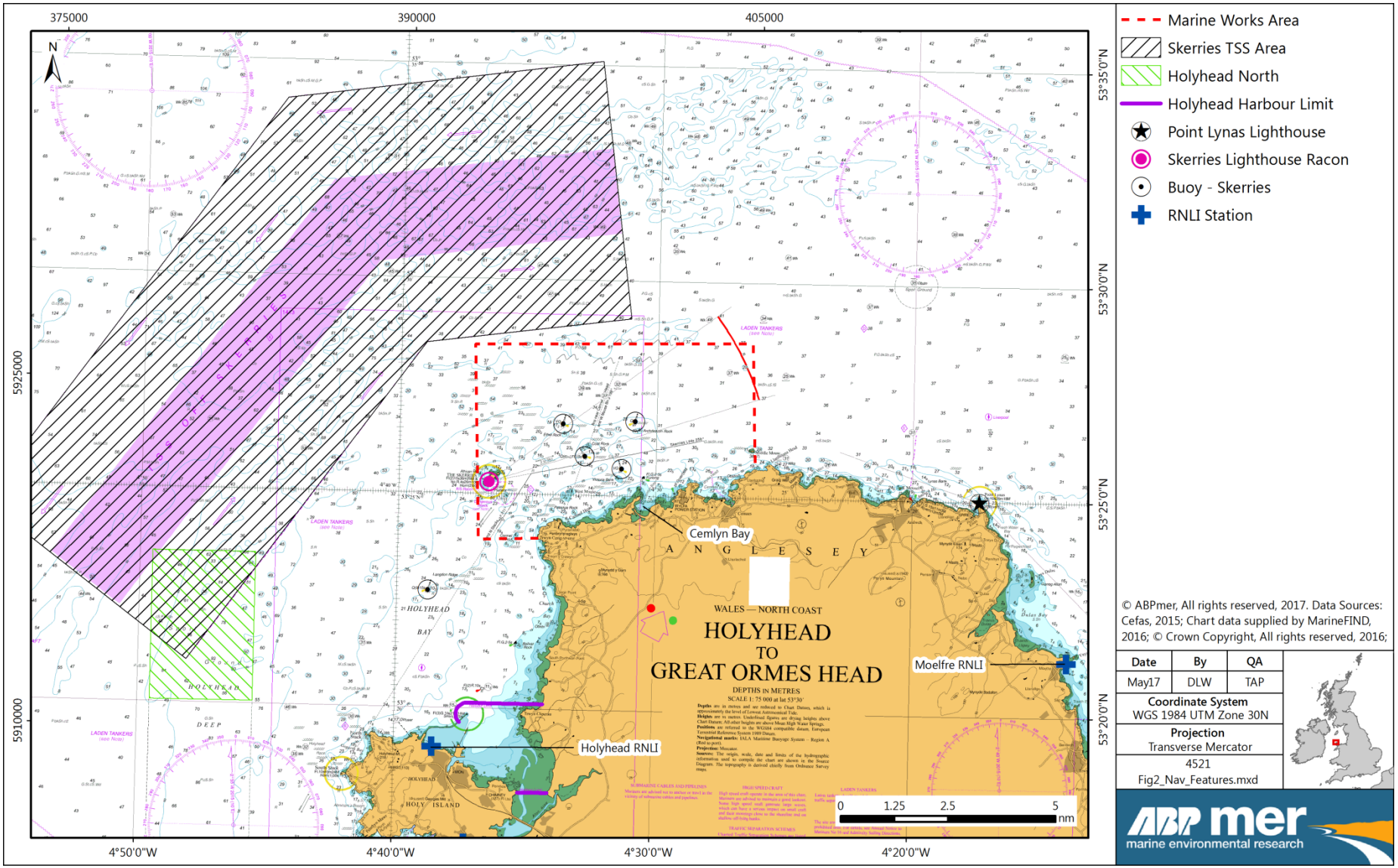


Figure 2. Navigational Features

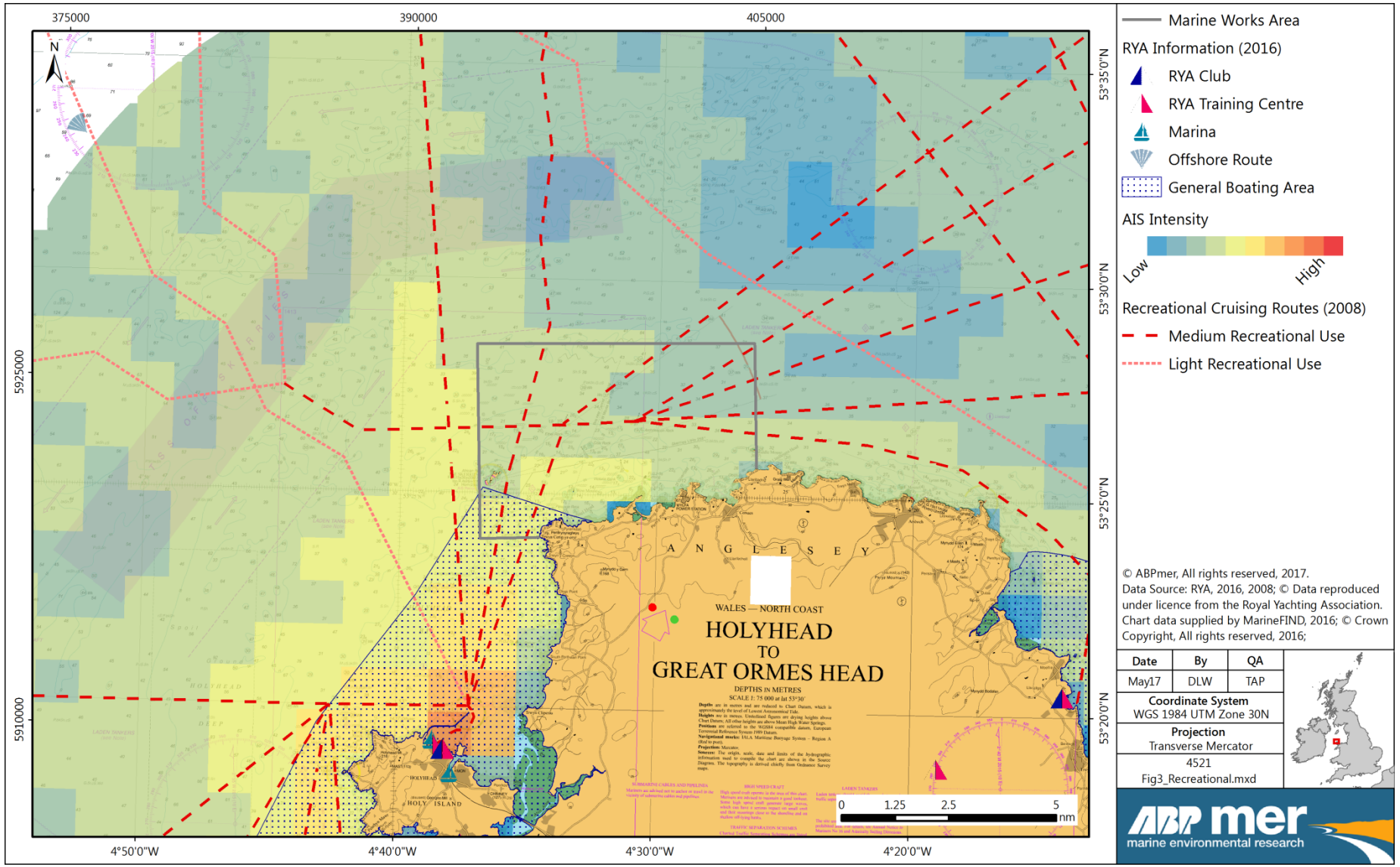


Figure 3. RYA Recreational Boating

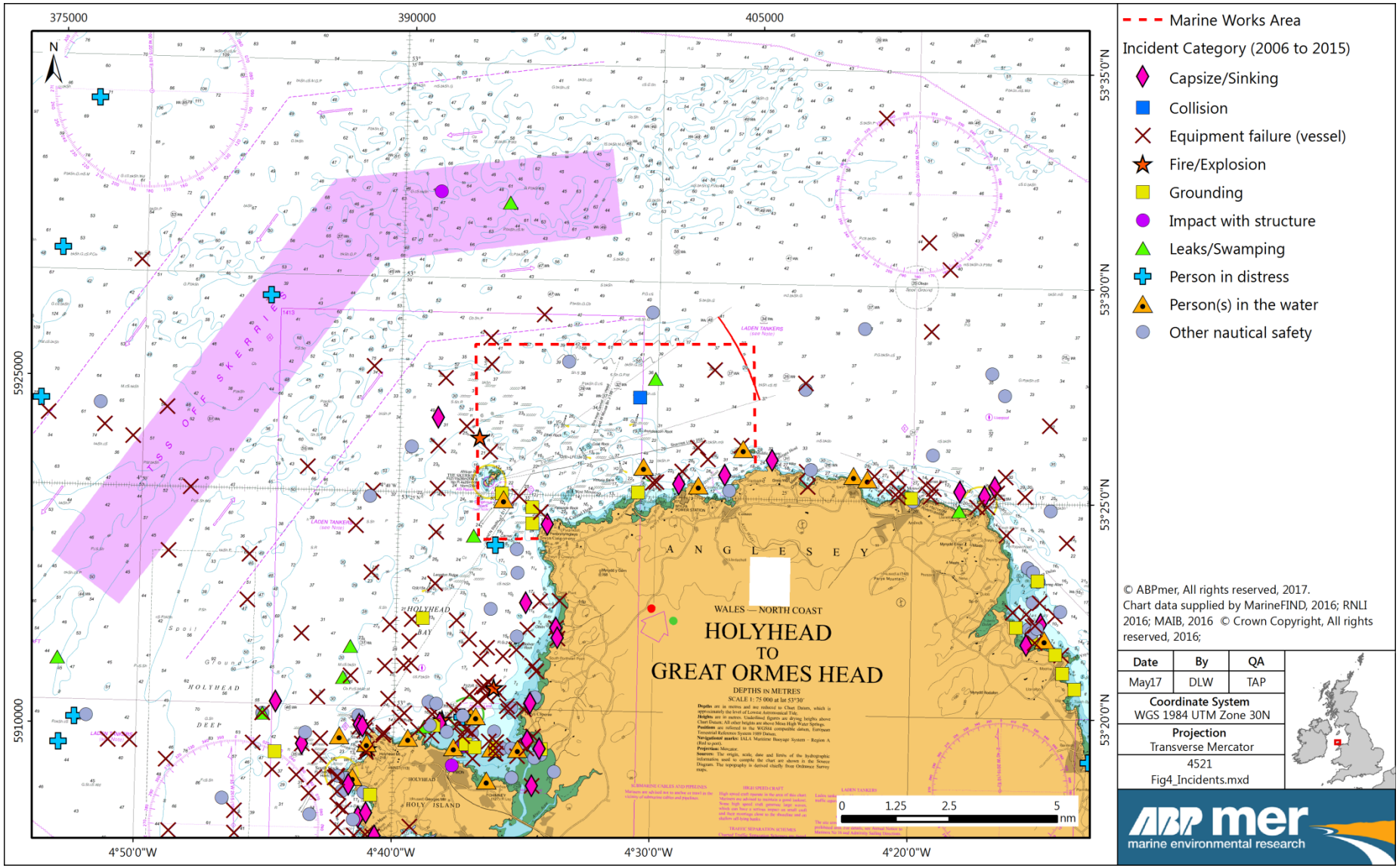


Figure 4. Navigational Accidents/Incidents

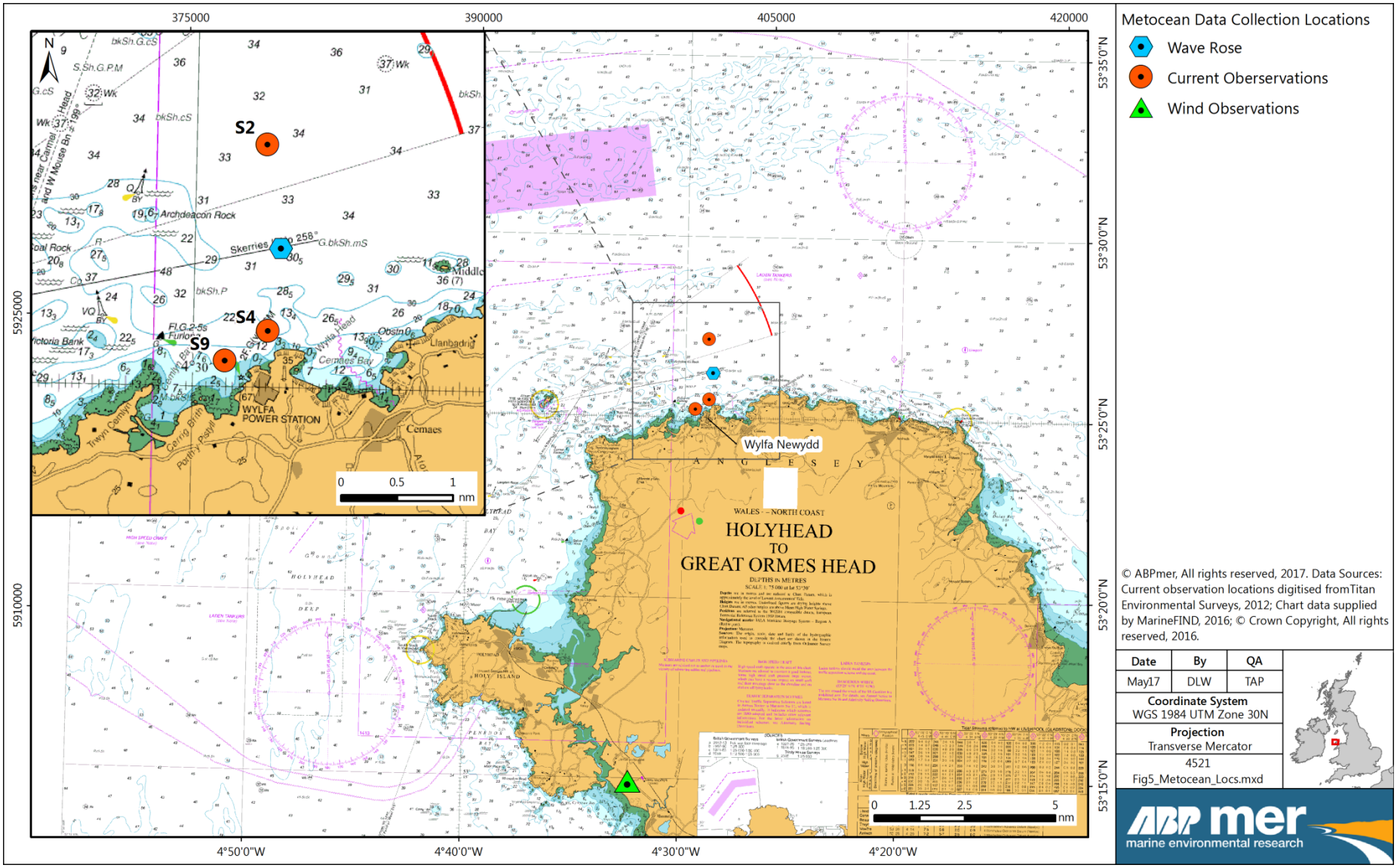


Figure 5. MetOcean Observation Locations

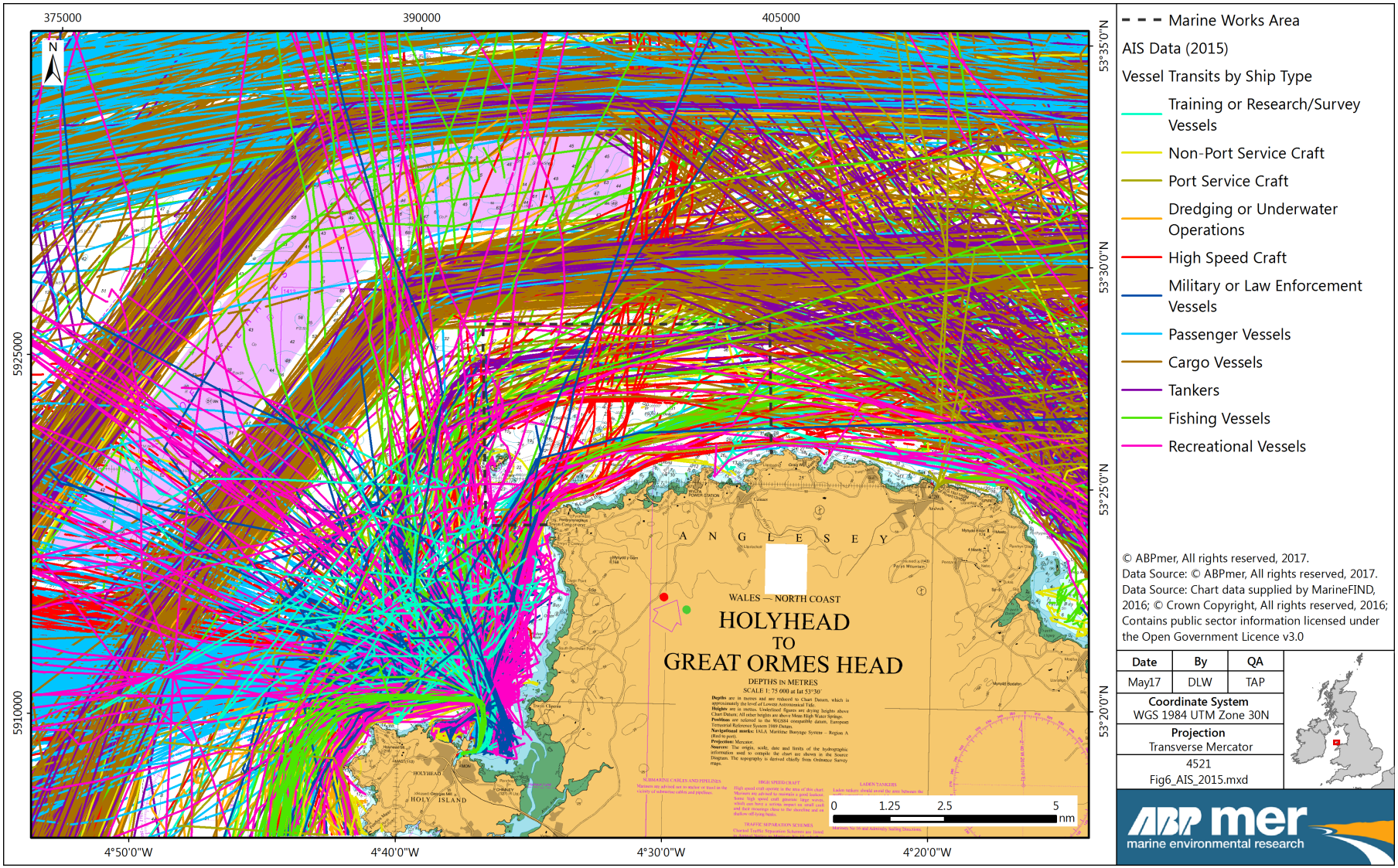


Figure 6. Vessel Transits through the Study Area

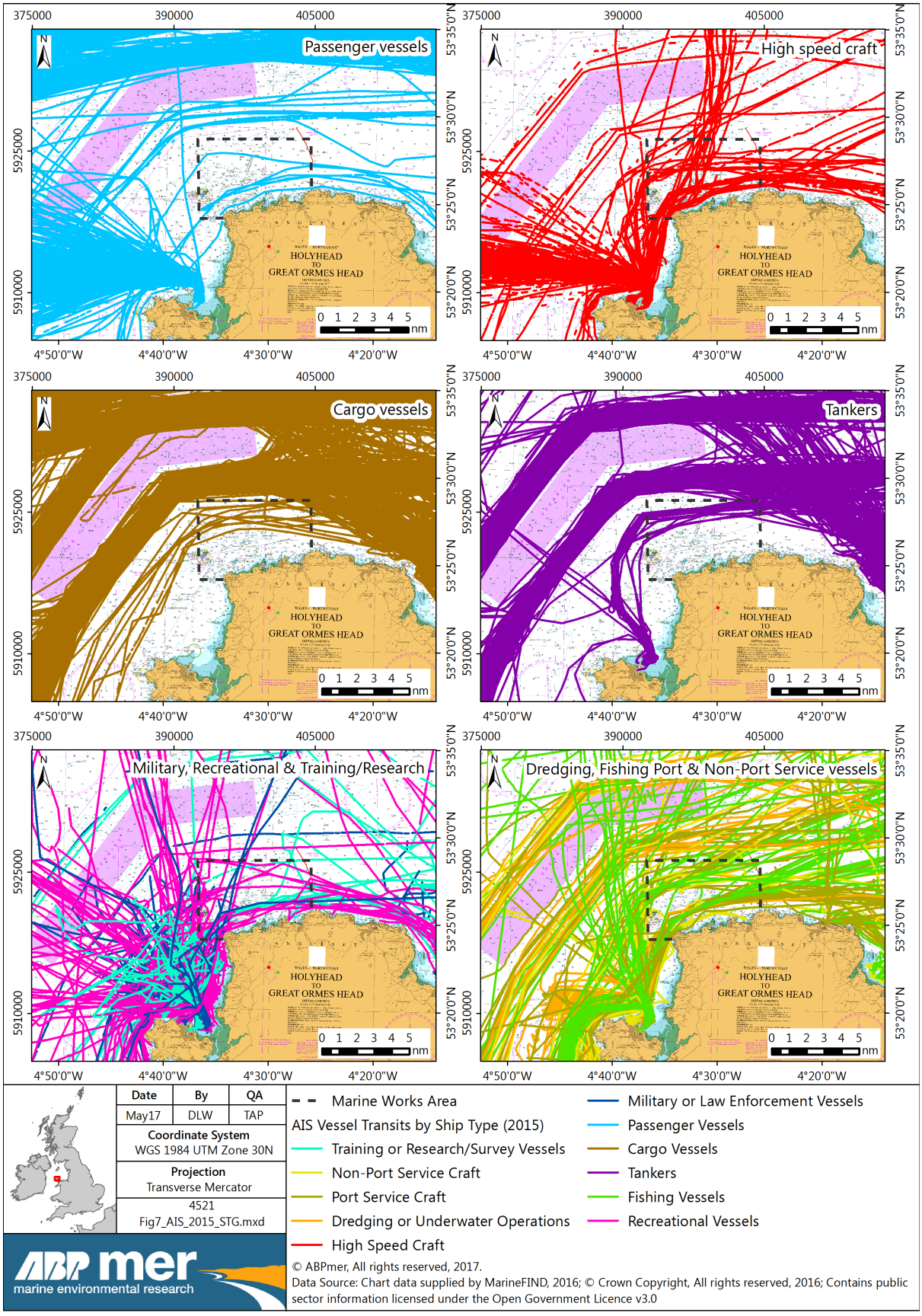
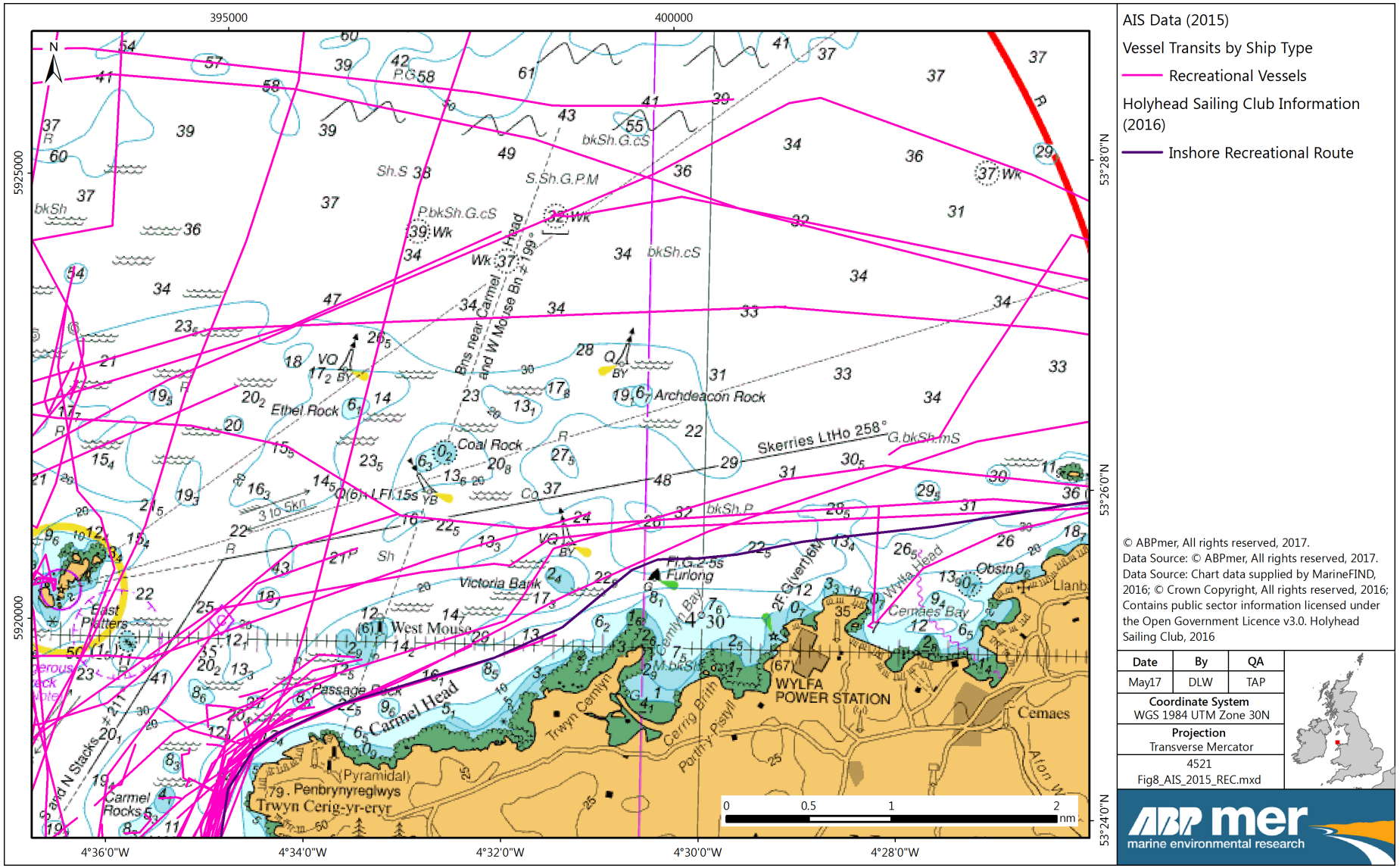


Figure 7. Vessel Transits through the Study Area by Ship Type



AIS Data (2015)

Vessel Transits by Ship Type

Recreational Vessels

Holyhead Sailing Club Information (2016)

Inshore Recreational Route

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Date	By	QA
May17	DLW	TAP
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Projection Transverse Mercator		
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Figure 8. Recreational Transits through the Marine Works Area

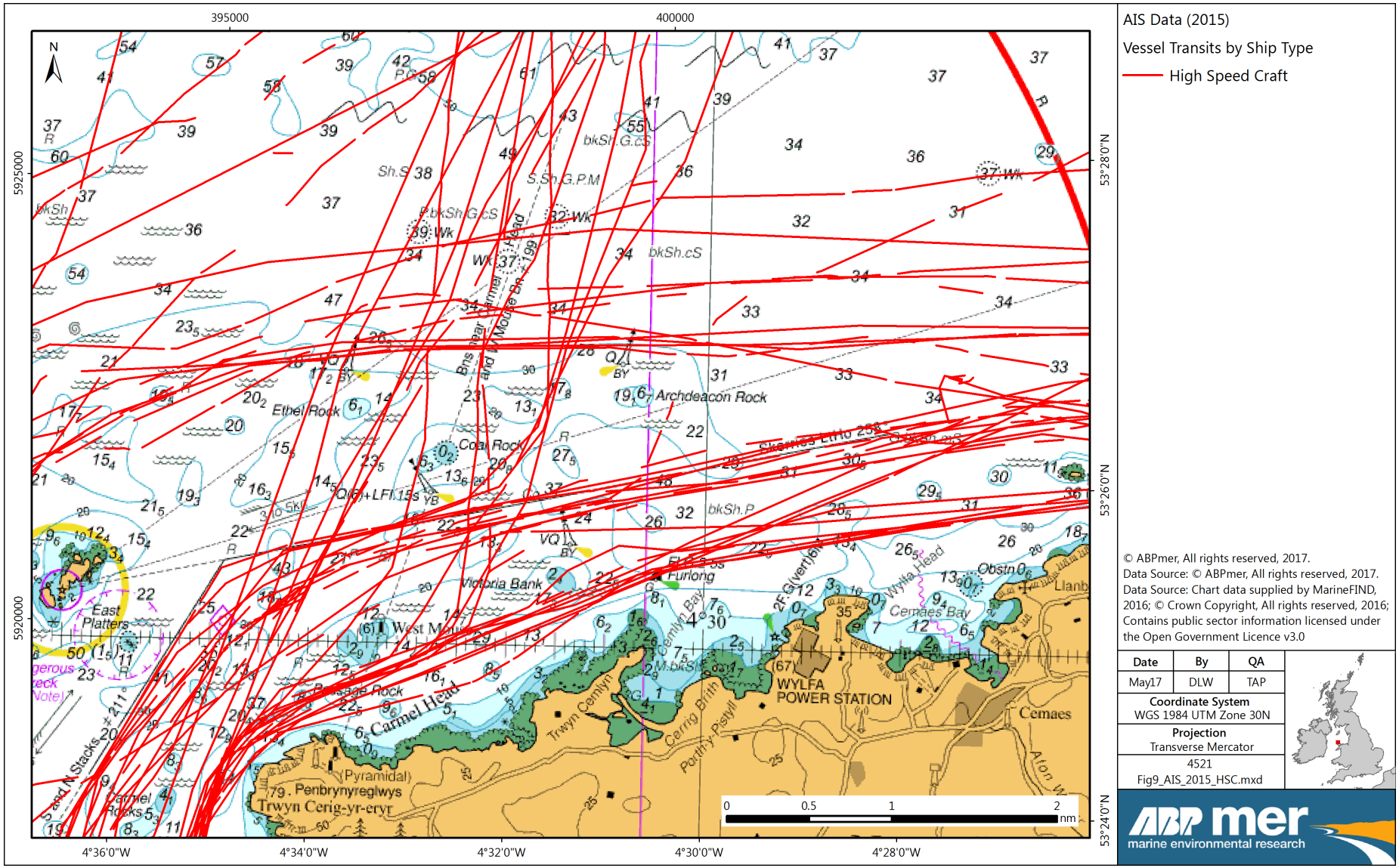
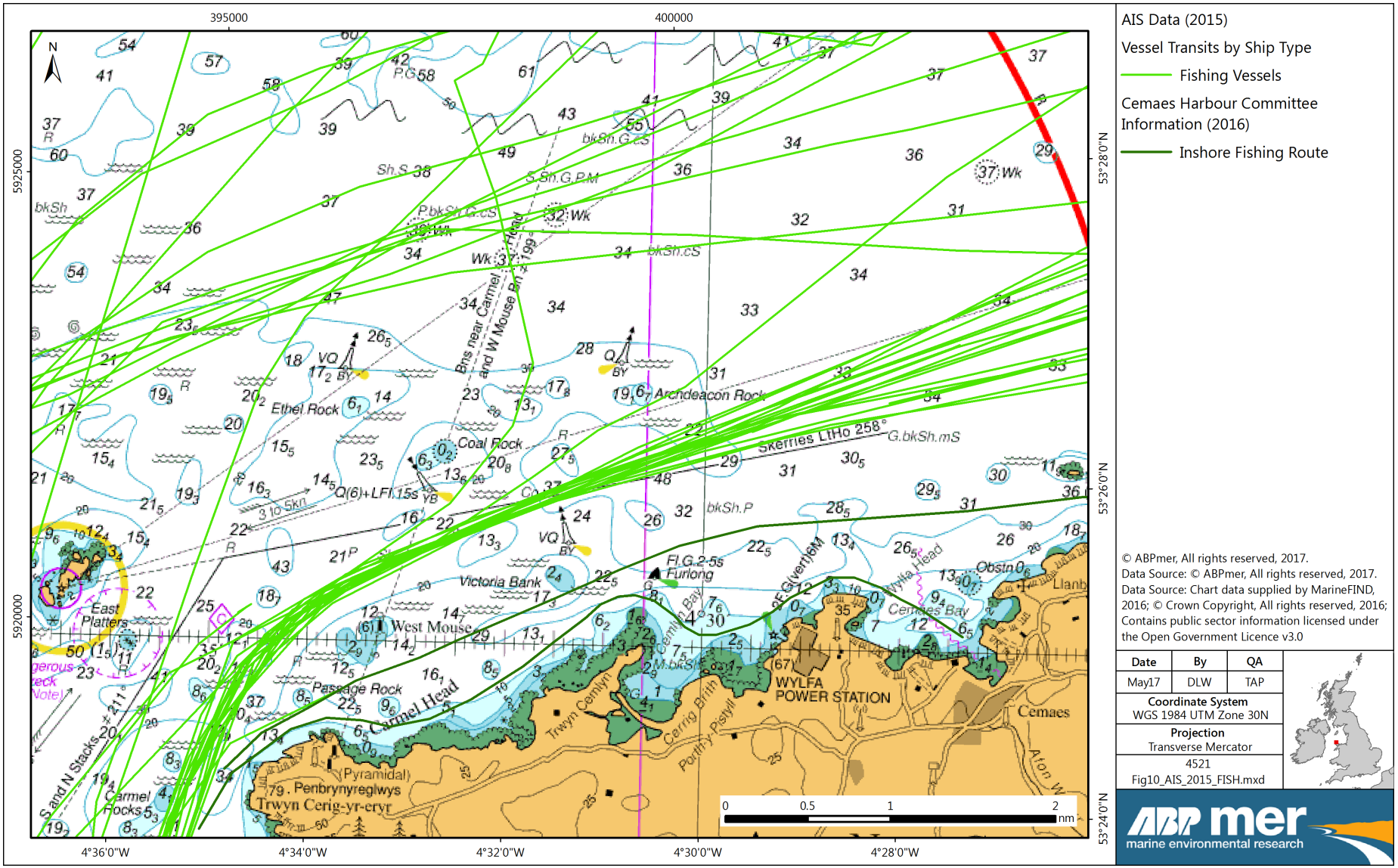


Figure 9. High Speed Craft Transits through the Marine Works Area



AIS Data (2015)

Vessel Transits by Ship Type

Fishing Vessels

Cemaes Harbour Committee Information (2016)

Inshore Fishing Route

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Coordinate System
WGS 1984 UTM Zone 30N

Projection
Transverse Mercator

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Figure 10. Fishing Vessel Transits through the Marine Works Area

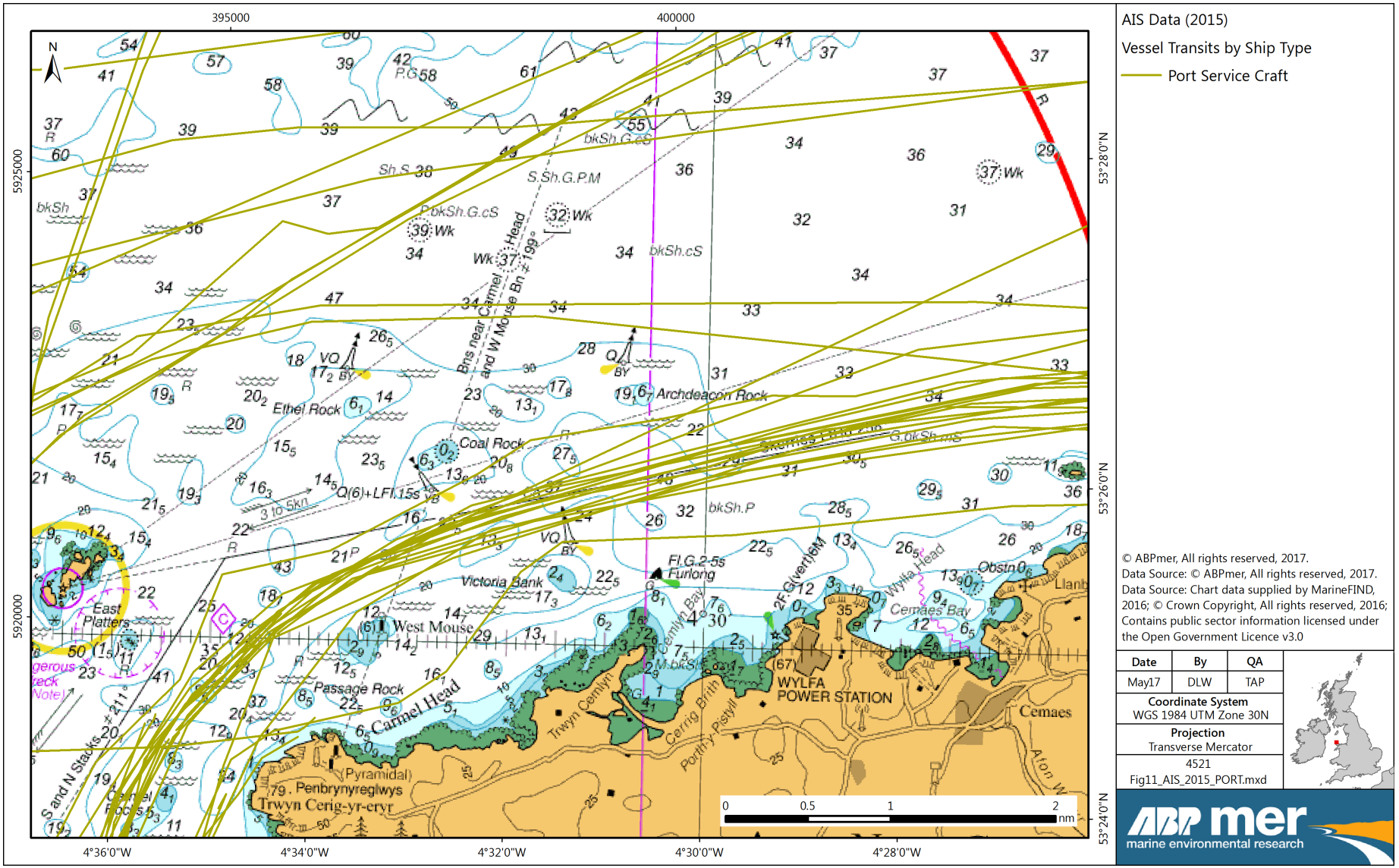
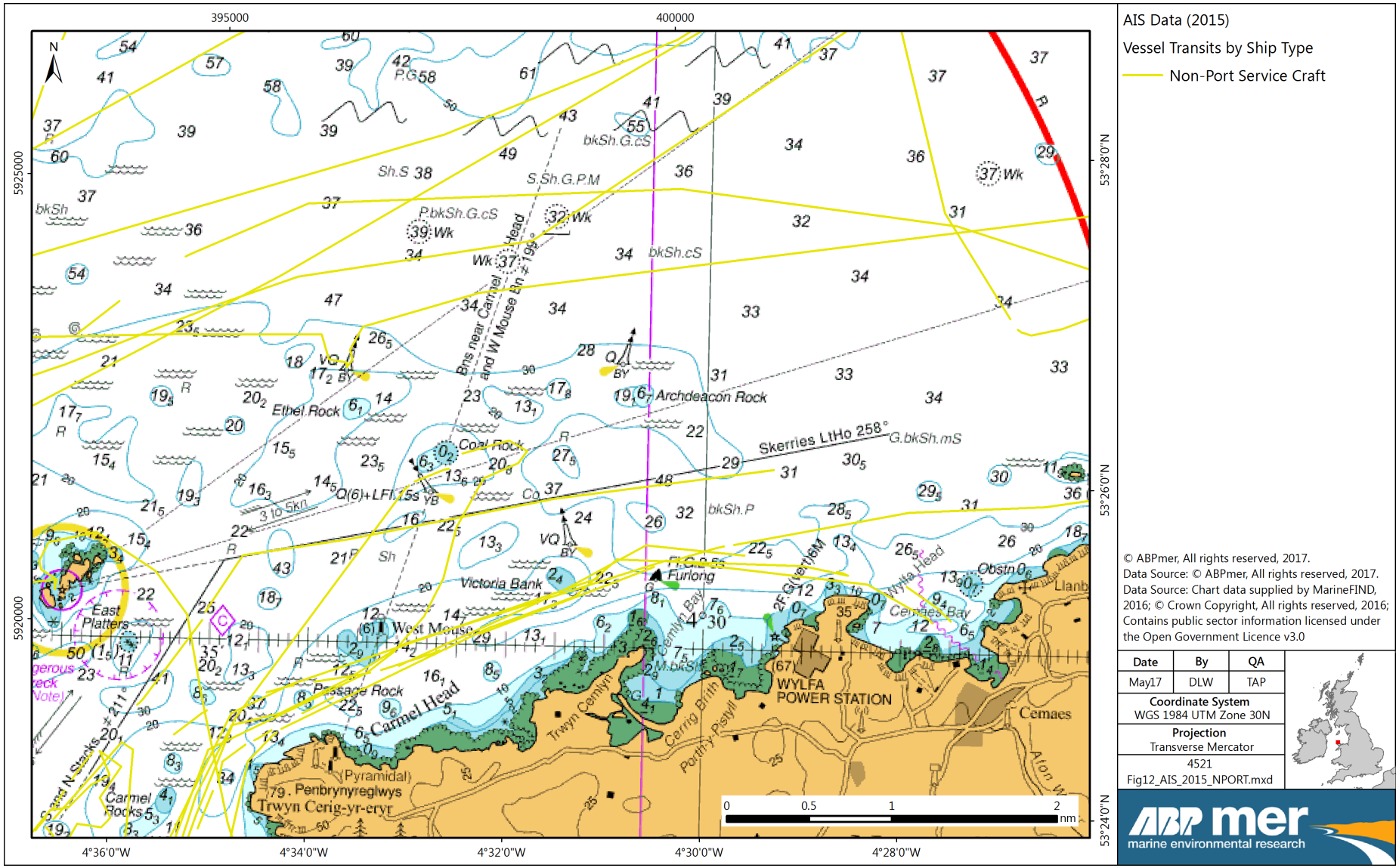


Figure 11. Port Service Craft Transits through the Marine Works Area



AIS Data (2015)

Vessel Transits by Ship Type

Non-Port Service Craft

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Coordinate System
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Figure 12. Non-Port Service Craft Transits through the Marine Works Area

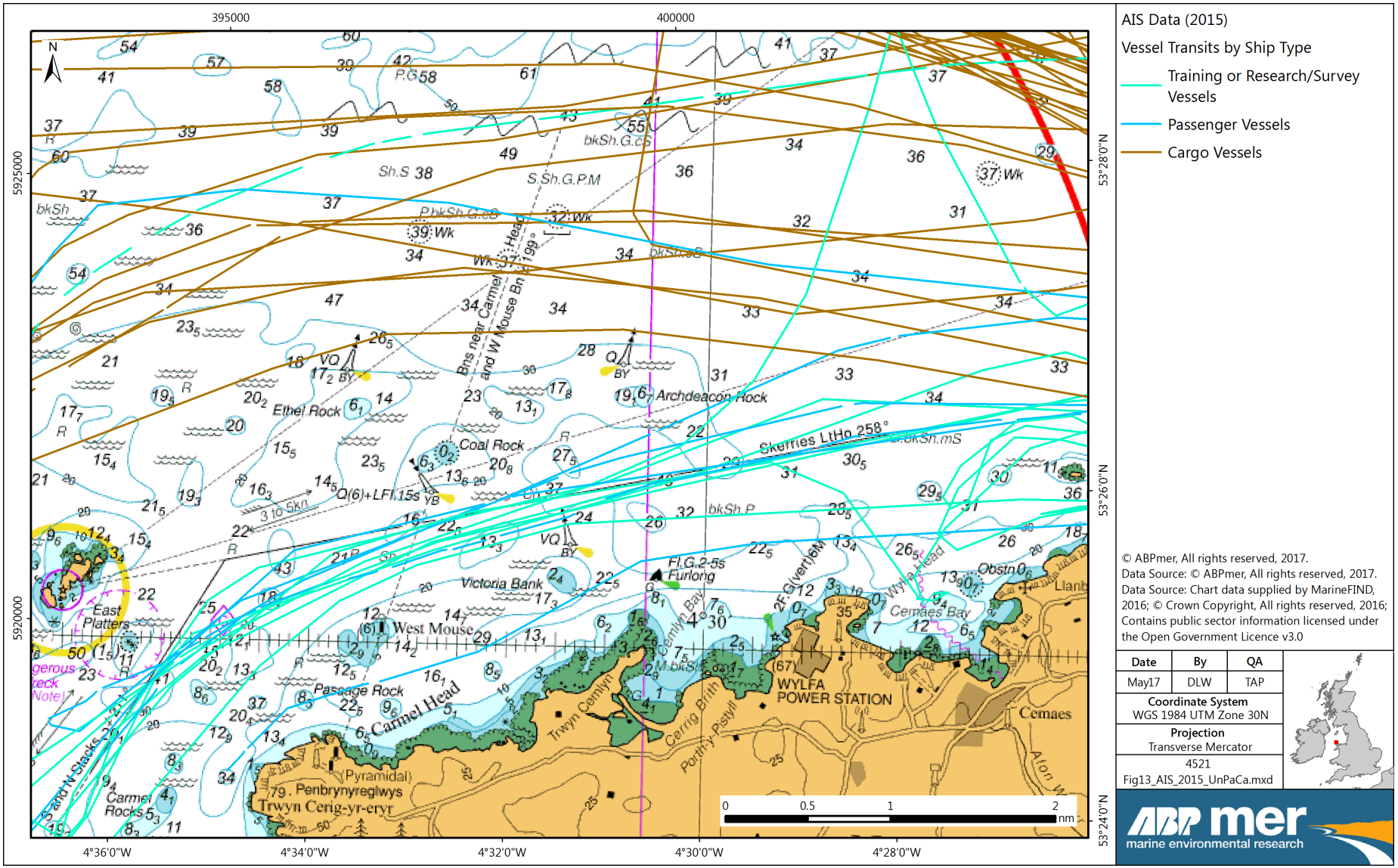
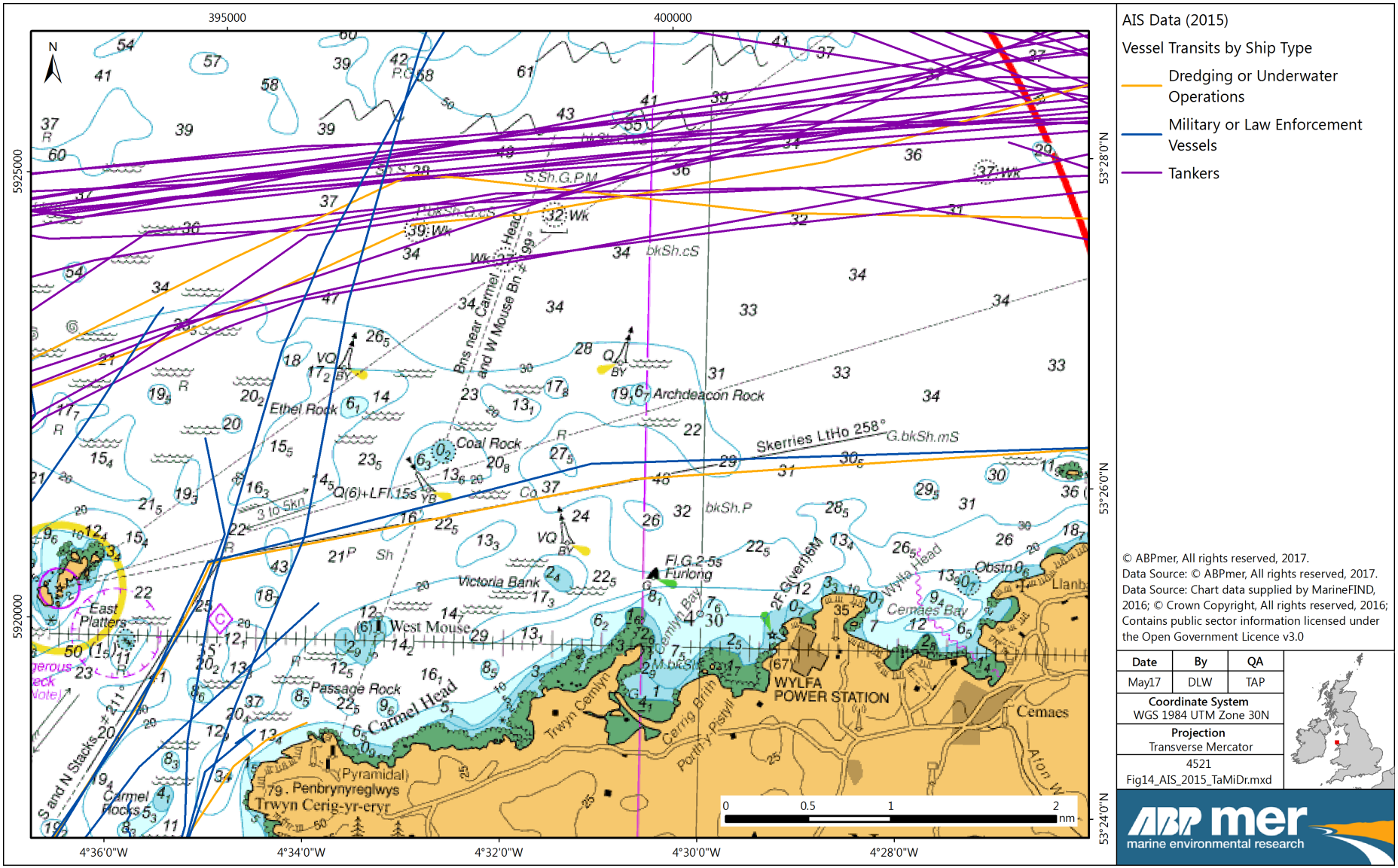


Figure 13. Training, Research, Passenger and Cargo Vessel Transits through the Marine Works Area



AIS Data (2015)

Vessel Transits by Ship Type

- Dredging or Underwater Operations
- Military or Law Enforcement Vessels
- Tankers

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Coordinate System
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Projection
Transverse Mercator

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Figure 14. Dredging, Underwater Operations, Military, Law Enforcement and Tanker Transits through the Marine Works Area

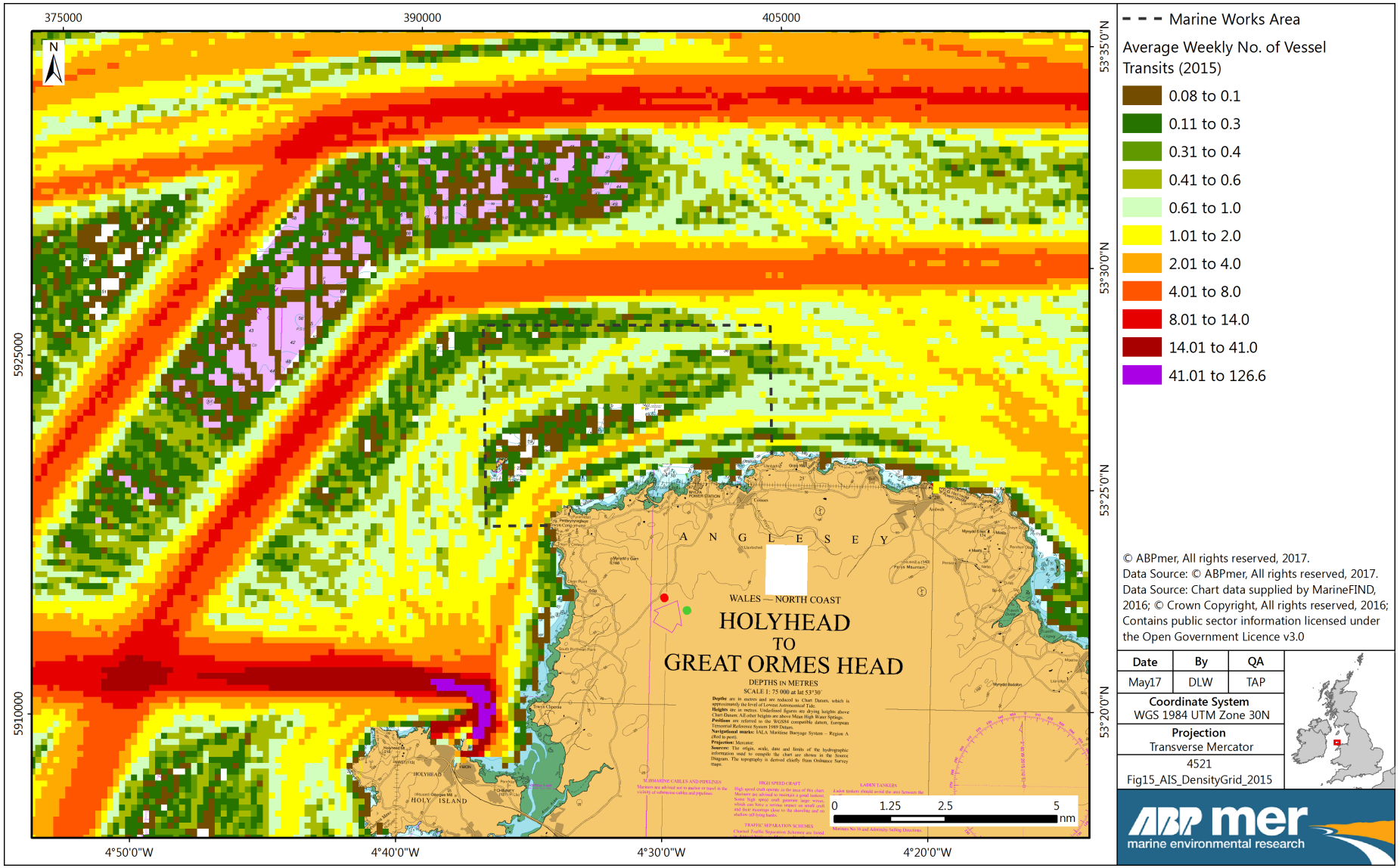


Figure 15. Vessel Transit Density Grid

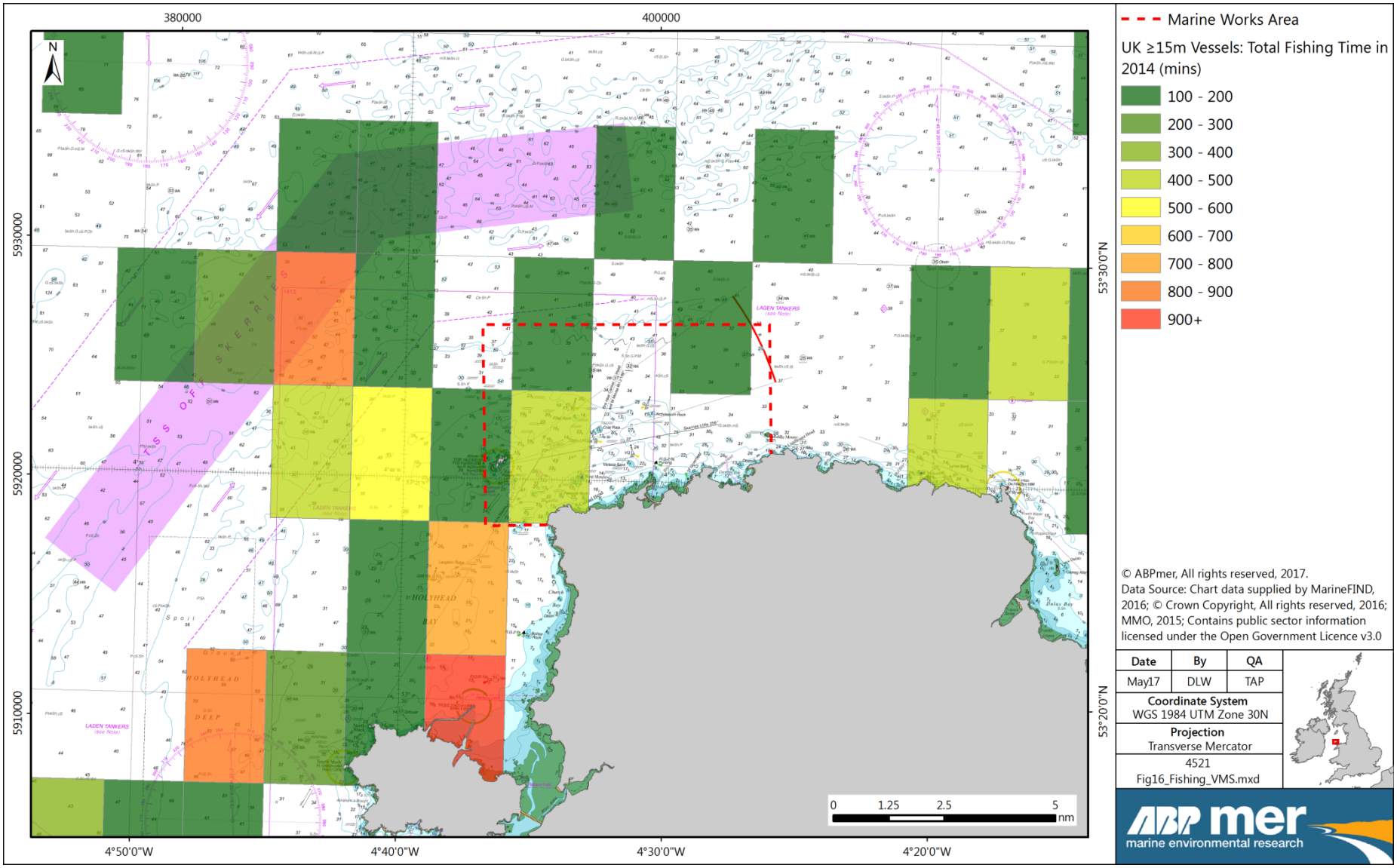


Figure 16. Vessel Monitoring System Information

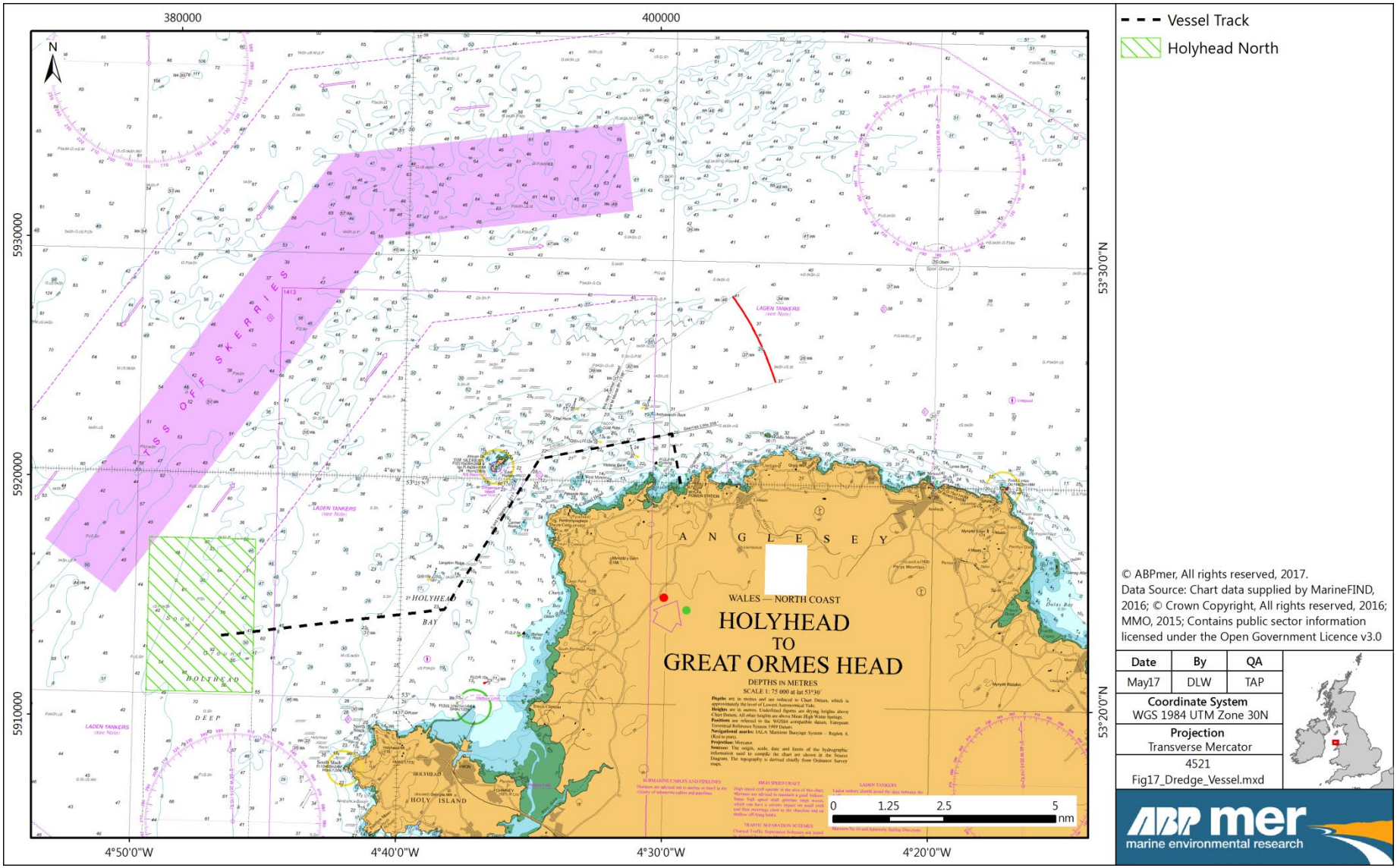


Figure 17. Passage between the Wylfa Marine Development Area and Holyhead North Disposal Site

Appendices



A Accident Incident Table

Record Origin	Incident Date	Vessel type	Incident Type	Latitude	Longitude
MAIB	12/01/2006	General Cargo	Collision	53.30	-4.63
MAIB	12/01/2006	Solid Cargo	Collision	53.30	-4.63
RNLI	27/01/2006	Canoe	Person(s) in the water	53.32	-4.60
RNLI	28/01/2006	Fishing vessel (large)	Grounding	53.32	-4.60
MAIB	29/01/2006	Service ship | Other	Fire/Explosion	53.30	-4.63
MAIB	01/02/2006	Passenger and Ro-Ro cargo	Grounding	53.42	-4.60
MAIB	06/02/2006	Fishing vessel	Equipment failure (vessel)	53.34	-4.61
RNLI	10/02/2006	Large powered boat with cabin	Equipment failure (vessel)	53.31	-4.81
MAIB	15/02/2006	Fishing vessel	Grounding	53.30	-4.63
MAIB	22/02/2006	Fishing vessel	Other nautical safety	53.47	-4.28
RNLI	09/03/2006	Rowing boat	Other nautical safety	53.30	-4.69
MAIB	30/03/2006	Recreational craft	Capsize/Sinking	53.41	-4.57
RNLI	16/04/2006	Large powered boat with cabin	Equipment failure (vessel)	53.32	-4.69
RNLI	20/04/2006	Large open powered boat	Equipment failure (vessel)	53.28	-4.68
RNLI	28/04/2006	Sail yacht with aux engine	Equipment failure (vessel)	53.36	-4.66
RNLI	29/04/2006	Large powered boat with cabin	Equipment failure (vessel)	53.40	-4.64
RNLI	17/05/2006	Large powered boat with cabin	Fire/Explosion	53.33	-4.64
RNLI	25/05/2006	Large powered boat with cabin	Equipment failure (vessel)	53.33	-4.66
MAIB	27/05/2006	Fishing vessel	Equipment failure (vessel)	53.39	-4.68
MAIB	29/05/2006	Fishing vessel	Collision	53.30	-4.63
RNLI	01/06/2006	Large powered boat with cabin	Equipment failure (vessel)	53.30	-4.72
RNLI	03/06/2006	Person in water	Person(s) in the water	53.32	-4.68
RNLI	03/06/2006	Sail yacht with aux engine	Equipment failure (vessel)	53.33	-4.64
RNLI	10/06/2006	Sail yacht with aux engine	Equipment failure (vessel)	53.48	-4.32
RNLI	11/06/2006	Sail yacht with aux engine	Equipment failure (vessel)	53.45	-4.82
RNLI	13/06/2006	Large powered boat with cabin	Equipment failure (vessel)	53.32	-4.71
RNLI	19/06/2006	Sail yacht with aux engine	Equipment failure (vessel)	53.32	-4.64
RNLI	19/06/2006	Sail yacht with aux engine	Equipment failure (vessel)	53.47	-4.46

Record Origin	Incident Date	Vessel type	Incident Type	Latitude	Longitude
MAIB	21/06/2006	Passenger and general cargo	Person(s) in the water	53.33	-4.62
RNLI	13/07/2006	Sail yacht with aux engine	Equipment failure (vessel)	53.43	-4.73
RNLI	15/07/2006	Sail yacht with aux engine	Equipment failure (vessel)	53.44	-4.84
RNLI	17/07/2006	Rowing boat	Other nautical safety	53.46	-4.40
RNLI	20/07/2006	Sailing dinghy	Capsize/Sinking	53.45	-4.64
RNLI	22/07/2006	Sail yacht with aux engine	Grounding	53.31	-4.74
RNLI	25/07/2006	Sail yacht with aux engine	Equipment failure (vessel)	53.43	-4.64
RNLI	09/08/2006	Small open powered boat	Grounding	53.36	-4.26
RNLI	12/08/2006	Jet ski	Other nautical safety	53.33	-4.59
RNLI	12/08/2006	Sail yacht with aux engine	Other nautical safety	53.45	-4.86
RNLI	18/08/2006	Large open powered boat	Equipment failure (vessel)	53.37	-4.27
RNLI	27/08/2006	Canoe	Capsize/Sinking	53.29	-4.69
MAIB	04/09/2006	Fishing vessel	Equipment failure (vessel)	53.30	-4.63
RNLI	09/09/2006	Large powered boat with cabin	Equipment failure (vessel)	53.32	-4.73
MAIB	14/09/2006	Fishing vessel	Fire/Explosion	53.30	-4.63
RNLI	15/10/2006	Sail yacht with aux engine	Equipment failure (vessel)	53.42	-4.33
RNLI	31/10/2006	Motor vehicle	Person in distress	53.33	-4.62
RNLI	04/11/2006	Canoe	Person(s) in the water	53.32	-4.70
RNLI	11/02/2007	Fishing vessel (large)	Equipment failure (vessel)	53.52	-4.33
MAIB	15/02/2007	Passenger and Ro-Ro cargo	Impact with Structure	53.30	-4.63
MAIB	07/03/2007	Cargo ship | Solid Cargo | Barge	Equipment failure (vessel)	53.44	-4.86
MAIB	27/04/2007	Cargo ship | Solid Cargo	Person in distress	53.30	-4.63
RNLI	30/04/2007	Sail yacht (no engine)	Other nautical safety	53.33	-4.69
RNLI	05/05/2007	Canoe	Person(s) in the water	53.41	-4.60
MAIB	14/05/2007	Fishing vessel	Equipment failure (vessel)	53.32	-4.68
RNLI	17/05/2007	Sail yacht with aux engine	Equipment failure (vessel)	53.46	-4.64
RNLI	19/05/2007	Large open powered boat	Equipment failure (vessel)	53.33	-4.62
RNLI	22/05/2007	Small open powered boat	Equipment failure (vessel)	53.32	-4.60
RNLI	12/06/2007	Sail yacht with aux engine	Other nautical safety	53.32	-4.60
MAIB	18/06/2007	Fishing vessel	Equipment failure (vessel)	53.30	-4.63
MAIB	29/06/2007	Fishing vessel | Potter	Person in distress	53.30	-4.63

Record Origin	Incident Date	Vessel type	Incident Type	Latitude	Longitude
MAIB	05/07/2007	Passenger and Ro-Ro cargo	Person in distress	53.28	-4.62
RNLI	10/07/2007	Sail yacht with aux engine	Equipment failure (vessel)	53.32	-4.59
RNLI	12/07/2007	Canoe	Capsize/Sinking	53.42	-4.29
RNLI	14/07/2007	Sail yacht with aux engine	Equipment failure (vessel)	53.33	-4.62
RNLI	15/07/2007	Small open powered boat	Capsize/Sinking	53.29	-4.68
RNLI	16/07/2007	Small open powered boat	Equipment failure (vessel)	53.34	-4.67
RNLI	18/07/2007	Small open powered boat	Equipment failure (vessel)	53.34	-4.60
RNLI	21/07/2007	Small open powered boat	Equipment failure (vessel)	53.34	-4.61
MAIB	28/07/2007	General Cargo	Collision	53.46	-4.51
MAIB	28/07/2007	Cargo ship | Solid Cargo	Collision	53.46	-4.51
RNLI	28/07/2007	Hovercraft	Equipment failure (vessel)	53.33	-4.64
RNLI	31/07/2007	Inflatable dinghy	Other nautical safety	53.37	-4.26
RNLI	02/08/2007	Small open powered boat	Capsize/Sinking	53.33	-4.64
RNLI	03/08/2007	Sail multihull with aux engine	Leaks/Swamping	53.34	-4.70
RNLI	05/08/2007	Sail multihull (no engine)	Capsize/Sinking	53.33	-4.74
RNLI	05/08/2007	Sail yacht with aux engine	Equipment failure (vessel)	53.34	-4.60
RNLI	15/08/2007	Sailing dinghy	Other nautical safety	53.46	-4.40
RNLI	15/08/2007	Sailing dinghy	Other nautical safety	53.46	-4.40
MAIB	20/08/2007	Recreational craft | Sailboat (sail only)	Grounding	53.41	-4.58
RNLI	26/08/2007	Small powered boat with cabin	Equipment failure (vessel)	53.37	-4.56
RNLI	31/08/2007	Sail yacht with aux engine	Equipment failure (vessel)	53.30	-4.58
RNLI	03/09/2007	Sail yacht with aux engine	Equipment failure (vessel)	53.36	-4.59
MAIB	16/11/2007	Service ship | Special purpose ship	Person in distress	53.30	-4.63
RNLI	23/11/2007	Sail yacht with aux engine	Leaks/Swamping	53.40	-4.62
MAIB	25/11/2007	Fishing vessel | Trawler | Beam	Person in distress	53.51	-4.89
RNLI	29/11/2007	Sail yacht with aux engine	Equipment failure (vessel)	53.33	-4.62
MAIB	03/12/2007	Fishing vessel | Trawler	Fire/Explosion	53.30	-4.63
MAIB	07/12/2007	Passenger and Ro-Ro cargo	Person in distress	53.30	-4.63
RNLI	22/12/2007	Tender (pleasure craft)	Other nautical safety	53.32	-4.59
RNLI	02/01/2008	Rowing Boat	Other nautical safety	53.32	-4.59
MAIB	23/03/2008	Passenger and Ro-Ro cargo	Person in distress	53.30	-4.63

Record Origin	Incident Date	Vessel type	Incident Type	Latitude	Longitude
RNLI	26/04/2008	Canoe/Kayak	Capsize/Sinking	53.43	-4.46
MAIB	30/04/2008	Passenger and Ro-Ro cargo	Person in distress	53.30	-4.63
RNLI	05/05/2008	Yacht with engine	Equipment failure (vessel)	53.40	-4.23
RNLI	17/05/2008	Yacht with engine	Equipment failure (vessel)	53.31	-4.72
RNLI	24/05/2008	Person in water	Person(s) in the water	53.42	-4.47
RNLI	31/05/2008	Yacht with engine	Equipment failure (vessel)	53.38	-4.64
RNLI	04/06/2008	Tender to a pleasure craft	Other nautical safety	53.32	-4.62
RNLI	06/06/2008	Yacht with engine	Grounding	53.42	-4.33
RNLI	07/06/2008	Canoe/Kayak	Grounding	53.41	-4.58
RNLI	21/06/2008	Yacht with engine	Equipment failure (vessel)	53.37	-4.63
RNLI	28/06/2008	Powered boat	Equipment failure (vessel)	53.37	-4.26
RNLI	12/07/2008	Powered boat	Equipment failure (vessel)	53.32	-4.62
RNLI	23/07/2008	Canoe/Kayak	Other nautical safety	53.34	-4.64
RNLI	24/07/2008	Powered boat	Equipment failure (vessel)	53.36	-4.58
RNLI	27/07/2008	Powered boat	Other nautical safety	53.40	-4.59
RNLI	01/08/2008	Multihull, no engine	Capsize/Sinking	53.37	-4.58
RNLI	04/08/2008	Yacht with engine	Equipment failure (vessel)	53.44	-4.90
RNLI	08/08/2008	Powered boat	Equipment failure (vessel)	53.31	-4.73
MAIB	15/08/2008	Passenger and Ro-Ro cargo	Equipment failure (vessel)	53.37	-4.76
RNLI	25/08/2008	Person in water	Person(s) in the water	53.32	-4.66
RNLI	20/09/2008	Yacht with engine	Equipment failure (vessel)	53.33	-4.63
RNLI	20/09/2008	Powered boat	Equipment failure (vessel)	53.34	-4.61
RNLI	29/09/2008	Yacht with engine	Other nautical safety	53.33	-4.87
MAIB	06/10/2008	Passenger and Ro-Ro cargo	Person in distress	53.33	-4.87
MAIB	23/12/2008	Fishing vessel	Equipment failure (vessel)	53.57	-4.36
MAIB	27/12/2008	Fishing vessel	Impact with Structure	53.30	-4.63
RNLI	29/12/2008	Powered boat	Equipment failure (vessel)	53.37	-4.66
MAIB	12/02/2009	Passenger and Ro-Ro cargo	Person in distress	53.30	-4.63
MAIB	19/02/2009	Passenger and Ro-Ro cargo	Person in distress	53.30	-4.63
RNLI	18/03/2009	Powered boat	Equipment failure (vessel)	53.42	-4.34
RNLI	21/03/2009	Yacht with engine	Equipment failure (vessel)	53.32	-4.60

Record Origin	Incident Date	Vessel type	Incident Type	Latitude	Longitude
MAIB	27/03/2009	Passenger and Ro-Ro cargo	Impact with Structure	53.30	-4.63
MAIB	08/04/2009	Fishing vessel | Trawler | Beam	Grounding	53.35	-4.23
RNLI	17/04/2009	Yacht with engine	Other nautical safety	53.42	-4.45
MAIB	29/04/2009	Fishing vessel | Trawler	Person in distress	53.32	-4.22
RNLI	29/04/2009	Yacht with engine	Other nautical safety	53.41	-4.69
RNLI	25/05/2009	Yacht with engine	Equipment failure (vessel)	53.48	-4.61
RNLI	31/05/2009	Powered boat	Equipment failure (vessel)	53.32	-4.60
RNLI	31/05/2009	Jet Ski	Equipment failure (vessel)	53.32	-4.58
RNLI	14/06/2009	Powered boat	Other nautical safety	53.37	-4.26
RNLI	27/06/2009	Motor Vehicle	Other nautical safety	53.30	-4.78
RNLI	29/06/2009	Powered boat	Equipment failure (vessel)	53.32	-4.69
RNLI	13/07/2009	Person in water	Person(s) in the water	53.31	-4.61
RNLI	19/07/2009	Powered boat	Equipment failure (vessel)	53.43	-4.34
RNLI	24/07/2009	Powered boat	Equipment failure (vessel)	53.37	-4.56
RNLI	24/07/2009	Powered boat	Equipment failure (vessel)	53.44	-4.45
RNLI	27/07/2009	Powered boat	Equipment failure (vessel)	53.37	-4.25
RNLI	27/07/2009	Yacht with engine	Other nautical safety	53.41	-4.24
RNLI	02/08/2009	Powered boat	Equipment failure (vessel)	53.40	-4.27
RNLI	08/08/2009	Multihull, no engine	Capsize/Sinking	53.32	-4.58
RNLI	11/08/2009	Sailing Dinghy	Other nautical safety	53.32	-4.57
RNLI	11/08/2009	Canoe/Kayak	Other nautical safety	53.39	-4.26
RNLI	11/08/2009	Sailing Dinghy	Capsize/Sinking	53.42	-4.28
RNLI	11/08/2009	Powered boat	Equipment failure (vessel)	53.43	-4.48
RNLI	15/08/2009	Yacht with engine	Equipment failure (vessel)	53.36	-4.62
MAIB	16/08/2009	Recreational craft | Sailboat (sail only)	Equipment failure (vessel)	53.42	-4.68
RNLI	17/08/2009	Sailing Dinghy	Equipment failure (vessel)	53.36	-4.24
RNLI	17/08/2009	Fishing Vessel	Equipment failure (vessel)	53.40	-4.69
RNLI	18/08/2009	Canoe/Kayak	Capsize/Sinking	53.37	-4.25
RNLI	19/08/2009	Yacht with engine	Equipment failure (vessel)	53.42	-4.50
RNLI	20/08/2009	Inflatables (airbed/toy/dinghy)	Person(s) in the water	53.36	-4.25
RNLI	22/08/2009	Yacht with engine	Equipment failure (vessel)	53.42	-4.26

Record Origin	Incident Date	Vessel type	Incident Type	Latitude	Longitude
RNLI	25/08/2009	Powered boat	Equipment failure (vessel)	53.44	-4.62
RNLI	28/08/2009	Bodyboard	Other nautical safety	53.34	-4.58
RNLI	30/08/2009	Canoe/Kayak	Other nautical safety	53.39	-4.25
RNLI	30/08/2009	Canoe/Kayak	Other nautical safety	53.39	-4.25
RNLI	07/09/2009	Powered boat	Person(s) in the water	53.43	-4.37
RNLI	12/09/2009	Powered boat	Equipment failure (vessel)	53.34	-4.62
RNLI	18/10/2009	Powered boat	Grounding	53.33	-4.64
RNLI	18/10/2009	Powered boat	Grounding	53.33	-4.64
RNLI	14/12/2009	Fishing Vessel	Equipment failure (vessel)	53.42	-4.80
RNLI	21/12/2009	Fishing Vessel	Equipment failure (vessel)	53.31	-4.62
RNLI	30/12/2009	Powered boat	Equipment failure (vessel)	53.33	-4.66
MAIB	29/01/2010	Fishing vessel | Potter	Impact with Structure	53.30	-4.63
MAIB	17/02/2010	Passenger and general cargo	Impact with Structure	53.30	-4.63
RNLI	21/03/2010	Yacht with engine	Equipment failure (vessel)	53.32	-4.84
MAIB	01/04/2010	Passenger and Ro-Ro cargo	Person in distress	53.30	-4.63
RNLI	17/04/2010	Yacht with engine	Equipment failure (vessel)	53.43	-4.27
MAIB	22/04/2010	Passenger and Ro-Ro cargo	Person in distress	53.30	-4.63
RNLI	07/05/2010	Fishing Vessel	Leaks/Swamping	53.36	-4.70
RNLI	29/05/2010	Yacht with engine	Equipment failure (vessel)	53.32	-4.76
RNLI	01/07/2010	Yacht with engine	Capsize/Sinking	53.33	-4.69
RNLI	07/07/2010	Yacht with engine	Equipment failure (vessel)	53.42	-4.28
RNLI	12/07/2010	Powered boat	Equipment failure (vessel)	53.42	-4.32
MAIB	13/07/2010	Passenger and Ro-Ro cargo	Equipment failure (vessel)	53.28	-4.68
RNLI	13/07/2010	Fishing Vessel	Equipment failure (vessel)	53.29	-4.70
MAIB	16/07/2010	Fishing vessel | Potter	Impact with Structure	53.30	-4.63
RNLI	16/07/2010	Charter angling vessel	Equipment failure (vessel)	53.34	-4.61
RNLI	17/07/2010	Powered boat	Equipment failure (vessel)	53.34	-4.60
RNLI	26/07/2010	Yacht with engine	Equipment failure (vessel)	53.35	-4.61
RNLI	02/08/2010	Yacht with engine	Equipment failure (vessel)	53.45	-4.25
RNLI	12/08/2010	Yacht with engine	Equipment failure (vessel)	53.33	-4.58
RNLI	13/08/2010	Canoe/Kayak	Other nautical safety	53.38	-4.25

Record Origin	Incident Date	Vessel type	Incident Type	Latitude	Longitude
RNLI	29/08/2010	Yacht with engine	Equipment failure (vessel)	53.29	-4.77
RNLI	02/09/2010	Yacht with engine	Equipment failure (vessel)	53.33	-4.59
RNLI	25/09/2010	Multihull, no engine	Capsize/Sinking	53.32	-4.57
RNLI	13/10/2010	Person in water	Person(s) in the water	53.32	-4.63
RNLI	25/10/2010	Fishing Vessel	Equipment failure (vessel)	53.37	-4.24
RNLI	25/10/2010	Powered boat	Equipment failure (vessel)	53.42	-4.59
RNLI	19/11/2010	Military vessel	Equipment failure (vessel)	53.32	-4.85
RNLI	25/03/2011	Powered boat	Grounding	53.37	-4.65
RNLI	31/03/2011	Kite Board	Other nautical safety	53.31	-4.59
RNLI	29/04/2011	Powered boat	Equipment failure (vessel)	53.33	-4.68
RNLI	29/04/2011	Multihull, no engine	Capsize/Sinking	53.37	-4.56
RNLI	04/06/2011	Powered boat	Equipment failure (vessel)	53.28	-4.69
RNLI	26/06/2011	Yacht with engine	Equipment failure (vessel)	53.35	-4.67
RNLI	30/06/2011	Yacht with engine	Grounding	53.32	-4.57
RNLI	02/07/2011	Powered boat	Equipment failure (vessel)	53.31	-4.70
MAIB	03/07/2011	Passenger and Ro-Ro cargo	Grounding	53.35	-4.23
RNLI	03/07/2011	Powered boat	Equipment failure (vessel)	53.31	-4.70
RNLI	03/07/2011	Fishing Vessel	Grounding	53.36	-4.24
RNLI	30/07/2011	Powered boat	Equipment failure (vessel)	53.29	-4.70
RNLI	31/07/2011	Yacht with engine	Equipment failure (vessel)	53.43	-4.61
RNLI	03/08/2011	Yacht with engine	Other nautical safety	53.37	-4.61
RNLI	06/08/2011	Powered boat	Equipment failure (vessel)	53.35	-4.60
RNLI	20/08/2011	Powered boat	Other nautical safety	53.31	-4.58
RNLI	21/08/2011	Powered boat	Equipment failure (vessel)	53.32	-4.59
RNLI	29/08/2011	Powered boat	Equipment failure (vessel)	53.32	-4.62
RNLI	02/09/2011	Sub aqua diver	Person(s) in the water	53.43	-4.36
MAIB	05/09/2011	Passenger and Ro-Ro cargo	Person in distress	53.30	-4.63
RNLI	27/09/2011	Yacht with engine	Equipment failure (vessel)	53.28	-4.81
RNLI	02/10/2011	Yacht with engine	Equipment failure (vessel)	53.36	-4.73
MAIB	28/10/2011	Passenger and Ro-Ro cargo	Fire/Explosion	53.32	-4.68
MAIB	29/11/2011	Passenger and Ro-Ro cargo	Impact with Structure	53.30	-4.63

Record Origin	Incident Date	Vessel type	Incident Type	Latitude	Longitude
MAIB	13/01/2012	Passenger and Ro-Ro cargo	Other nautical safety	53.25	-4.74
MAIB	01/02/2012	Fishing vessel | Trawler | Stern	Equipment failure (vessel)	53.30	-4.63
MAIB	17/02/2012	Passenger and Ro-Ro cargo	Person in distress	53.45	-4.90
RNLI	25/04/2012	Yacht with engine	Leaks/Swamping	53.33	-4.65
RNLI	05/05/2012	Canoe/Kayak	Capsize/Sinking	53.43	-4.43
MAIB	10/05/2012	Passenger and Ro-Ro cargo | Class B	Person in distress	53.30	-4.63
RNLI	22/05/2012	Fishing Vessel (Leisure)	Fire/Explosion	53.34	-4.60
RNLI	25/05/2012	Sailboard	Capsize/Sinking	53.34	-4.58
RNLI	26/05/2012	Yacht with engine	Equipment failure (vessel)	53.49	-4.57
RNLI	02/06/2012	Powered boat	Equipment failure (vessel)	53.42	-4.29
RNLI	03/06/2012	Yacht with engine	Other nautical safety	53.31	-4.70
RNLI	10/06/2012	Yacht with engine	Equipment failure (vessel)	53.47	-4.61
RNLI	23/06/2012	Powered boat	Equipment failure (vessel)	53.38	-4.25
RNLI	06/07/2012	Yacht with engine	Equipment failure (vessel)	53.43	-4.47
RNLI	07/07/2012	Canoe/Kayak	Capsize/Sinking	53.32	-4.73
RNLI	14/07/2012	Person in water	Person(s) in the water	53.31	-4.69
RNLI	21/07/2012	Canoe/Kayak	Capsize/Sinking	53.30	-4.67
RNLI	22/07/2012	Jet Ski	Person(s) in the water	53.33	-4.61
RNLI	10/08/2012	Powered boat	Equipment failure (vessel)	53.35	-4.66
RNLI	10/08/2012	Powered boat	Equipment failure (vessel)	53.36	-4.67
RNLI	10/08/2012	Yacht with engine	Equipment failure (vessel)	53.37	-4.55
RNLI	18/08/2012	Yacht with engine	Equipment failure (vessel)	53.31	-4.74
RNLI	19/08/2012	Fishing Vessel (Leisure)	Equipment failure (vessel)	53.30	-4.65
RNLI	20/08/2012	Yacht with engine	Other nautical safety	53.46	-4.28
RNLI	01/09/2012	Fishing Vessel (Leisure)	Equipment failure (vessel)	53.46	-4.40
RNLI	08/09/2012	Powered boat	Equipment failure (vessel)	53.29	-4.66
RNLI	10/09/2012	Canoe/Kayak	Other nautical safety	53.43	-4.66
RNLI	25/10/2012	Yacht with engine	Other nautical safety	53.32	-4.63
MAIB	14/11/2012	Passenger and Ro-Ro cargo	Person in distress	53.40	-4.60
MAIB	24/12/2012	Recreational craft | Motorboat	Equipment failure (vessel)	53.39	-4.76
MAIB	16/02/2013	Passenger and Ro-Ro cargo	Impact with Structure	53.32	-4.62

Record Origin	Incident Date	Vessel type	Incident Type	Latitude	Longitude
MAIB	19/04/2013	Recreational craft | Canoe/Kayak	Capsize/Sinking	53.30	-4.50
RNLI	21/04/2013	Powered boat	Other nautical safety	53.32	-4.60
RNLI	23/04/2013	Sailing Dinghy	Capsize/Sinking	53.42	-4.30
MAIB	16/05/2013	Service ship | Tug (Towing/Pushing)	Fire/Explosion	53.44	-4.62
RNLI	18/05/2013	Fishing Vessel (Leisure)	Equipment failure (vessel)	53.43	-4.40
MAIB	23/05/2013	Service ship | Special purpose ship	Equipment failure (vessel)	53.30	-4.63
RNLI	23/05/2013	Fishing Vessel (Leisure)	Other nautical safety	53.33	-4.64
RNLI	25/05/2013	Fishing Vessel (Leisure)	Equipment failure (vessel)	53.32	-4.67
RNLI	08/06/2013	Powered boat	Leaks/Swamping	53.41	-4.30
RNLI	09/06/2013	Jet Ski	Other nautical safety	53.29	-4.90
RNLI	09/06/2013	Powered boat	Equipment failure (vessel)	53.42	-4.29
RNLI	07/07/2013	Powered boat	Equipment failure (vessel)	53.42	-4.40
RNLI	09/07/2013	Powered boat	Other nautical safety	53.29	-4.69
RNLI	13/07/2013	Powered boat	Equipment failure (vessel)	53.32	-4.68
RNLI	14/07/2013	Powered boat	Grounding	53.30	-4.68
RNLI	16/07/2013	Fishing Vessel (Leisure)	Other nautical safety	53.33	-4.75
RNLI	17/07/2013	Powered boat	Equipment failure (vessel)	53.31	-4.70
RNLI	21/07/2013	Fishing Vessel (Leisure)	Equipment failure (vessel)	53.32	-4.67
RNLI	27/07/2013	Powered boat	Leaks/Swamping	53.33	-4.75
RNLI	28/07/2013	Fishing Vessel (Leisure)	Equipment failure (vessel)	53.34	-4.61
RNLI	29/07/2013	Inflatables (airbed/toy/dinghy)	Capsize/Sinking	53.36	-4.26
RNLI	07/08/2013	Fishing Vessel (Leisure)	Equipment failure (vessel)	53.36	-4.56
RNLI	08/08/2013	Yacht with engine	Grounding	53.42	-4.51
RNLI	12/08/2013	Canoe/Kayak	Capsize/Sinking	53.30	-4.58
RNLI	12/08/2013	Military vessel	Equipment failure (vessel)	53.34	-4.72
RNLI	20/08/2013	Inflatables (airbed/toy/dinghy)	Other nautical safety	53.37	-4.25
MAIB	23/08/2013	Passenger and Ro-Ro cargo	Other nautical safety	53.30	-4.63
RNLI	23/08/2013	Sailing Dinghy	Other nautical safety	53.48	-4.37
RNLI	26/08/2013	Fishing Vessel (Leisure)	Equipment failure (vessel)	53.34	-4.61
RNLI	28/08/2013	Yacht with engine	Equipment failure (vessel)	53.47	-4.68
RNLI	06/09/2013	Yacht with engine	Grounding	53.32	-4.62

Record Origin	Incident Date	Vessel type	Incident Type	Latitude	Longitude
RNLI	20/09/2013	Rowing Boat	Other nautical safety	53.40	-4.54
MAIB	22/09/2013	Passenger and Ro-Ro cargo	Equipment failure (vessel)	53.39	-4.82
RNLI	28/10/2013	Person in water	Person(s) in the water	53.32	-4.59
RNLI	06/11/2013	Fishing Vessel	Equipment failure (vessel)	53.44	-4.47
MAIB	20/11/2013	Service ship | Special purpose ship	Other nautical safety	53.42	-4.33
MAIB	29/11/2013	Service ship | Research ship	Fire/Explosion	53.32	-4.60
MAIB	14/03/2014	Service ship | Special purpose ship	Other nautical safety	53.42	-4.33
MAIB	15/03/2014	Fishing vessel | Dredger	Other nautical safety	53.31	-4.70
RNLI	15/03/2014	Fishing Vessel	Other nautical safety	53.30	-4.70
MAIB	03/04/2014	Cargo ship | Liquid Cargo | Oil tanker	Collision	53.30	-4.63
MAIB	03/04/2014	Cargo ship | Liquid Cargo	Collision	53.30	-4.63
RNLI	05/04/2014	Rowing Boat	Other nautical safety	53.43	-4.32
RNLI	11/04/2014	Yacht with engine	Equipment failure (vessel)	53.42	-4.35
RNLI	13/04/2014	Jet Ski	Equipment failure (vessel)	53.32	-4.53
RNLI	13/04/2014	Powered boat	Equipment failure (vessel)	53.37	-4.25
RNLI	25/04/2014	Fishing Vessel (Leisure)	Equipment failure (vessel)	53.36	-4.25
RNLI	27/04/2014	Yacht no engine	Grounding	53.32	-4.61
RNLI	28/04/2014	Powered boat	Equipment failure (vessel)	53.33	-4.75
MAIB	15/05/2014	Fishing vessel | Trawler | Other	Person in distress	53.57	-4.87
RNLI	15/05/2014	Fishing Vessel	Person in distress	53.49	-4.75
RNLI	31/05/2014	Canoe/Kayak	Capsize/Sinking	53.33	-4.69
RNLI	01/06/2014	Canoe/Kayak	Other nautical safety	53.39	-4.25
RNLI	01/06/2014	Powered boat	Equipment failure (vessel)	53.40	-4.42
RNLI	03/06/2014	Sailing Dinghy	Capsize/Sinking	53.36	-4.56
RNLI	05/06/2014	Fishing Vessel (Leisure)	Equipment failure (vessel)	53.38	-4.57
RNLI	07/06/2014	Powered boat	Equipment failure (vessel)	53.51	-4.31
RNLI	14/06/2014	Powered boat	Equipment failure (vessel)	53.35	-4.58
RNLI	15/06/2014	Powered boat	Equipment failure (vessel)	53.40	-4.40
MAIB	19/06/2014	Passenger and Ro-Ro cargo	Person in distress	53.30	-4.63
RNLI	28/06/2014	Jet Ski	Equipment failure (vessel)	53.42	-4.34
MAIB	30/06/2014	Passenger and Ro-Ro cargo	Impact with Structure	53.53	-4.64

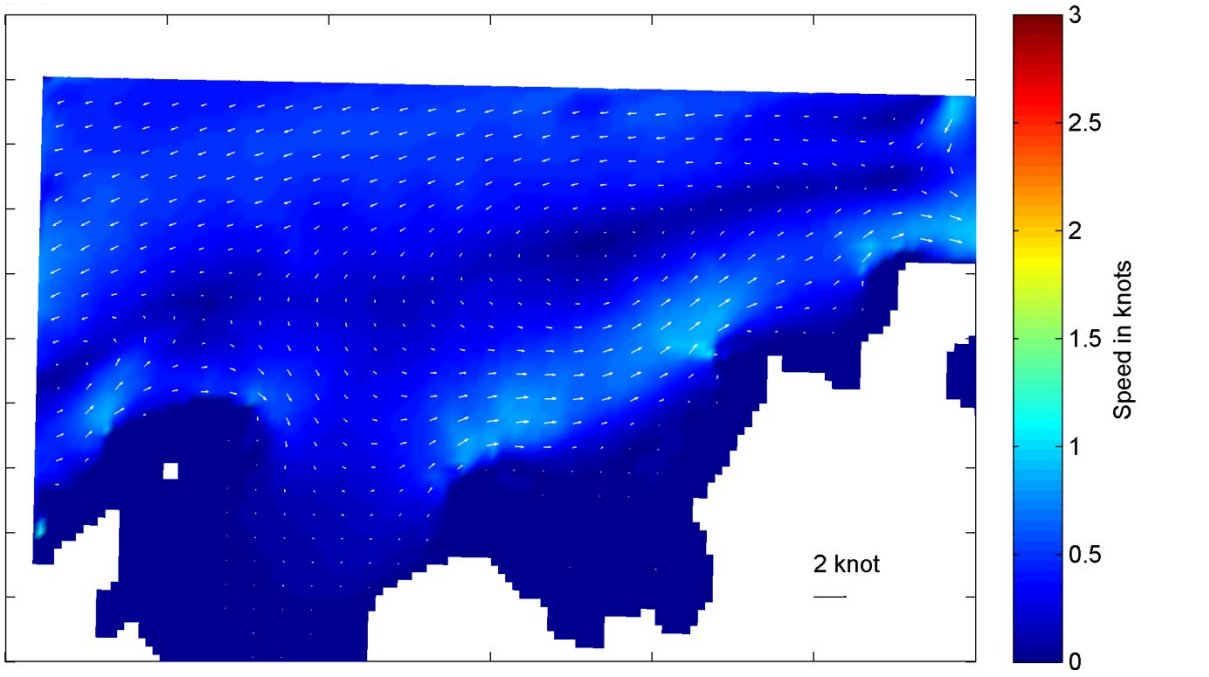
Record Origin	Incident Date	Vessel type	Incident Type	Latitude	Longitude
RNLI	15/07/2014	Yacht with engine	Equipment failure (vessel)	53.42	-4.64
RNLI	16/07/2014	Yacht with engine	Other nautical safety	53.47	-4.56
RNLI	22/07/2014	Powered boat	Equipment failure (vessel)	53.31	-4.70
RNLI	23/07/2014	Powered boat	Leaks/Swamping	53.46	-4.50
MAIB	24/07/2014	Liquid Cargo | Oil tanker | Product carrier	Collision	53.30	-4.63
RNLI	27/07/2014	Tender to a pleasure craft	Equipment failure (vessel)	53.33	-4.64
RNLI	02/08/2014	Inflatables (airbed/toy/dinghy)	Other nautical safety	53.31	-4.56
RNLI	05/08/2014	Yacht with engine	Grounding	53.39	-4.25
RNLI	17/08/2014	Powered boat	Person(s) in the water	53.44	-4.44
RNLI	22/08/2014	Powered boat	Equipment failure (vessel)	53.32	-4.58
RNLI	24/08/2014	Sailing Dinghy	Capsize/Sinking	53.34	-4.58
RNLI	04/09/2014	Powered boat	Equipment failure (vessel)	53.34	-4.70
RNLI	06/09/2014	Canoe/Kayak	Capsize/Sinking	53.29	-4.68
RNLI	12/09/2014	Yacht with engine	Equipment failure (vessel)	53.50	-4.84
RNLI	13/09/2014	Powered boat	Equipment failure (vessel)	53.28	-4.77
RNLI	01/10/2014	Multihull with engine	Equipment failure (vessel)	53.31	-4.71
RNLI	10/10/2014	Yacht with engine	Equipment failure (vessel)	53.41	-4.33
RNLI	14/11/2014	Yacht with engine	Other nautical safety	53.33	-4.64
RNLI	21/12/2014	Fishing Vessel	Other nautical safety	53.32	-4.72
MAIB	28/12/2014	Cargo ship | Liquid Cargo | Oil tanker	Collision	53.30	-4.63
MAIB	02/01/2015	Passenger and Ro-Ro cargo	Impact with Structure	53.32	-4.62
RNLI	10/01/2015	Work vessel	Equipment failure (vessel)	53.42	-4.32
MAIB	01/02/2015	Cargo ship | Liquid Cargo | Oil tanker	Collision	53.31	-4.62
MAIB	22/03/2015	Passenger and Ro-Ro cargo	Equipment failure (vessel)	53.31	-4.62
RNLI	24/03/2015	Powered boat	Equipment failure (vessel)	53.32	-4.60
MAIB	26/03/2015	Passenger and Ro-Ro cargo	Person in distress	53.30	-4.63
RNLI	24/04/2015	Fishing Vessel (Leisure)	Leaks/Swamping	53.35	-4.89
RNLI	29/04/2015	Yacht with engine	Equipment failure (vessel)	53.32	-4.65
RNLI	21/05/2015	Yacht with engine	Other nautical safety	53.49	-4.50
RNLI	25/05/2015	Powered boat	Equipment failure (vessel)	53.43	-4.36
RNLI	30/05/2015	Work vessel	Equipment failure (vessel)	53.42	-4.50

Record Origin	Incident Date	Vessel type	Incident Type	Latitude	Longitude
RNLI	08/06/2015	Yacht with engine	Grounding	53.37	-4.27
RNLI	10/06/2015	Yacht with engine	Equipment failure (vessel)	53.29	-4.70
RNLI	13/06/2015	Jet Ski	Equipment failure (vessel)	53.33	-4.59
RNLI	13/06/2015	Fishing Vessel (Leisure)	Leaks/Swamping	53.53	-4.60
RNLI	20/06/2015	Yacht with engine	Equipment failure (vessel)	53.32	-4.60
RNLI	20/06/2015	Yacht with engine	Equipment failure (vessel)	53.32	-4.60
RNLI	04/07/2015	Powered boat	Equipment failure (vessel)	53.32	-4.62
RNLI	09/07/2015	Powered boat	Equipment failure (vessel)	53.38	-4.56
RNLI	18/07/2015	Sailing Dinghy	Capsize/Sinking	53.32	-4.57
RNLI	18/07/2015	Powered boat	Equipment failure (vessel)	53.35	-4.58
RNLI	21/07/2015	Canoe/Kayak	Person(s) in the water	53.43	-4.51
RNLI	25/07/2015	Powered boat	Equipment failure (vessel)	53.35	-4.66
RNLI	01/08/2015	Powered boat	Capsize/Sinking	53.30	-4.69
RNLI	01/08/2015	Powered boat	Other nautical safety	53.38	-4.24
RNLI	02/08/2015	Powered boat	Equipment failure (vessel)	53.33	-4.63
MAIB	04/08/2015	Passenger and Ro-Ro cargo	Impact with Structure	53.31	-4.63
MAIB	08/08/2015	Passenger and Ro-Ro cargo	Person in distress	53.30	-4.63
RNLI	08/08/2015	Yacht with engine	Other nautical safety	53.39	-4.59
RNLI	16/08/2015	Yacht with engine	Equipment failure (vessel)	53.30	-4.70
RNLI	30/08/2015	Canoe/Kayak	Other nautical safety	53.29	-4.72
MAIB	31/08/2015	Passenger and Ro-Ro cargo	Collision	53.28	-4.68
RNLI	10/09/2015	Yacht with engine	Other nautical safety	53.43	-4.40
RNLI	26/09/2015	Powered boat	Equipment failure (vessel)	53.41	-4.57
MAIB	03/10/2015	Passenger and Ro-Ro cargo	Person in distress	53.32	-4.88
RNLI	23/10/2015	Powered boat	Other nautical safety	53.33	-4.62
RNLI	28/10/2015	Powered boat	Other nautical safety	53.36	-4.59
RNLI	01/11/2015	Powered boat	Equipment failure (vessel)	53.36	-4.61
RNLI	31/12/2015	Canoe/Kayak	Capsize/Sinking	53.42	-4.49

B Tidal Flow Atlas

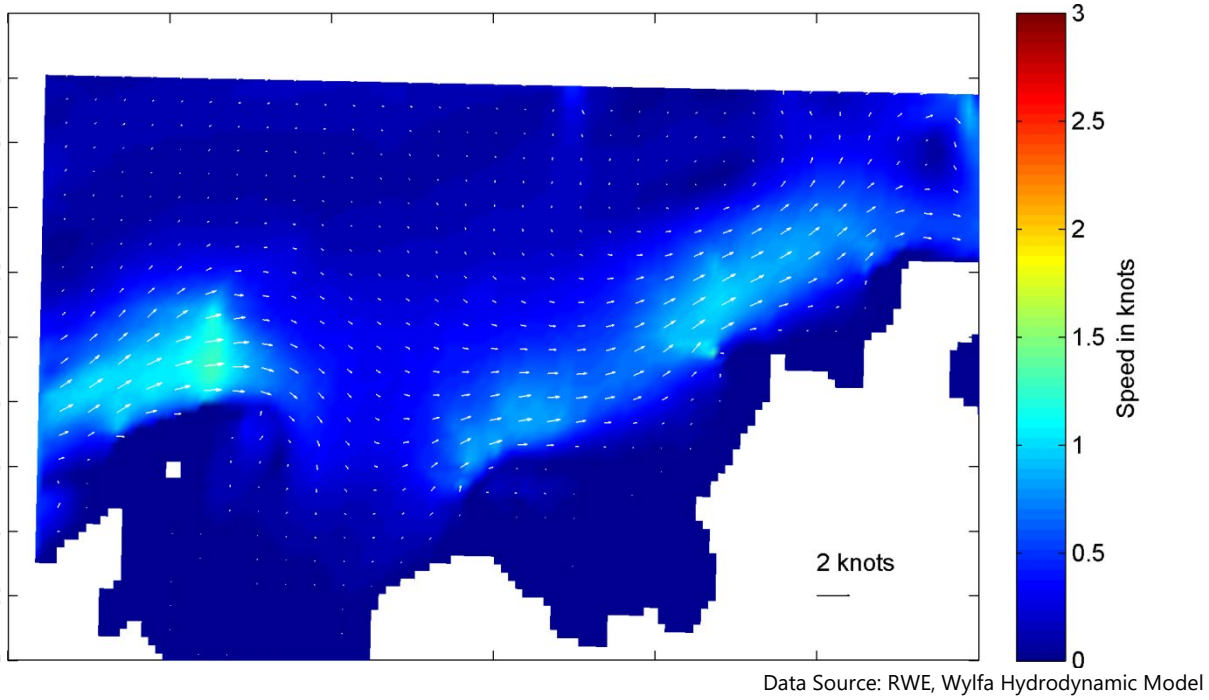
B.1 High Water Minus 6 Hours

Spring tide



Data Source: RWE, Wylfa Hydrodynamic Model

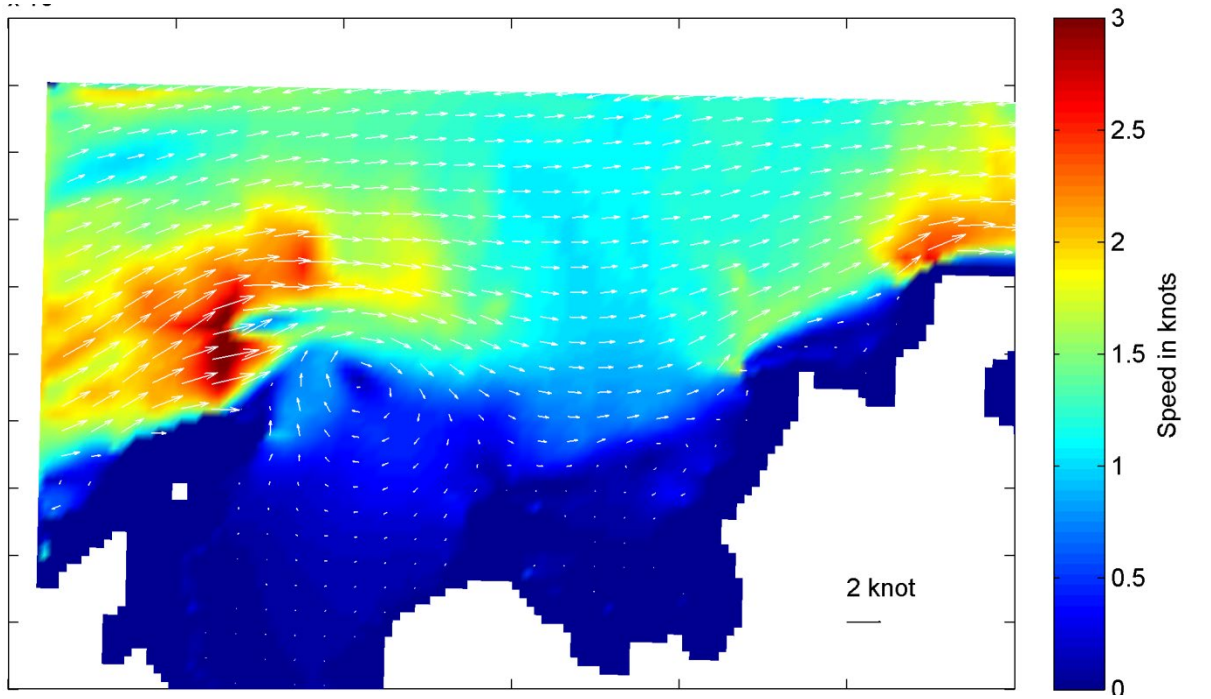
Neap tide



Data Source: RWE, Wylfa Hydrodynamic Model

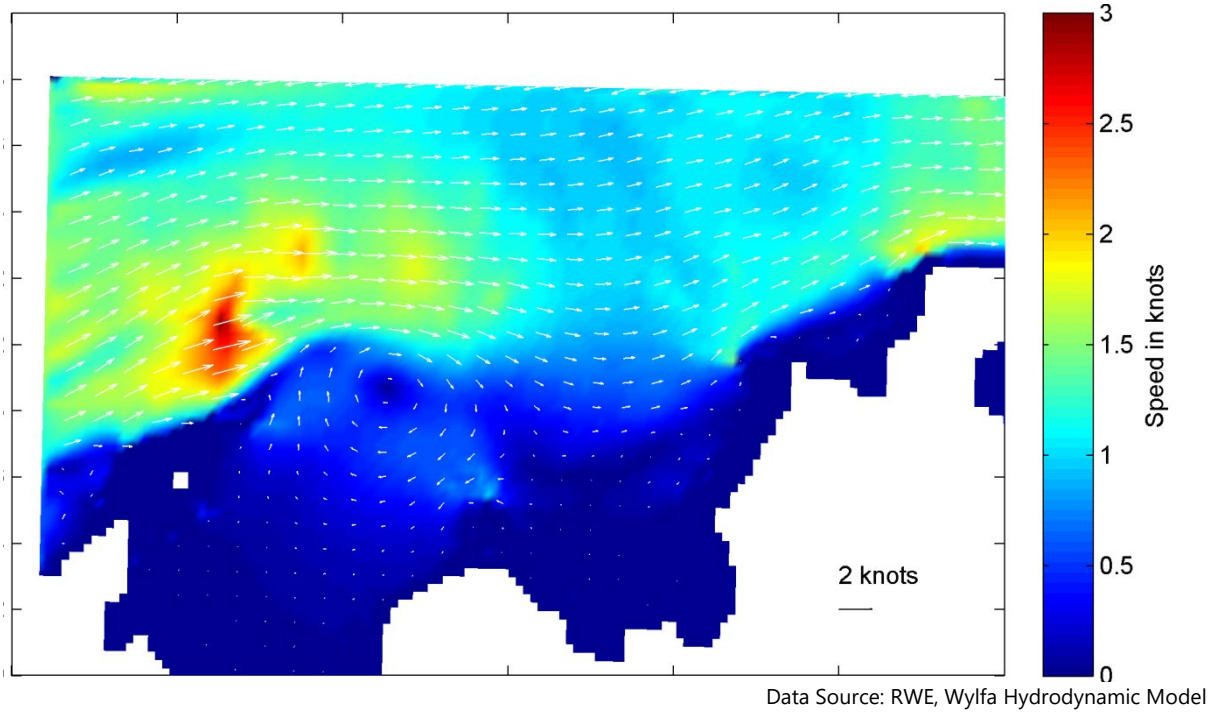
B.2 High Water Minus 5 Hours

Spring tide



Data Source: RWE, Wylfa Hydrodynamic Model

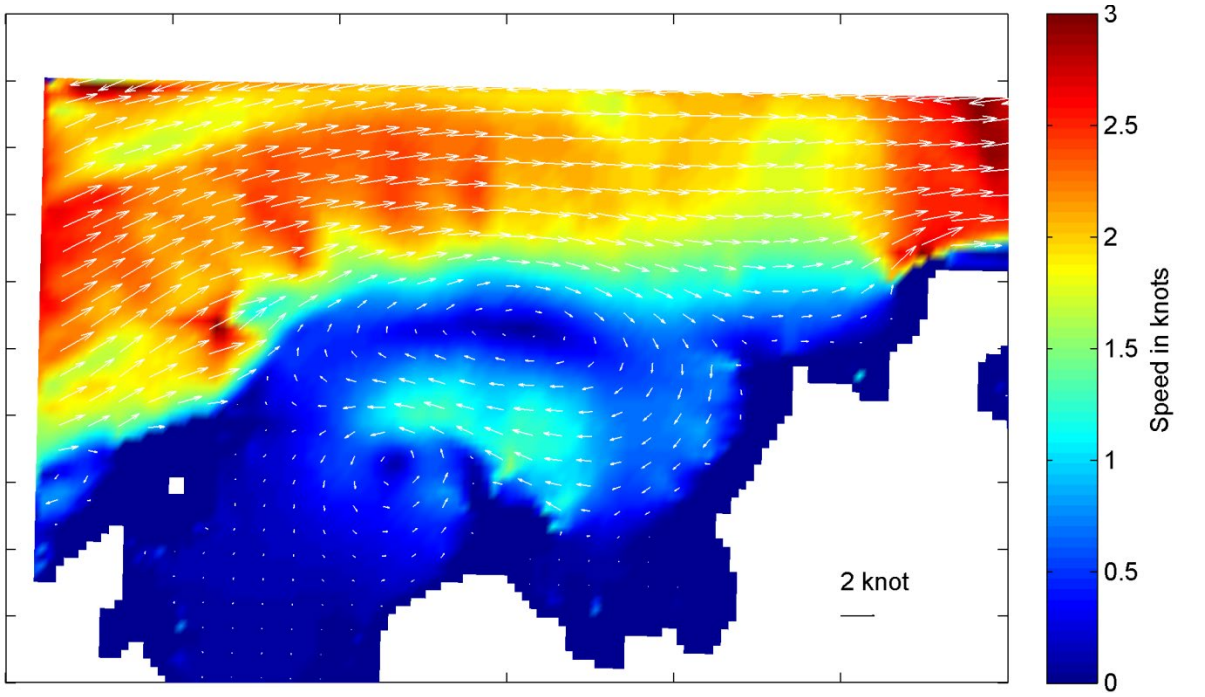
Neap tide



Data Source: RWE, Wylfa Hydrodynamic Model

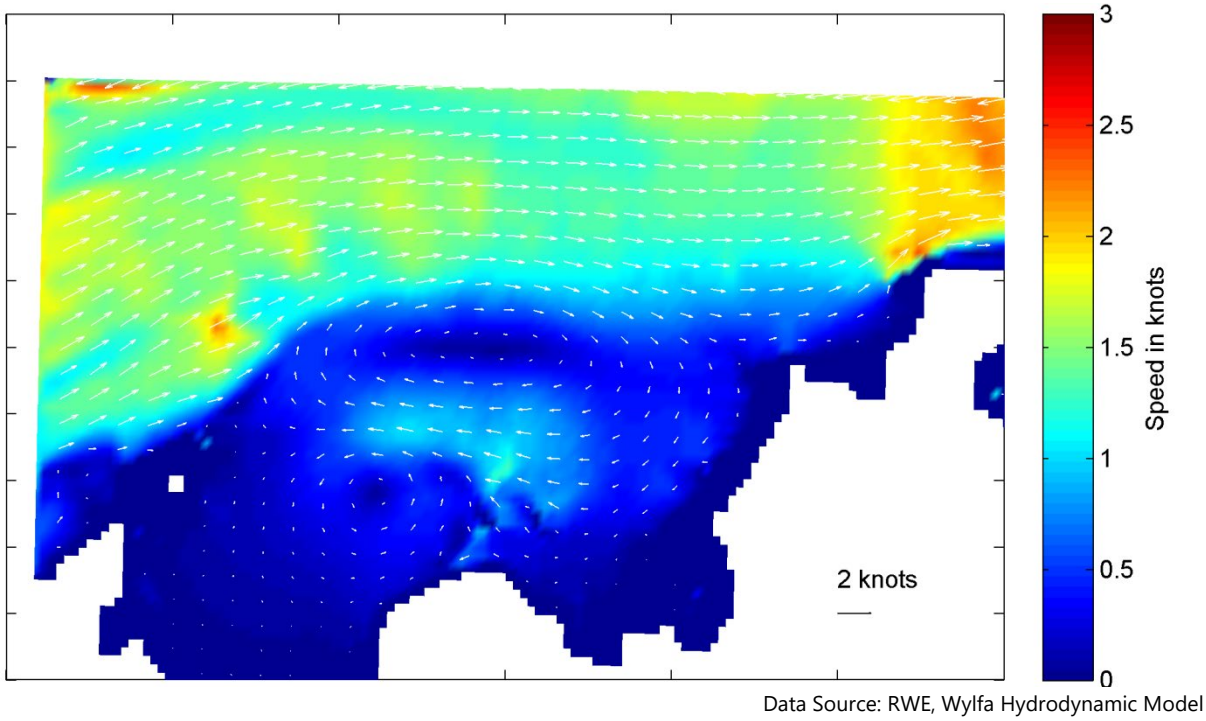
B.3 High Water Minus 4 Hours

Spring tide



Data Source: RWE, Wylfa Hydrodynamic Model

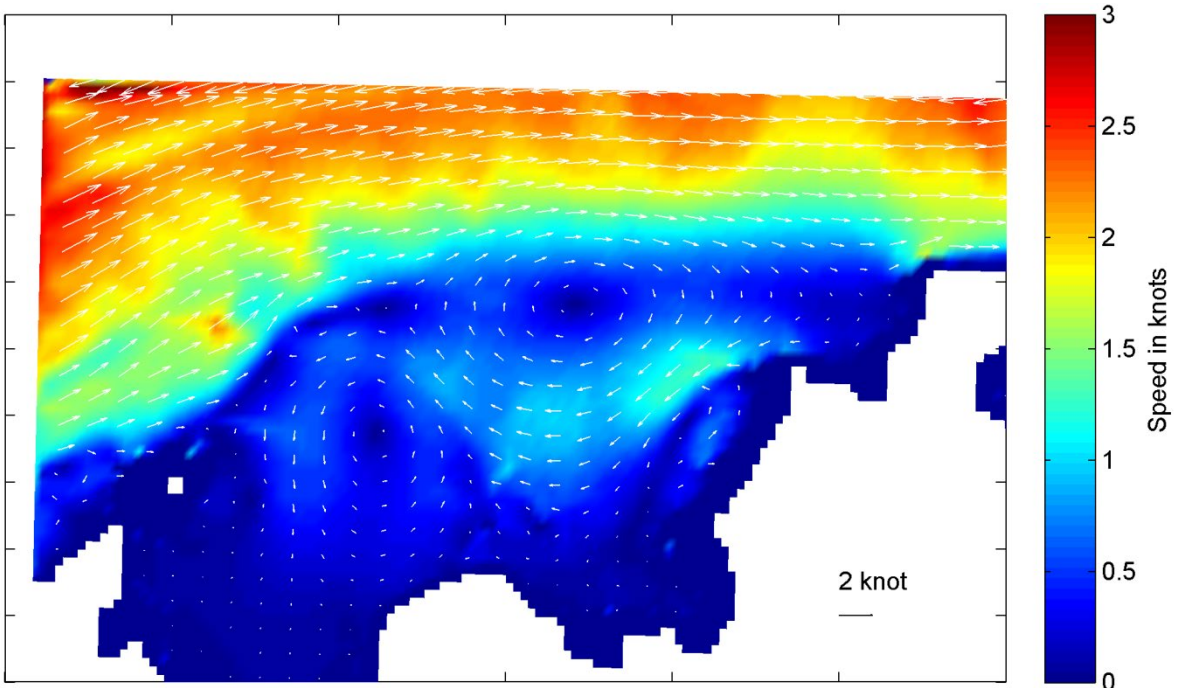
Neap tide



Data Source: RWE, Wylfa Hydrodynamic Model

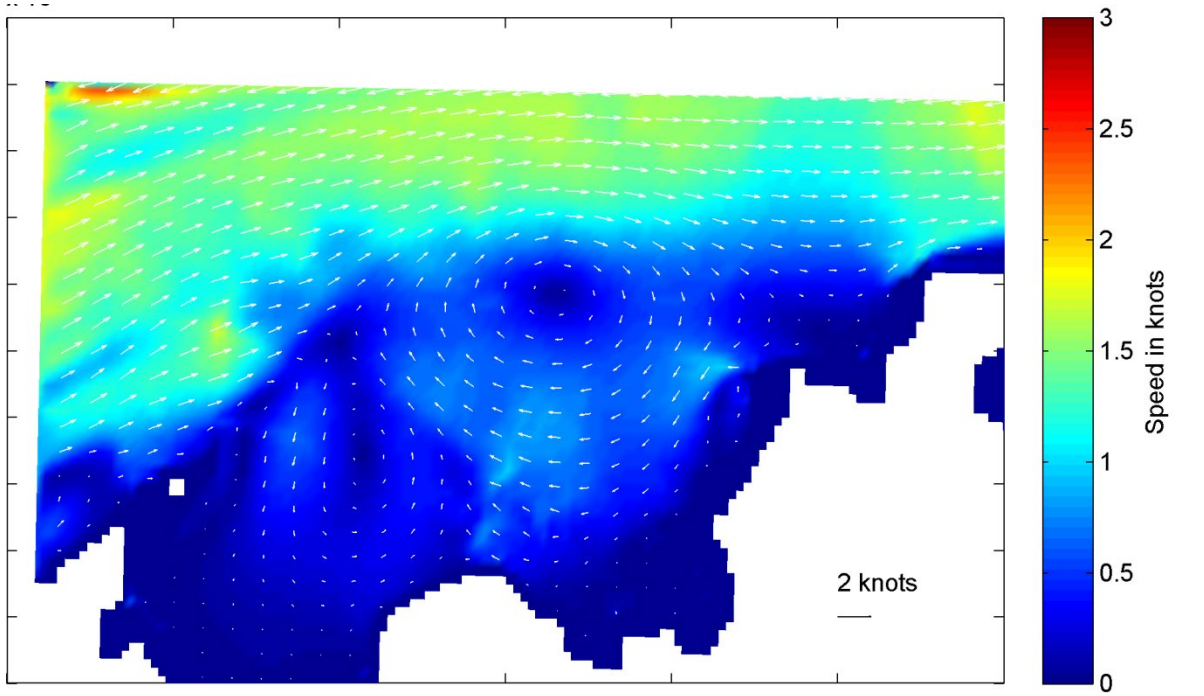
B.4 High Water Minus 3 Hours

Spring tide



Data Source: RWE, Wylfa Hydrodynamic Model

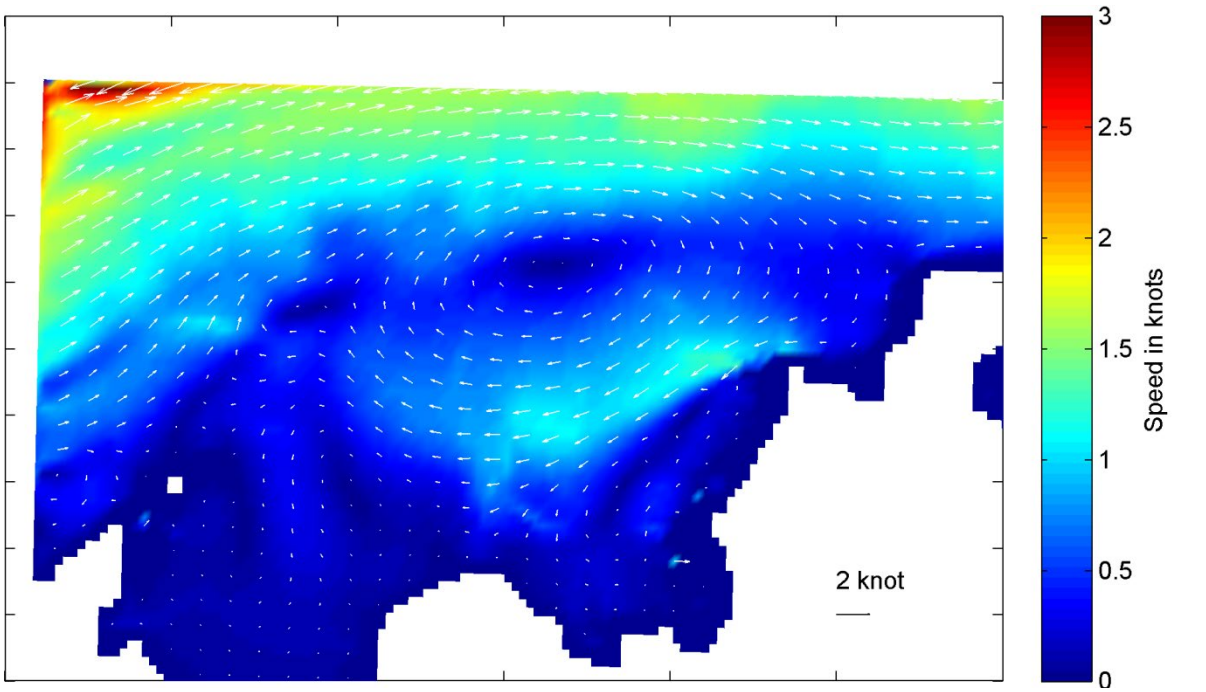
Neap tide



Data Source: RWE, Wylfa Hydrodynamic Model

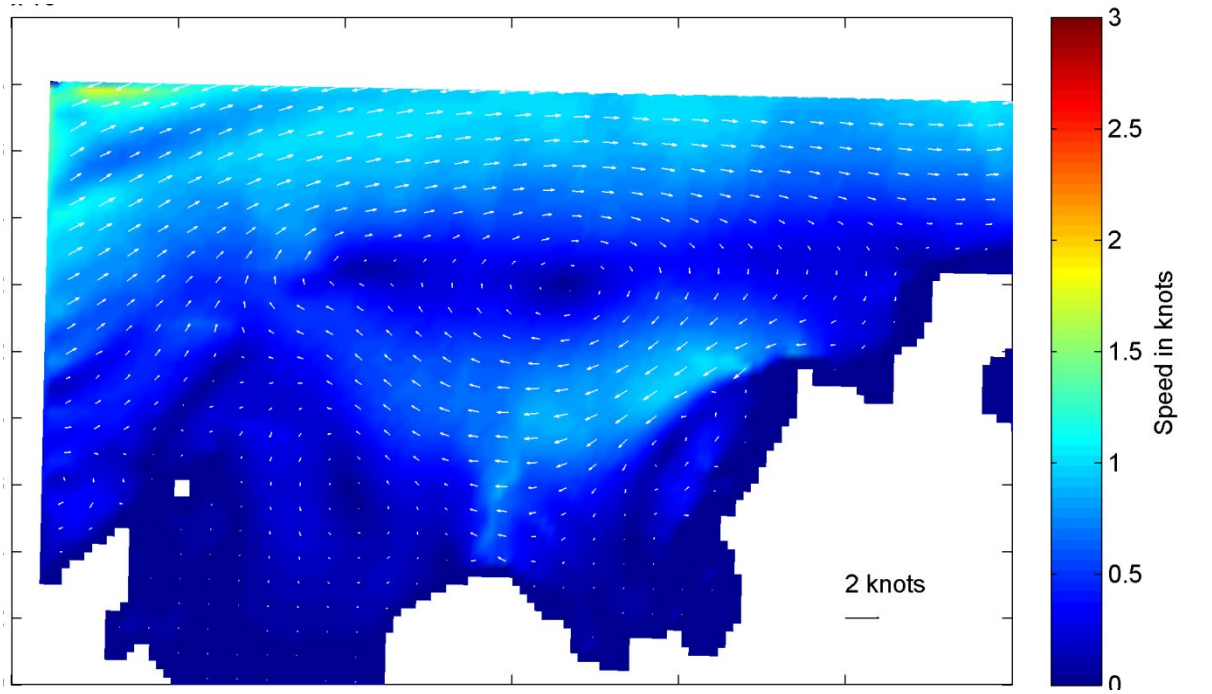
B.5 High Water Minus 2 Hours

Spring tide



Data Source: RWE, Wylfa Hydrodynamic Model

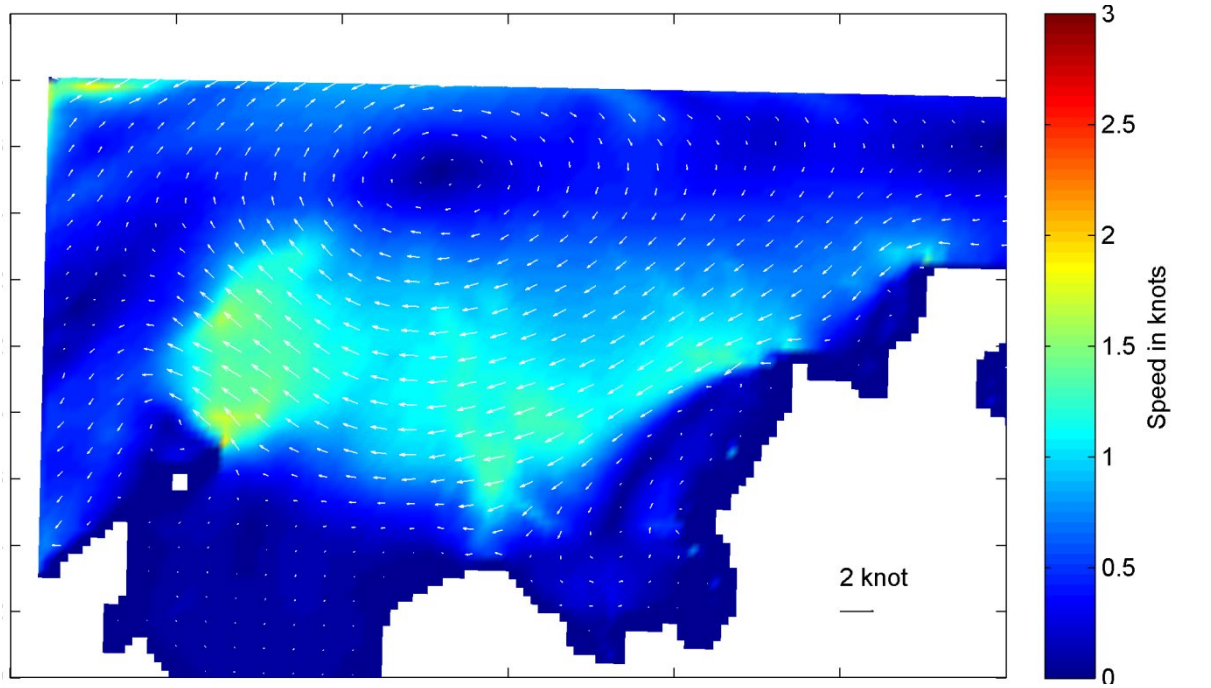
Neap tide



Data Source: RWE, Wylfa Hydrodynamic Model

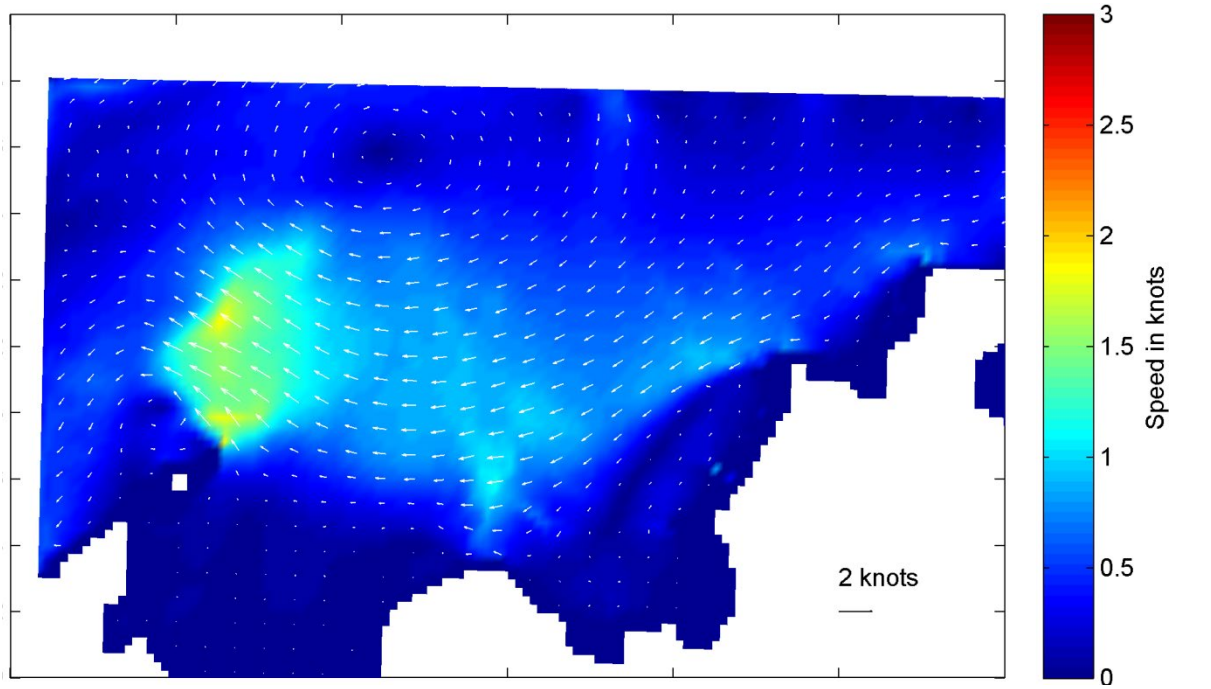
B.6 High Water Minus 1 Hour

Spring tide



Data Source: RWE, Wylfa Hydrodynamic Model

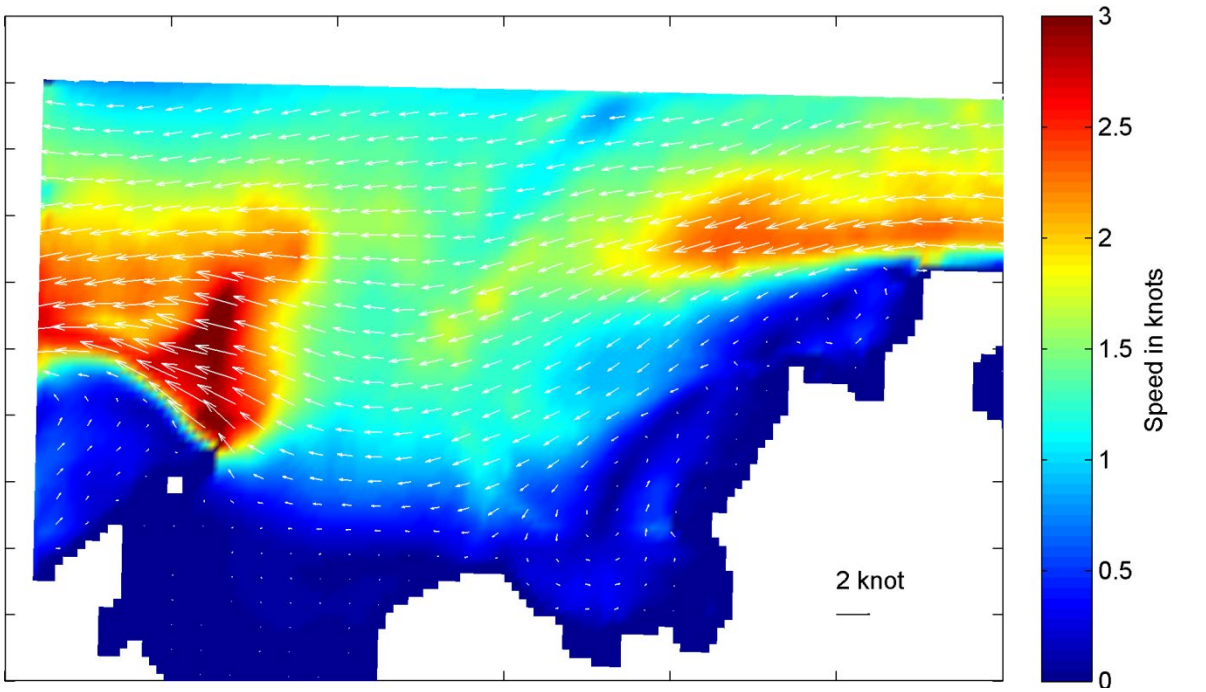
Neap tide



Data Source: RWE, Wylfa Hydrodynamic Model

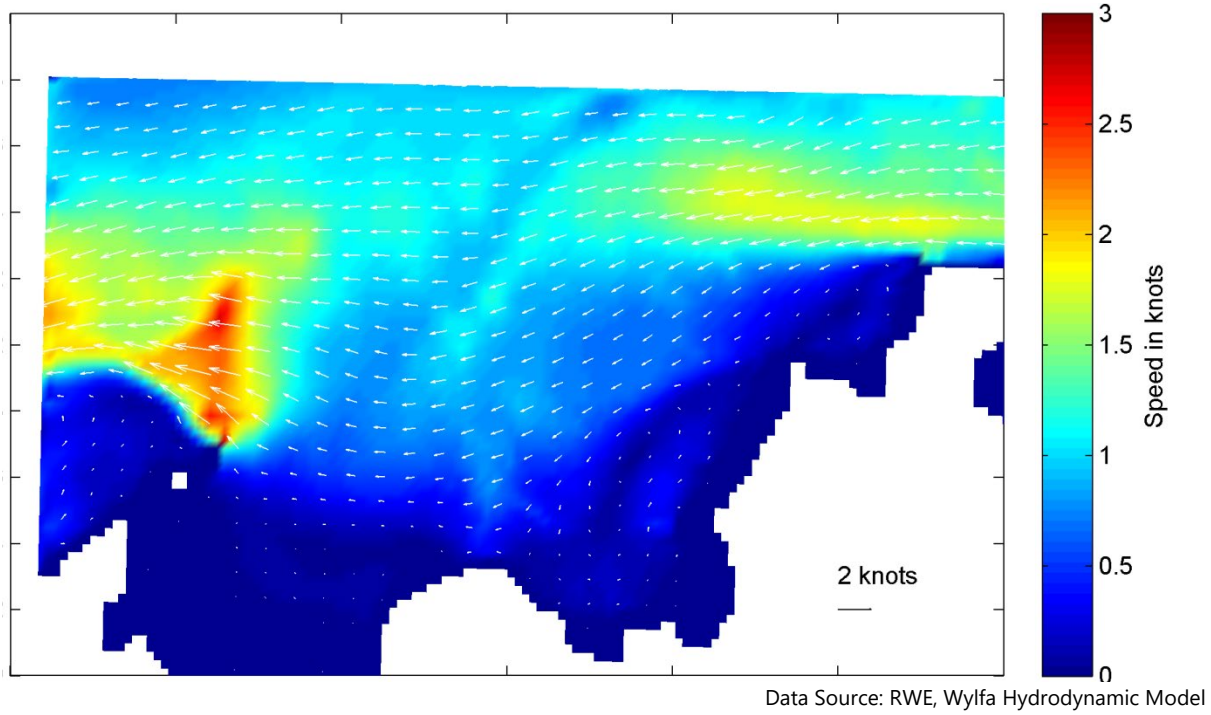
B.7 High Water

Spring tide



Data Source: RWE, Wylfa Hydrodynamic Model

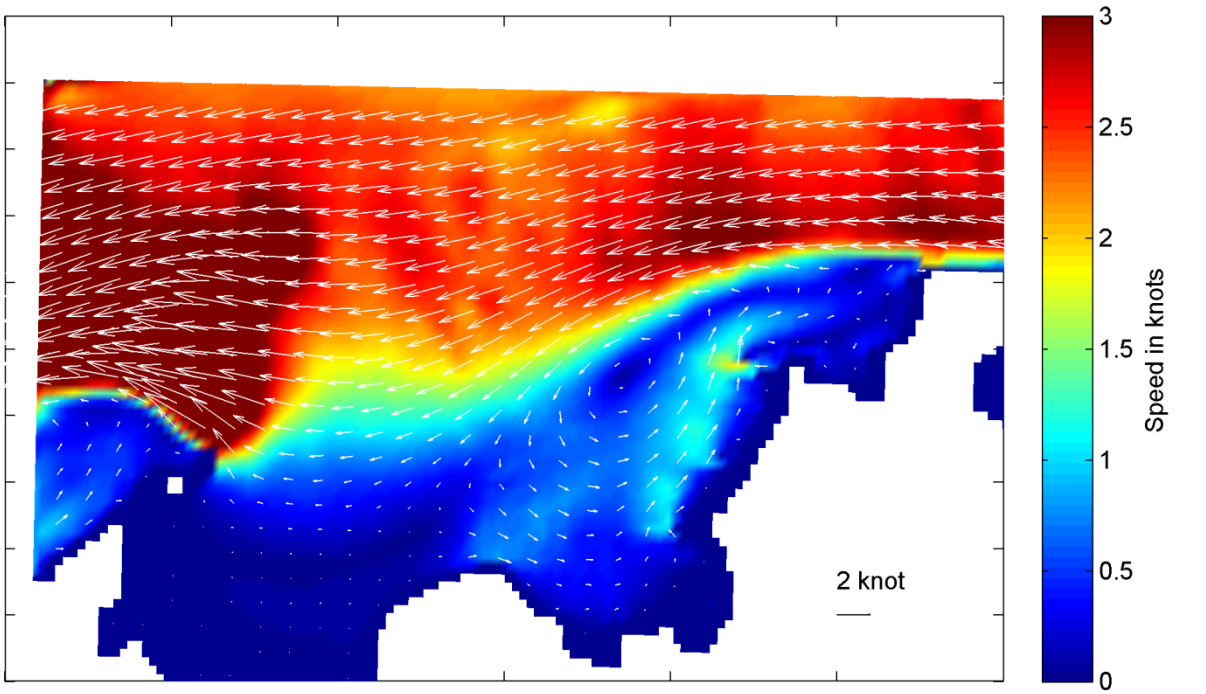
Neap tide



Data Source: RWE, Wylfa Hydrodynamic Model

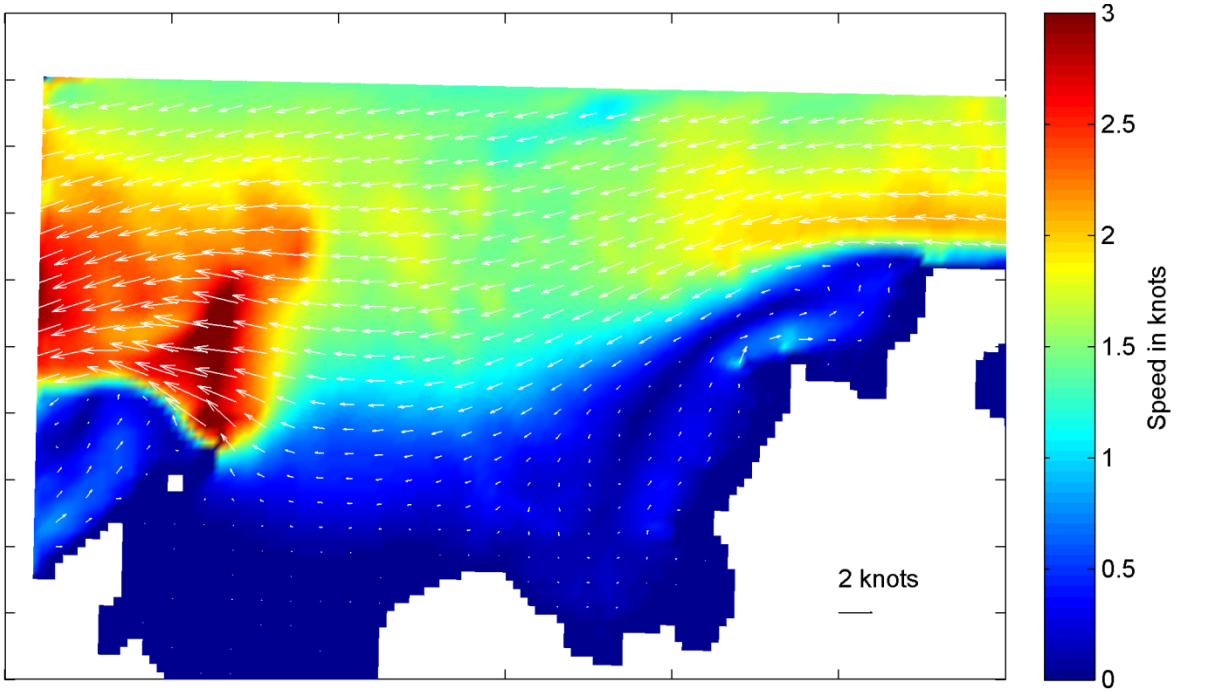
B.8 High Water Plus 1 Hour

Spring tide



Data Source: RWE, Wylfa Hydrodynamic Model

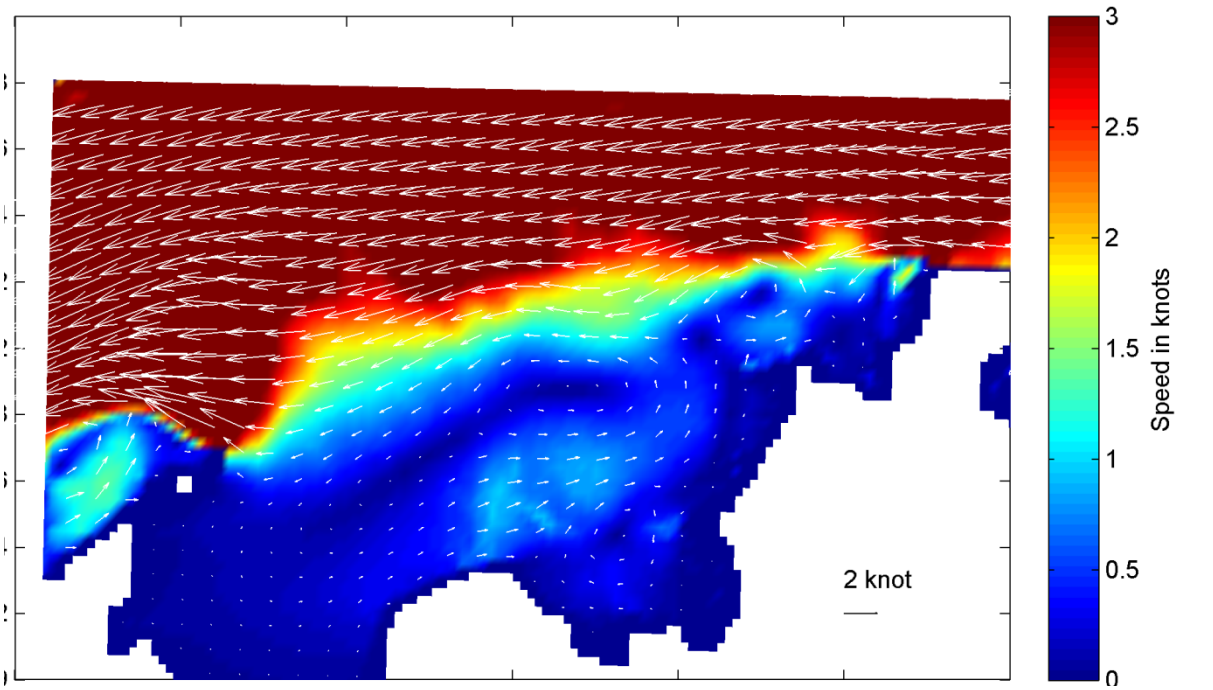
Neap tide



Data Source: RWE, Wylfa Hydrodynamic Model

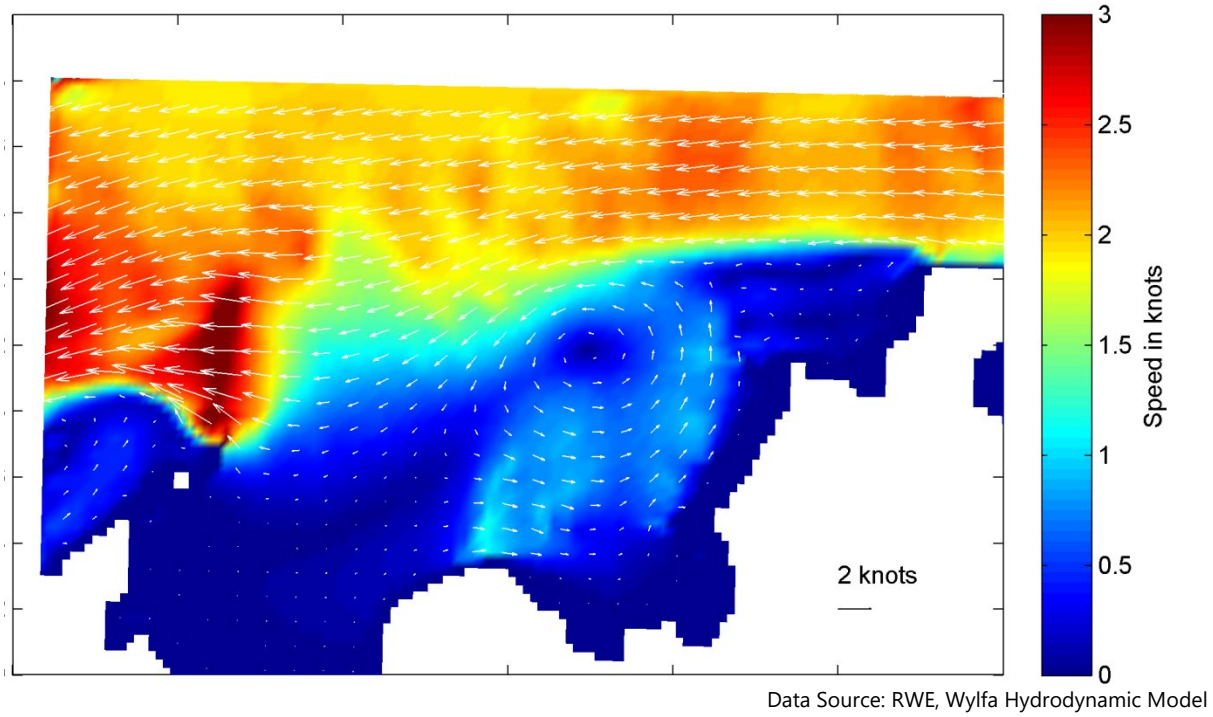
B.9 High Water Plus 2 Hours

Spring tide



Data Source: RWE, Wylfa Hydrodynamic Model

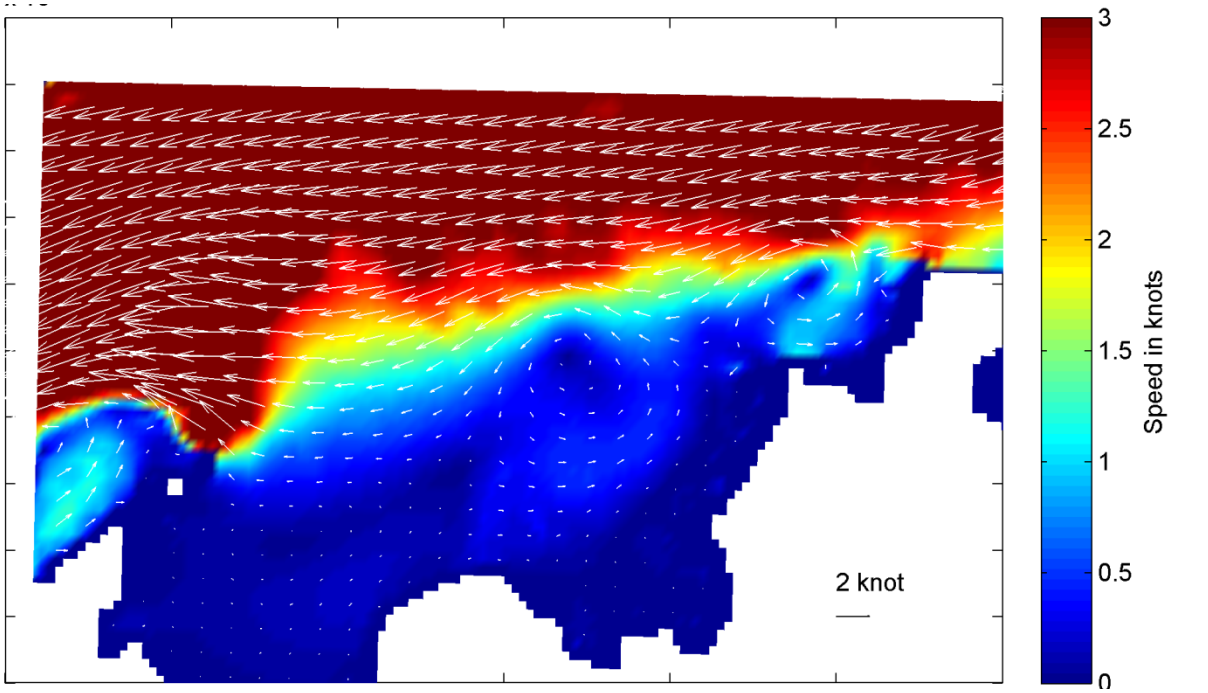
Neap tide



Data Source: RWE, Wylfa Hydrodynamic Model

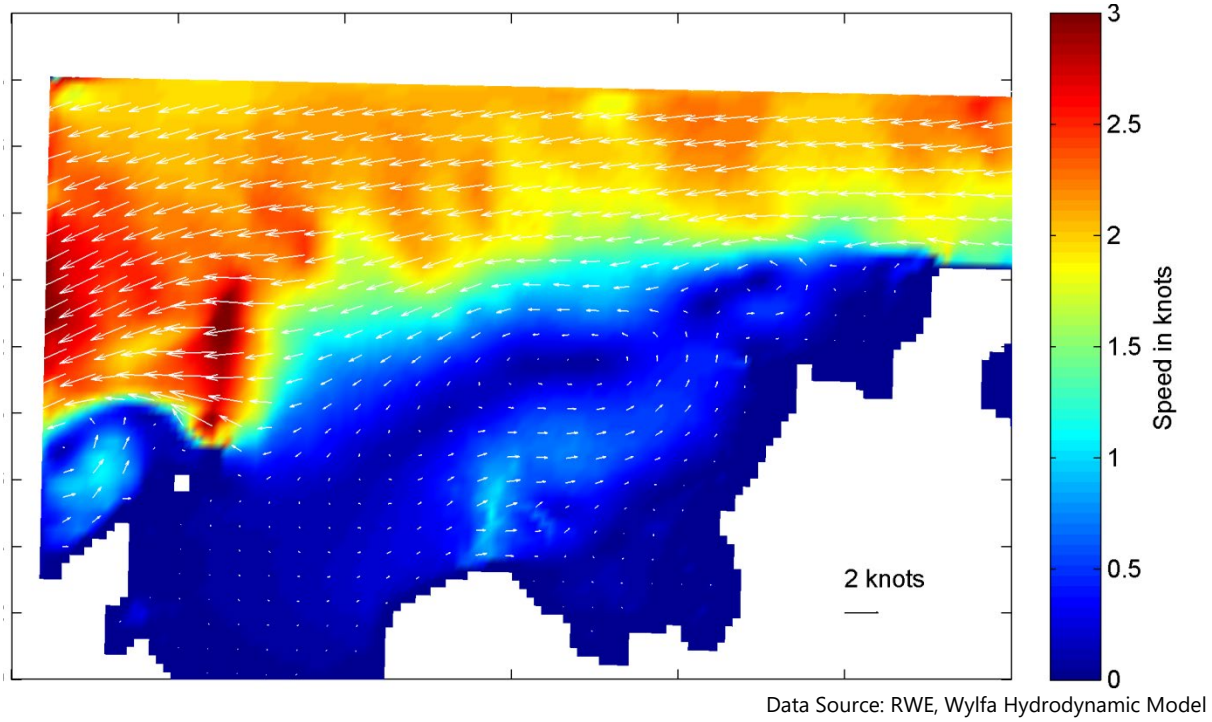
B.10 High Water Plus 3 Hours

Spring tide



Data Source: RWE, Wylfa Hydrodynamic Model

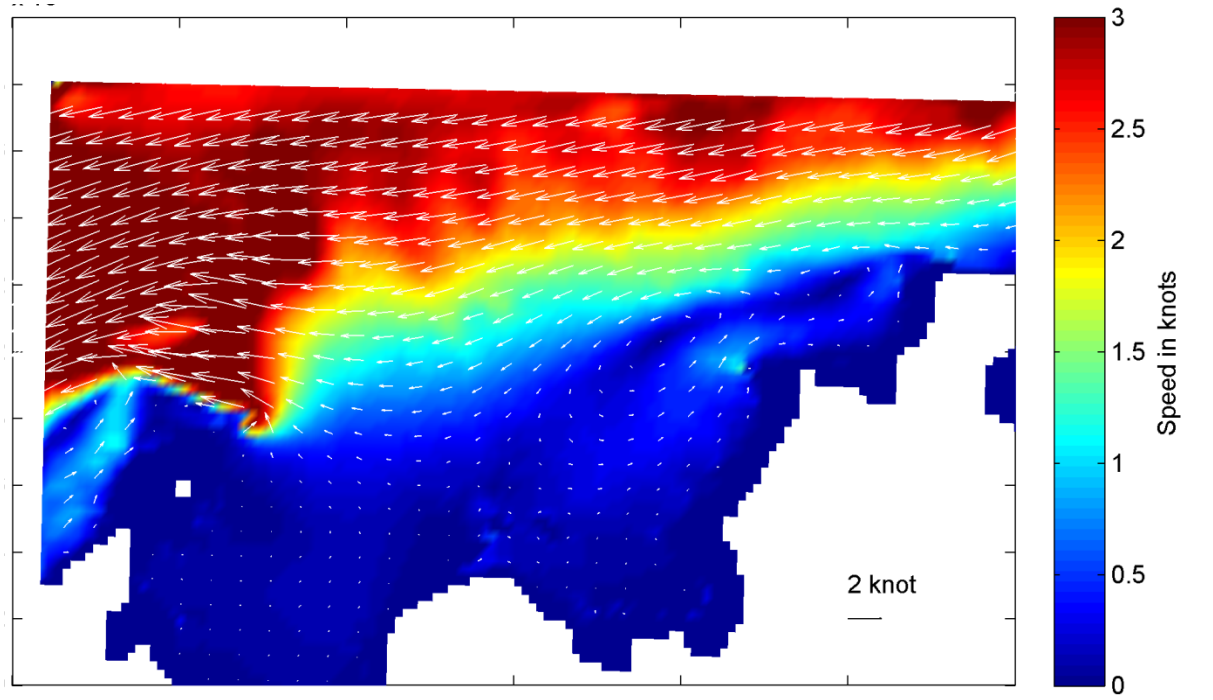
Neap tide



Data Source: RWE, Wylfa Hydrodynamic Model

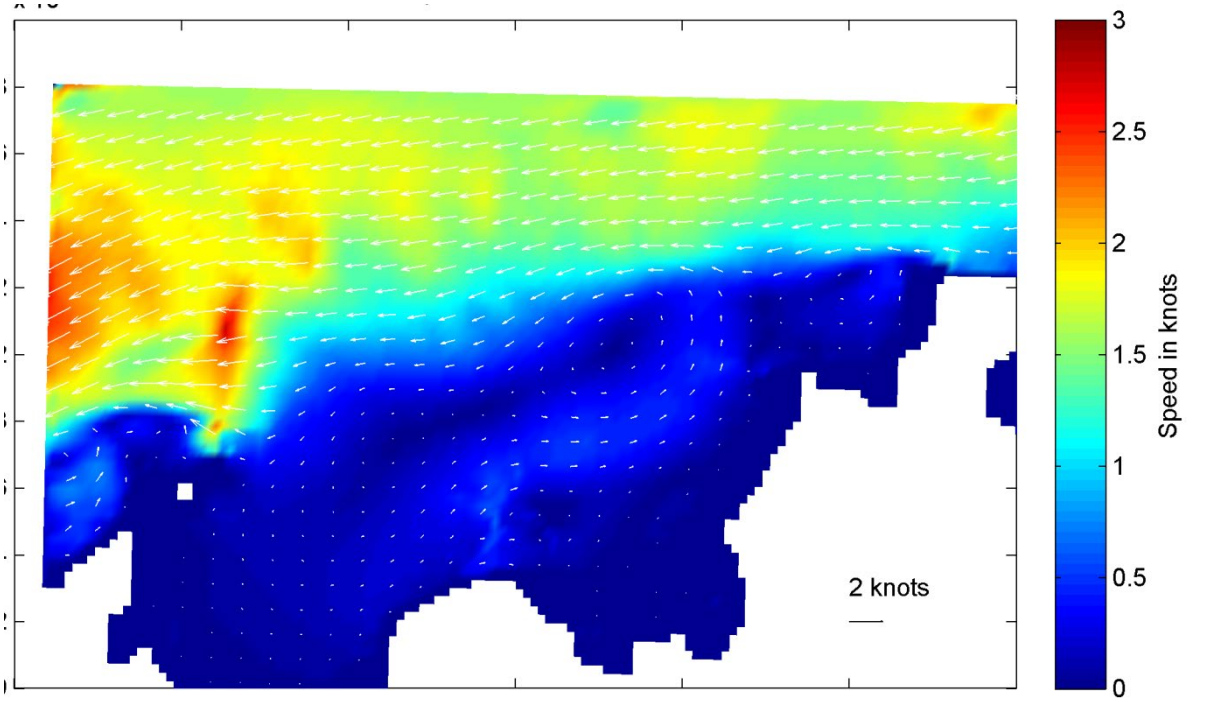
B.11 High Water Plus 4 Hours

Spring tide



Data Source: RWE, Wylfa Hydrodynamic Model

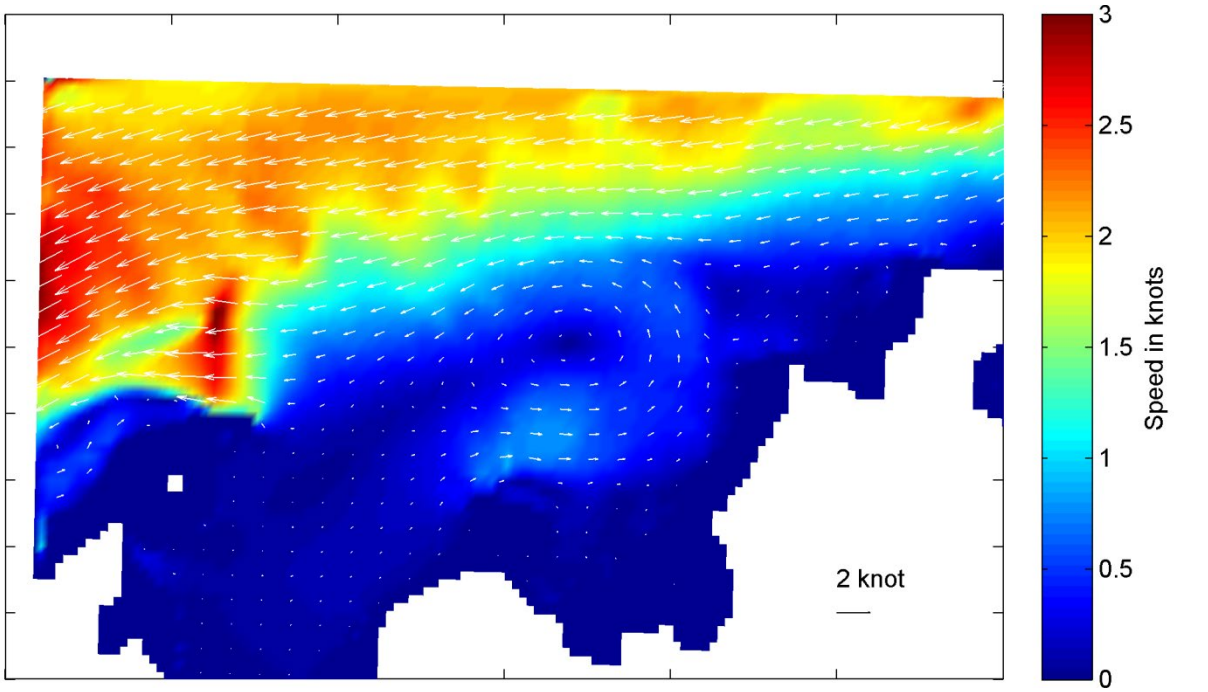
Neap tide



Data Source: RWE, Wylfa Hydrodynamic Model

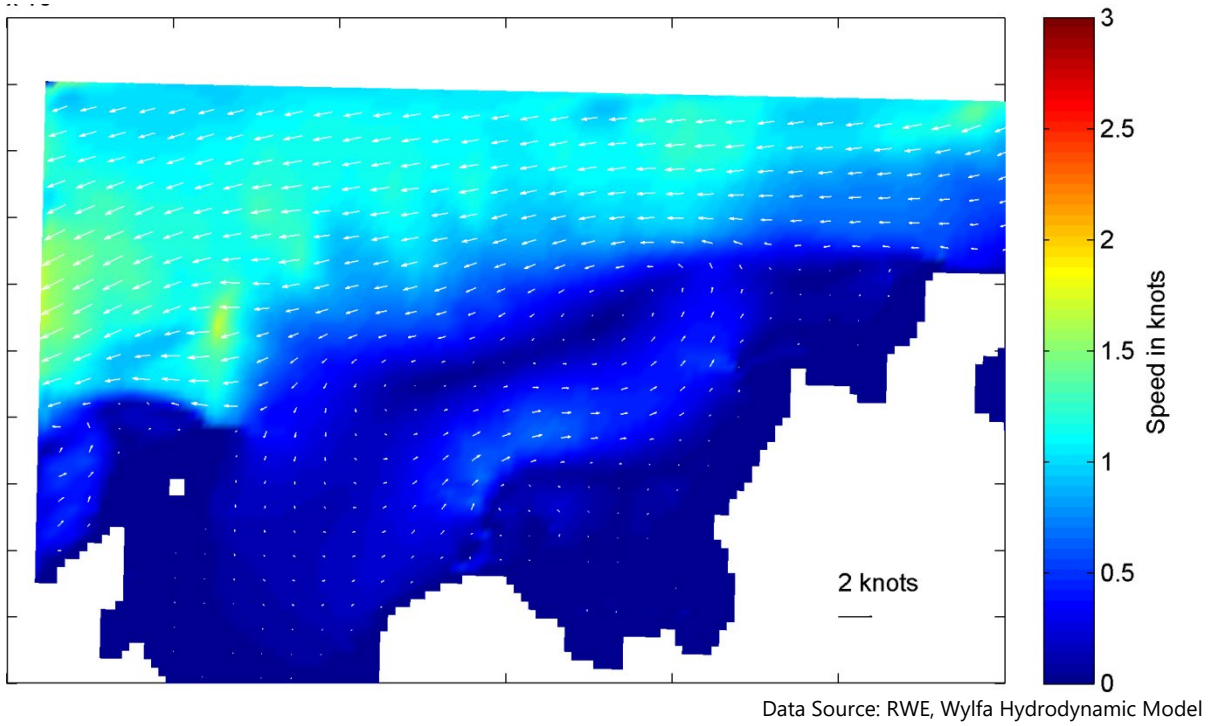
B.12 High Water Plus 5 Hours

Spring tide



Data Source: RWE, Wylfa Hydrodynamic Model

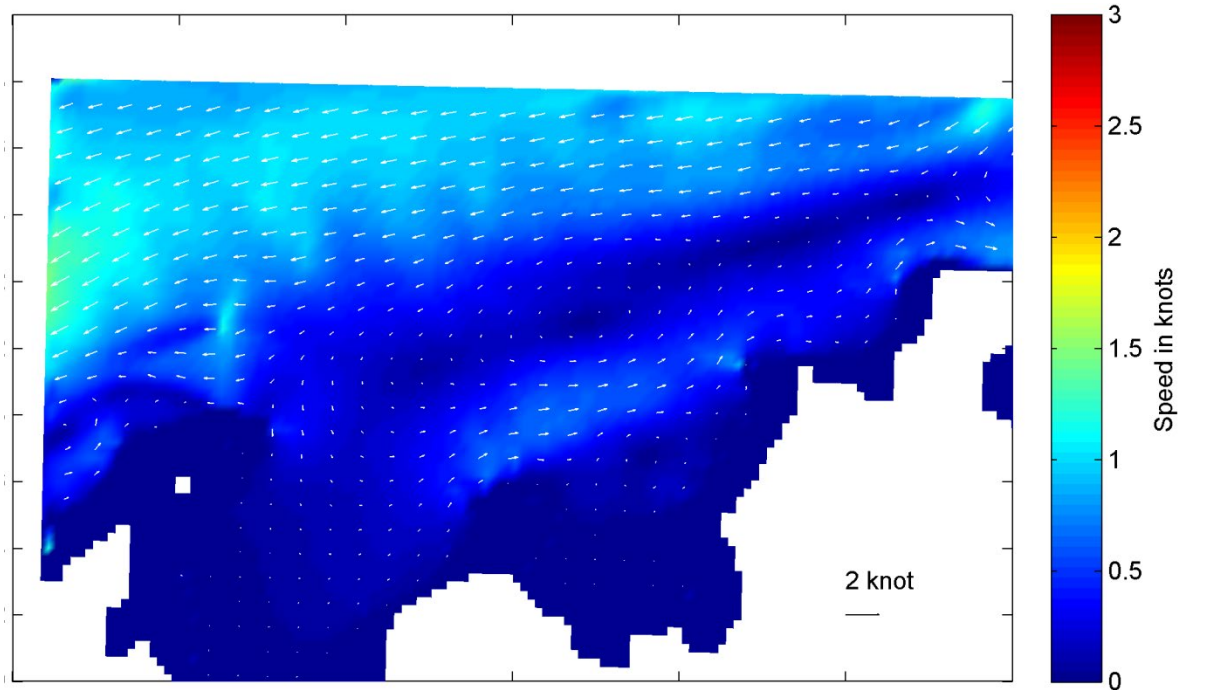
Neap tide



Data Source: RWE, Wylfa Hydrodynamic Model

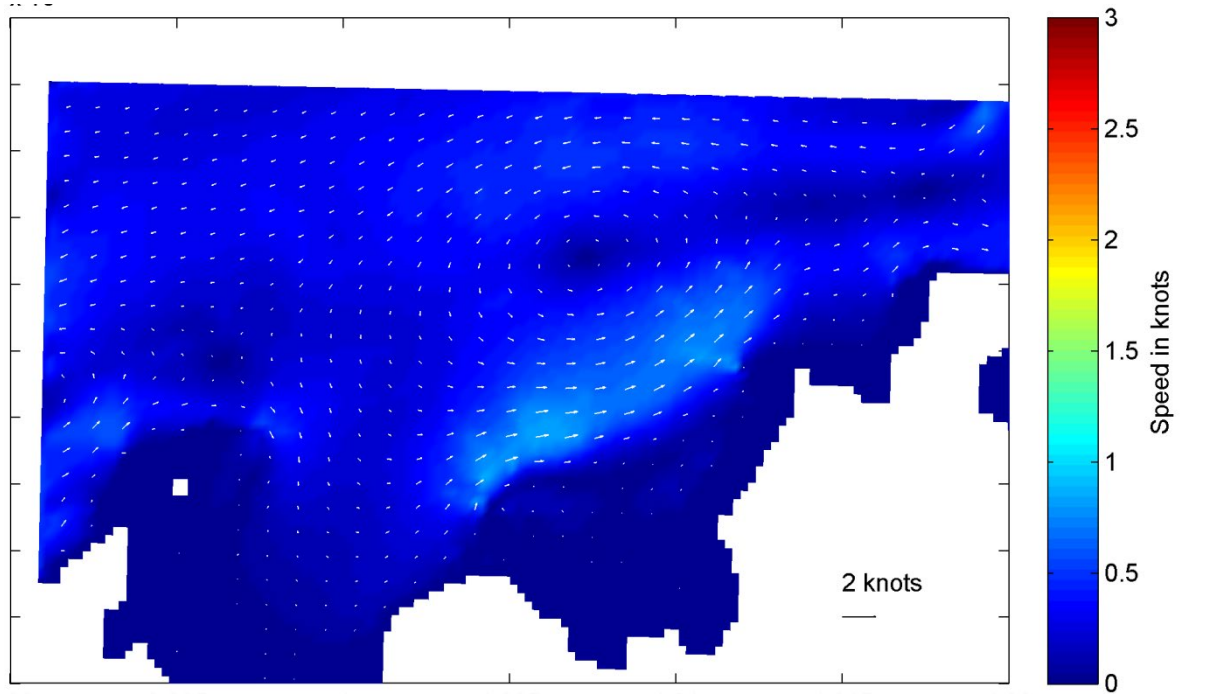
B.13 High Water Plus 6 Hours

Spring tide



Data Source: RWE, Wylfa Hydrodynamic Model

Neap tide



Data Source: RWE, Wylfa Hydrodynamic Model

C Construction Phase Navigational Risk Assessments

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
	Accidents to personnel	Commercial diving operations associated with the marine works	Dredge/construction vessel is unaware of divers in the water. Diver caught in propellers or umbilical severed, loss of life, operations cease during investigation, national adverse publicity.						Dredge/construction vessel approaches diving area and does not see 'A' flag. Vessel is warned of underwater operations and alters course. Divers taken out of water, disruption to activities.							1	Human error/fatigue - Ship Personnel
																5	Human error/fatigue - Port/Marine Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place on-board vessel
																23	Communication failure - Operational/procedural
																24	Communication failure - Equipment
																25	Communication failure - Personnel
																26	Adverse weather conditions
																28	Restricted visibility
																30	Failure to comply with VTS/LPS/SOPs
																31	Failure to observe standing notices
																33	High traffic density
1				5	3	1	0	4		1	0	0	0	1	5.09	37	Failure to comply with safe systems of work
																42	Non-attendance of boatmen
																43	Malicious action by external parties
																48	Risk Assessment, Incomplete/not reviewed
																55	Incapacitated master (drugs/alcohol)
																59	Inadequate procedures shore side
																61	Incorrect assessment of tidal flow
																78	Ship/Tug/Launch failure
																79	Weather & hydro failure - equipment
																80	Human error
																86	Competence
																87	Notice to Mariners failure to observe
																102	Language problems
																103	Excessive vessel speed

Control ID	Embedded Controls				Residual Risk	Current Risk	Control ID	Additional Controls				Residual Risk	Final Risk	Date	Assessors
	Control	Comment	Likelihood Reduction	Consequence Reduction				Control	Comment	Likelihood Reduction	Consequence Reduction				
26	Communications equipment	VHF radios used by diving team	10%	0%	5.04	4.81	9	Local Port Services - Harbour control office	Point of contact for Harbour operations and provided safety information to vessels	5%	5%	4.31	3.54	24-Oct-2016 Revised 02-Jun-2017	Anthony Hilliard - MCA Trevor Harris - Trinity House Wyn Parry - Stena Line Ports Ltd David Williams - Cemaes Harbour Committee Kim Argyle - Holyhead Sailing Club Monty Smedley - ABPmer Emma Beagley - Horizon
41	Notices to mariners	Issued weekly by the Admiralty	5%	0%	5.02		16	LPS broadcast (navigation and safety information)	VHF broadcast on commencement of diving operations	10%	0%	4.28			
44	Safe systems of work (H&S)	No diving operations to commence until reviewed and approved.	15%	0%	4.94		19	Port Facility Emergency Plan	Incorporating responsibility's as CAT 2 responder	0%	5%	4.10			
60	International COLREGS 1972 (as amended)		10%	0%	4.89		28	AIS coverage	All dredge/construction vessels, including barges to carry AIS (A or B).	5%	0%	4.08			
62	Emergency services equipment - shore side	Mayday or Pan-Pan call to Coastguards, local ambulance service.	0%	0%	4.89		41	Notices to mariners	Issued by the SHA or Local NtM	5%	0%	4.06			
95	Standing Orders/SOPs	In place on-board vessels	5%	0%	4.86		70	Marine Safety Management System	Prior to commencement of marine operations, MSMS established by the SHA, including SOPs	5%	0%	4.04			
97	Visual observation (clear line of sight)		5%	0%	4.84		112	PMSC compliance	SHA MSMS applies, which recognises the need for contractors RAMS to be agreed with the SHA in advance of marine works.	5%	0%	4.02			
102	Signage	A' flag displayed during diving operations	5%	0%	4.81		114	Directions (General) - issued by SHA	Allows HA to regulate vessel speed	5%	0%	4.00			
							132	Safety zone	Construction safety zone around the marine site, marked with buoyage.	10%	0%	3.92			
							140	RAMS	Provided to the HA and agreed prior to commencement of operations	10%	0%	3.91			
							141	Dedicated VHF channel	Licence obtained from OFCOM, information updated in ALRS	5%	0%	3.90			
							22	Contingency plan exercises		0%	5%	3.73			
							33	Training of port marine/operations personnel		0%	5%	3.55			
							137	Permit to work	Checklist to ensure all safety measures are in place prior to commencement of operations	10%	0%	3.54			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
2	Accidents to personnel	Man overboard during dredge/construction works	Person falls into water during the dredge/construction works and hits head on the vessel leading to drowning. No pollution, delay to construction works during investigation. National adverse publicity.	5	3	0	0	3	Person falls into water during the dredge/construction works, person is recovered to shore and treated for cold water immersion. No pollution, minor delay to construction works.	1	1	0	0	1	4.69	1	Human error/fatigue - Ship Personnel
																7	Inadequate procedures in place on-board vessel
																8	Fire/Explosion
																16	Unplanned interaction with recreational/fishing craft
																20	Tug failure towing equipment
																23	Communication failure - Operational/procedural
																25	Communication failure - Personnel
																26	Adverse weather conditions
																30	Failure to comply with VTS/LPS/SOPs
																37	Failure to comply with safe systems of work
																48	Risk Assessment, Incomplete/not reviewed
																49	Loss of vessels stability (due to other than loss of watertight integrity)
																59	Inadequate procedures shore side
																76	Inadequate training/competence - Others
																78	Ship/Tug/Launch failure
																80	Human error
																86	Competence
																106	Inadequate PPE

Embedded Controls					Residual Risk	Current Risk	Additional Controls					Residual Risk	Final Risk	Date	Assessors
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction			Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction				
26	Communications equipment	VHF radio available to vessels/personnel	0%	10%	4.33		9	Local Port Services - Harbour control office	Point of contact for Harbour operations, liaison with authorities during emergency	5%	5%	2.72			
44	Safe systems of work (H&S)	Provided by contractors and reviewed prior to operations	10%	0%	3.96		19	Port Facility Emergency Plan	Procedures for coordination of emergency operations	0%	5%	2.53			
62	Emergency services equipment - shore side	Mayday or Pan-Pan call to Coastguards, local ambulance service.	0%	10%	3.64		22	Contingency plan exercises	MoB drills at regular intervals	0%	5%	2.34			
95	Standing Orders/SOPs	Vessel SOPs for operations	10%	5%	3.44		27	CCTV coverage	Covering marine works	0%	10%	1.97			
155	PPE	Lifejackets and hard hats provided by contractor	0%	10%	3.11		28	AIS coverage	All dredge/construction vessels, including barges to carry AIS (A or B).	0%	5%	1.46			
142	International Convention for the Safety of Life at Sea (SOLAS) 1974	Details requirements for emergency procedures	0%	5%	2.93	2.93	70	Marine Safety Management System	Prior to commencement of marine operations, MSMS established by the SHA, including SOPs	10%	0%	1.46	0.73	24-Oct-2016 Revised 02-Jun-2017	Anthony Hilliard - MCA Trevor Harris - Trinity House Wyn Parry - Stena Line Ports Ltd David Williams - Cemaes Harbour Committee Kim Argyle - Holyhead Sailing Club Monty Smedley - ABPmer Emma Beagley - Horizon
							112	PMSC compliance	SHA MSMS applies, which recognises the need for contractors RAMS to be agreed with the SHA in advance of marine works.	10%	0%	1.46			
							140	RAMS	Reviewed prior to commencement of construction	5%	0%	1.46			
							142	International Convention for the Safety of Life at Sea (SOLAS) 1974	Appropriate craft capable of recovering MoB on-site and capable of immediate use	0%	10%	0.98			
							141	Dedicated VHF channel	Licence obtained from OFCOM information updated in ALRS. Channel used for HA and marine works operations	0%	5%	0.73			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
3	Allision	Dredge/construction plant impact with marine works during construction phase	Dredge/construction craft slow speed impact with structures during the marine works dredge/construction phase. Minor damage to vessel, serious injury to crew, minor pollution (Tier 1). Delay to marine works due to repairs.	5	2	3	2	2	Dredge/construction vessel slow speed impact with structure during the marine works dredge/construction phase. No damage to vessel hull, minor injuries to crew, no pollution. Minor delay to marine works.	1	1	1	0	1	5.66	1	Human error/fatigue - Ship Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place on-board vessel
																11	Vessel breakdown or malfunction
																16	Unplanned interaction with recreational/fishing craft
																20	Tug failure towing equipment
																22	Failure to comply with Towage guidelines
																25	Communication failure - Personnel
																26	Adverse weather conditions
																28	Restricted visibility
																38	Shore side light backscatter
																55	Incapacitated master (drugs/alcohol)
																60	Protest by external parties
																61	Incorrect assessment of tidal flow
																68	Interaction
																72	Failure to follow passage plan
																76	Inadequate training/competence - Others
																78	Ship/Tug/Launch failure
																80	Human error
																84	Tugs - Inadequate/unavailable
																86	Competence
																103	Excessive vessel speed

Embedded Controls							Additional Controls									
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Current Risk	Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Final Risk	Date	Assessors
26	Communications equipment	VHF radio available for all craft and supervisory personnel	10%	5%	4.97	4.35	9	Local Port Services - Harbour control office	Point of contact for Harbour operations. Provides safety information to vessels in the HA	10%	5%	4.12	2.43	24-Oct-2016 Revised 02-Jun-2017	Anthony Hilliard - MCA Trevor Harris - Trinity House Wyn Parry - Stena Line Ports Ltd David Williams - Cemaes Harbour Committee Kim Argyle - Holyhead Sailing Club Monty Smedley - ABPmer Emma Beagley - Horizon
44	Safe systems of work (H&S)	Reviewed and updated prior to commencement of operations	10%	0%	4.92		16	LPS broadcast (navigation and safety information)	Including weather conditions within the harbour	10%	0%	4.11			
95	Standing Orders/SOPs	In place on-board vessels	10%	5%	4.68		19	Port Facility Emergency Plan	Detailing the HA responsible to emergency situations	0%	5%	3.91			
97	Visual observation (clear line of sight)		10%	0%	4.63		21	Oil spill contingency plans	The MCA require an OPRC plan to be in place and approved by them prior to the commencement of marine works at the site.	0%	5%	3.72			
125	Standards of Training, Certification and Watchkeeping for Seafarers (STCW)	Maintain training and competence levels for vessel crew	50%	0%	4.38		22	Contingency plan exercises		0%	5%	3.52			
60	International COLREGS 1972 (as amended)		5%	0%	4.35		28	AIS coverage	All dredge/construction vessels, including barges to carry AIS (A or B).	10%	0%	3.51			
							36	Availability of pollution response equipment	Harbour and contractors to have equipment available	0%	5%	3.30			
							39	Direction (Special) - Powers of Harbour/Pier Master	Issued to control traffic in the event of an incident or for safety reasons	5%	5%	3.08			
							57	Aids to navigation, provision and maintenance of	All marine works are required to be lit, showing navigational lights/shapes as appropriate	10%	0%	3.06			
							69	Training of pollution response personnel		0%	5%	2.84			
							70	Marine Safety Management System	Established prior to operations based on risk assessment and containing procedures to allow for safe operations within the harbour	5%	0%	2.83			
							112	PMSC compliance		5%	0%	2.82			
							140	RAMS	Provided to HA and agreed prior to commencement of operations	10%	5%	2.44			
							141	Dedicated VHF channel	Licence obtained from OFCOM, information updated in ALRS	5%	0%	2.43			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
4	Collision	Dredge/construction plant collision with recreational vessel	Collision of a recreational vessel with dredge/construction craft. Collision occurs at night, recreational vessel misunderstands or does not recognise navigational lights and shapes displayed by the dredge/construction craft, or dredge/construction craft not showing lights/shapes. Recreational vessel hull damaged leading to ingress of water and sinking, loss of life, small-scale pollution (Tier 1). Disruption to marine works during investigation and adverse publicity.	5	4	3	2	4	Collision of a recreational vessel with dredge or construction craft. Collision occurs at night, recreational vessel misunderstands or does not recognise navigational lights and shapes displayed by the dredge/construction craft, or dredge/construction craft not showing lights/shapes. Recreational vessel receives contact damage, no damage to dredge or construction plant. Minor injury to recreational vessel crew, no local adverse publicity.	5	1	2	0	1	6.59	1	Human error/fatigue - Ship Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place on-board vessel
																11	Vessel breakdown or malfunction
																16	Unplanned interaction with recreational/fishing craft
																23	Communication failure - Operational/procedural
																24	Communication failure - Equipment
																25	Communication failure - Personnel
																26	Adverse weather conditions
																28	Restricted visibility
																30	Failure to comply with VTS/LPS/SOPs
																31	Failure to observe standing notices
																32	Failure to observe Byelaws/local regulations
																33	High traffic density
																38	Shore side light backscatter
																48	Risk Assessment, Incomplete/not reviewed
																55	Incapacitated master (drugs/alcohol)
																56	COLREGS failure to comply
																61	Incorrect assessment of tidal flow
																68	Interaction
																72	Failure to follow passage plan
																76	Inadequate training/competence - Others
																80	Human error
																82	AIS failure
																86	Competence
																87	Notice to Mariners failure to observe
																102	Language problems
																103	Excessive vessel speed

Embedded Controls						Additional Controls							
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Current Risk	Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Final Risk	Date	Assessors
10	Passage planning	Vessels must complete a detailed plan for every voyage	10%	0%	6.50	5.56	9	Local Port Services - Harbour control office	Point of contact for Harbour operations. Provides safety information to vessels in the HA	5%	5%	5.30	3.44	24-Oct-2016 Revised 02-Jun-2017	Anthony Hilliard - MCA Trevor Harris - Trinity House Wyn Parry - Stena Line Ports Ltd David Williams - Cemaes Harbour Committee Kim Argyle - Holyhead Sailing Club Monty Smedley - ABPmer Emma Beagley - Horizon
41	Notices to mariners	Issued weekly by the Admiralty, provided safety information	5%	0%	6.45		16	LPS broadcast (navigation and safety information)	Including weather conditions within the harbour	10%	0%	5.22			
60	International COLREGS 1972 (as amended)		5%	0%	6.41		19	Port Facility Emergency Plan	Detailing the HA responsible to emergency situations	0%	5%	5.00			
62	Emergency services equipment - shore side	Mayday or Pan-Pan call to Coastguards	5%	5%	6.05		21	Oil spill contingency plans	The MCA require an OPRC plan to be in place and approved by them prior to the commencement of marine works at the site.	0%	5%	4.78			
95	Standing Orders/SOPs	In place on-board vessels	5%	5%	5.78		22	Contingency plan exercises		0%	5%	4.56			
142	International Convention for the Safety of Life at Sea (SOLAS) 1974	Details requirements for emergency procedures	0%	5%	5.56		28	AIS coverage	All dredge/construction vessels, including barges to carry AIS (A or B).	10%	0%	4.48			
							36	Availability of pollution response equipment	Harbour and contractors to have equipment available	0%	5%	4.25			
							39	Direction (Special) - Powers of Harbour/Pier Master	Issued to control traffic in the event of an incident	5%	0%	4.21			
							41	Notices to mariners	Local Notice to Mariners issued by the SHA	5%	0%	4.17			
							45	Guidance for small craft	Passive (informative) management of leisure traffic by Development Liaison Team, written information to the RYA and local yacht clubs, and available as a web based resource.	10%	0%	4.09			
							69	Training of pollution response personnel		0%	5%	3.87			
							70	Marine Safety Management System	Established prior to operations based on risk assessment and containing procedures to allow for safe operations within the harbour	5%	0%	3.83			
							112	PMSC compliance	SHA MSMS applies, which recognises the need for contractors RAMS to be agreed with the SHA in advance of marine works.	5%	0%	3.78			
							114	Directions (General) - issued by SHA	Allows HA to regulate vessel speed	5%	0%	3.74			
							140	RAMS	Provided to HA and agreed prior to commencement of operations	5%	5%	3.46			
							141	Dedicated VHF channel	Licence obtained from OFCOM, information updated in ALRS	5%	0%	3.44			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
5	Collision	Dredge/construction craft collision with commercial vessel	Collision of dredge/construction craft with commercial vessel in transit to or from the MOLF. Collision occurs in deep water. At least one vessel receives major hull damage, ingress of water and sinks. Multiple fatalities, pollution (Tier 2). Disruption to marine works meaning temporary suspension of operations until investigation complete and wreck removed. National adverse publicity.	5	4	4	3	3	Collision of Dredge/construction craft with commercial vessel in transit to or from the MOLF. Collision occurs in deep water. Vessels make contact whilst taking avoiding action, glancing blow resulting in minor damage to both vessels. Vessels return to nearest suitable berth to assess damage. Minor injury to crew, no pollution, no disruption to operations. Vessel remains at berth until damage is surveyed and repaired.	1	1	3	0	1	7.59	1	Human error/fatigue - Ship Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place on-board vessel
																11	Vessel breakdown or malfunction
																16	Unplanned interaction with recreational/fishing craft
																20	Tug failure towing equipment
																23	Communication failure - Operational/procedural
																24	Communication failure - Equipment
																25	Communication failure - Personnel
																26	Adverse weather conditions
																28	Restricted visibility
																30	Failure to comply with VTS/LPS/SOPs
																55	Incapacitated master (drugs/alcohol)
																56	COLREGS failure to comply
																61	Incorrect assessment of tidal flow
																72	Failure to follow passage plan
																76	Inadequate training/competence - Others
																78	Ship/Tug/Launch failure
																80	Human error
																82	AIS failure
																86	Competence
																102	Language problems
																103	Excessive vessel speed

Embedded Controls							Additional Controls								
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Current Risk	Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Final Risk	Date	Assessors
10	Passage planning	Vessels must complete a detailed plan for every voyage	10%	0%	7.53	6.77	3	Communications - Traffic broadcast	LPS informs approaching vessel of movements within the harbour	10%	0%	6.71	5.77	24-Oct-2016 Revised 02-Jun-2017	Anthony Hilliard - MCA Trevor Harris - Trinity House Wyn Parry - Stena Line Ports Ltd David Williams - Cemaes Harbour Committee Kim Argyle - Holyhead Sailing Club Monty Smedley - ABPmer Emma Beagley - Horizon
60	International COLREGS 1972 (as amended)		15%	0%	7.44		9	Local Port Services - Harbour control office	Point of contact to control Harbour operations	5%	5%	6.44			
62	Emergency services equipment - shore side	Mayday or Pan-Pan call to Coastguards	5%	5%	7.06		13	Arrival/departure, advance notice of	To allow LPS to advise vessels operating at the marine works of traffic movements	10%	0%	6.39			
125	Standards of Training, Certification and Watchkeeping for Seafarers (STCW)	Maintain training and competence levels for vessel crew	10%	5%	6.77		16	LPS broadcast (navigation and safety information)	Including weather conditions within the harbour	5%	0%	6.36			
							28	AIS coverage	All dredge/construction vessels, including barges to carry AIS (A or B).	10%	5%	6.06			
							140	RAMS	Provided to HA and agreed prior to commencement of operations	5%	5%	5.80			
							141	Dedicated VHF channel	Licence obtained from OFCOM, information updated in ALRS	5%	0%	5.77			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
6	Collision	Dredger or barge on passage to Holyhead North disposal site and other vessel	Collision between loaded dredger/barge and vessel transiting inshore of TSS. Damage to hull of both vessels leading to ingress of water and sinking of at least one vessel. Multiple fatalities, pollution (Tier 2), national adverse publicity, dredge operations cease until investigation complete and another vessel can be chartered.	5	4	4	3	3	Avoiding action taken resulting in glancing blow. Minor damage to both vessels, minor injuries to crew, no pollution, operations cease during survey and repair.	1	1	2	0	1	7.13	1	Human error/fatigue - Ship Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place onboard vessel
																26	Adverse weather conditions
																28	Restricted visibility
																33	High traffic density
																56	COLREGS failure to comply
																72	Failure to follow passage plan
																82	AIS failure
																86	Competence
																103	Excessive vessel speed
																105	Navigation equipment failure

Control ID	Embedded Controls				Residual Risk	Current Risk	Control ID	Additional Controls				Residual Risk	Final Risk	Date	Assessors
	Control	Comment	Likelihood Reduction	Consequence Reduction				Control	Comment	Likelihood Reduction	Consequence Reduction				
3	Communications - Traffic broadcast	Security message broadcast to vessels in the area	10%	0%	7.06	4.73	9	Local Port Services - Harbour control office	Point of control for Harbour operations	0%	5%	4.49	3.56	24-Oct-2016 Revised 02-Jun-2017	Anthony Hilliard - MCA Trevor Harris - Trinity House Wyn Parry - Stena Line Ports Ltd David Williams - Cemaes Harbour Committee Kim Argyle - Holyhead Sailing Club Monty Smedley - ABPmer Emma Beagley - Horizon
10	Passage planning	Vessels must complete a detailed plan for every voyage	10%	0%	7.00		16	LPS broadcast (navigation and safety information)		5%	0%	4.46			
28	AIS coverage	All dredgers are required to carry AIS	15%	0%	6.91		28	AIS coverage	All dredge/construction vessels, including barges to carry AIS (A or B).	10%	5%	4.17			
60	International COLREGS 1972 (as amended)		20%	0%	6.79		140	RAMS	Provided to HA and agreed prior to commencement of operations	5%	5%	3.56			
95	Standing Orders/SOPs	In place on a vessel as part of their SMS	10%	10%	6.17										
125	Standards of Training, Certification and Watchkeeping for Seafarers (STCW)	Maintain training and competence levels for vessel crew	10%	15%	5.43										
142	International Convention for the Safety of Life at Sea (SOLAS) 1974	Details requirements for emergency drills	0%	15%	4.73										

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
7	Collision	Dredger or barge Depositing load at Holyhead North with vessel transiting	Collision whilst dredger/barge stationary results in hull damage to both vessels, ingress of water and sinking of at least one vessel. Multiple fatalities, pollution (Tier 2), national adverse publicity, dredge operations cease until investigation complete and another vessel can be chartered.	10	4	4	3	3	Avoiding action taken resulting in glancing blow. Minor damage to both vessels, minor injuries to crew, no pollution, operations cease during survey and repair.	5	1	2	0	1	6.19	1	Human error/fatigue - Ship Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place on-board vessel
																26	Adverse weather conditions
																28	Restricted visibility
																33	High traffic density
																56	COLREGS failure to comply
																72	Failure to follow passage plan
																82	AIS failure
																86	Competence
																103	Excessive vessel speed
																105	Navigation equipment failure

Embedded Controls							Additional Controls								
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Current Risk	Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Final Risk	Date	Assessors
10	Passage planning	Vessels must complete a detailed plan for every voyage	10%	0%	6.11	3.89	41	Notices to mariners	Publicised to advise vessels of disposal operations at the site	10%	0%	3.82	3.82	24-Oct-2016 Revised 02-Jun-2017	Anthony Hilliard - MCA Trevor Harris - Trinity House Wyn Parry - Stena Line Ports Ltd David Williams - Cemaes Harbour Committee Kim Argyle - Holyhead Sailing Club Monty Smedley - ABPmer Emma Beagley - Horizon
28	AIS coverage	All dredgers are required to carry AIS	10%	0%	6.03										
60	International COLREGS 1972 (as amended)		20%	0%	5.88										
95	Standing Orders/SOPs	In place on a vessel as part of their SMS	10%	10%	5.30										
125	Standards of Training, Certification and Watchkeeping for Seafarers (STCW)	Maintain training and competence levels for vessel crew	10%	15%	4.57										
142	International Convention for the Safety of Life at Sea (SOLAS) 1974	Details requirements for emergency drills	0%	15%	3.89										

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
8	Collision	Tug and tow collision with commercial vessel	Steering/propulsion failure causes tug and tow to drift into the Skerries traffic separation scheme. Collision with commercial vessel occurs in deep water. At least one vessel receives major hull damage, ingress of water and sinks. Multiple fatalities, pollution (Tier 2). Disruption to marine works meaning temporary suspension of operations until investigation complete and wreck removed. National adverse publicity.	5	4	4	3	3	Steering/propulsion failure causes tug and tow to drift into the Skerries traffic separation scheme. Collision occurs in deep water. Vessels make contact whilst taking avoiding action, glancing blow resulting in minor damage to both vessels. Vessels return to nearest suitable berth to assess damage. Minor injury to crew, no pollution, no disruption to operations.	1	1	3	0	1	7.59	1	Human error/fatigue - Ship Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place on-board vessel
																8	Fire/Explosion
																11	Vessel breakdown or malfunction
																14	Vessel has unreported defect
																20	Tug failure towing equipment
																23	Communication failure - Operational/procedural
																24	Communication failure - Equipment
																26	Adverse weather conditions
																33	High traffic density
																55	Incapacitated master (drugs/alcohol)
																75	Inadequate maintenance/inspection
																78	Ship/Tug/Launch failure
																80	Human error
																82	AIS failure
																84	Tugs - Inadequate/unavailable
																105	Navigation equipment failure

Embedded Controls					Residual Risk	Current Risk	Additional Controls					Residual Risk	Final Risk	Date	Assessors
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction			Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction				
3	Communications - Traffic broadcast	Security message broadcast to vessels in the area	10%	0%	7.53		9	Local Port Services - Harbour control office	Point of contact for Harbour operations	0%	5%	5.63			
10	Passage planning	Vessels must complete a detailed plan for every voyage	10%	0%	6.55		16	LPS broadcast (navigation and safety information)		5%	0%	5.62			
41	Notices to mariners	Issued weekly by the Admiralty, provided safety information	10%	0%	6.53		28	AIS coverage	All dredge/construction vessels, including barges to carry AIS (A or B).	10%	5%	5.36			
60	International COLREGS 1972 (as amended)		15%	0%	6.49		140	RAMS	Provided to HA and agreed prior to commencement of operations	5%	5%	5.63			
62	Emergency services equipment - shore side	Mayday or Pan-Pan call to Coastguards	0%	5%	6.16	5.86							5.63	24-Oct-2016 Revised 02-Jun-2017	Anthony Hilliard - MCA Trevor Harris - Trinity House Wyn Parry - Stena Line Ports Ltd David Williams - Cemaes Harbour Committee Kim Argyle - Holyhead Sailing Club Monty Smedley - ABPmer Emma Beagley - Horizon
118	Vessel maintenance	Maintenance schedule part of the vessel SMS	10%	0%	6.13										
119	Vessel inspection/survey	Port and flag state inspections and surveys by classification society	10%	0%	6.11										
125	Standards of Training, Certification and Watchkeeping for Seafarers (STCW)	Maintain training and competence levels for vessel crew	10%	5%	5.86										

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
9	Fire/Explosion	Dredge/construction plant on-board fire	Fire on-board the dredge/construction craft during the marine works dredge/construction phase. Substantial damage leaving the vessel inoperative, multipole fatalities, minor pollution (Tier 1) from firefighting products and run off, craft removed from service until repairs can be completed. Disruption to the marine works.	10	4	4	2	3	Fire on-board the dredge/construction craft during the marine works dredge/construction phase. Fire is contained by crew, resulting in localised damage to on-board equipment. Minor injuries, no pollution, vessel operational capability unaffected. Minor disruption to the marine works.	5	1	1	0	2	6.09	1	Human error/fatigue - Ship Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place on-board vessel
																8	Fire/Explosion
																11	Vessel breakdown or malfunction
																14	Vessel has unreported defect
																19	Vessel fails to notify hazardous cargo
																48	Risk Assessment, Incomplete/not reviewed
																75	Inadequate maintenance/inspection
																76	Inadequate training/competence - Others
																80	Human error
																86	Competence

Embedded Controls							Additional Controls									
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Current Risk	Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Final Risk	Date	Assessors
44	Safe systems of work (H&S)	Provided by contractors after risk assessment	10%	0%	6.02		19	Port Facility Emergency Plan		0%	10%	4.98			
95	Standing Orders/SOPs	In place on-board vessels	10%	0%	5.94		21	Oil spill contingency plans	The MCA require an OPRC plan to be in place and approved by them prior to the commencement of marine works at the site.	0%	5%	4.76			
118	Vessel maintenance	Maintenance schedule part of the vessel SMS	10%	5%	5.55		22	Contingency plan exercises		0%	5%	4.54			
119	Vessel inspection/survey	Port and flag state inspections and surveys by classification society	10%	0%	5.49		33	Training of port marine/operations personnel	This should include the use of equipment and implementation of the plans	0%	5%	4.32			Anthony Hilliard - MCA Trevor Harris - Trinity House Wyn Parry - Stena Line Ports Ltd David Williams - Cemaes Harbour Committee Kim Argyle - Holyhead Sailing Club Monty Smedley - ABPmer Emma Beagley - Horizon
125	Standards of Training, Certification and Watchkeeping for Seafarers (STCW)	Maintain training and competence levels for vessel crew	10%	0%	5.43	5.43	36	Availability of pollution response equipment	Harbour and contractors to have equipment available	0%	5%	4.10	3.59	24-Oct-2016 Revised 02-Jun-2017	
							39	Direction (Special) - Powers of Harbour/Pier Master	Issued to control traffic in the event of an incident	0%	5%	3.88			
							69	Training of pollution response personnel		0%	5%	3.65			
							70	Marine Safety Management System	Prior to commencement of marine operations, MSMS established by the SHA.	5%	0%	3.62			
							112	PMSC compliance	SHA MSMS applies, which recognises the need for contractors RAMS to be agreed with the SHA in advance of marine works.	5%	0%	3.59			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
10	Fire/Explosion	Ordnance found during dredge/construction	Dredger makes contact with unexploded ordnance. Resulting explosion punctures hull leading to flooding and sinking. Multiple fatalities through explosion and/or vessel sinking. Pollution (Tier 2). Significant disruption to the marine works and national adverse publicity.	10	4	4	3	3	Dredger brings unexploded ordnance on-board, which is identified by the crew. LPS (Local Ports Services and/or site office) is informed and the area is evacuated, the EOD (bomb disposal) team attend the site. Disruption to the marine works. No injury or pollution.	5	0	0	0	3	6.16	8	Fire/Explosion
																48	Risk Assessment, Incomplete/not reviewed
																59	Inadequate procedures shore side
																104	Inadequate surveying at planning stage

Embedded Controls							Additional Controls								
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Current Risk	Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Final Risk	Date	Assessors
62	Emergency services equipment - shore side		0%	10%	5.73	5.20	9	Local Port Services - Harbour control office	Point of contact to control Harbour operations	0%	5%	4.99	2.99	24-Oct-2016 Revised 02-Jun-2017	Anthony Hilliard - MCA Trevor Harris - Trinity House Wyn Parry - Stena Line Ports Ltd David Williams - Cemaes Harbour Committee Kim Argyle - Holyhead Sailing Club Monty Smedley - ABPmer Emma Beagley - Horizon
115	Unexploded ordnance investigation and reported risk levels		40%	0%	5.48		19	Port Facility Emergency Plan	Detailing the HA responsible to emergency situations	0%	5%	4.78			
130	Vessel safety management system (ISM code)		10%	5%	5.20		21	Oil spill contingency plans	The MCA require an OPRC plan to be in place and approved by them prior to the commencement of marine works at the site.	10%	5%	4.50			
							22	Contingency plan exercises		0%	5%	4.28			
							36	Availability of pollution response equipment	Harbour and contractors to have equipment available	10%	5%	3.97			
							39	Direction (Special) - Powers of Harbour/Pier Master	Issued to control traffic in the event of an incident	0%	5%	3.73			
							70	Marine Safety Management System	Prior to commencement of marine operations, MSMS established by the SHA.	10%	5%	3.42			
							112	PMSC compliance	SHA MSMS applies, which recognises the need for contractors RAMS to be agreed with the SHA in advance of marine works.	10%	5%	3.08			
							132	Safety zone	Construction safety zone around the marine site, marked with special marker buoyage.	15%	0%	2.99			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
11	Fire/Explosion	Pressure waves caused by explosives during dredging operations.	Explosives detonated too close to a dredge/construction plant. Severe injuries, noise impacts on marine environment. No impact on construction works or program	10	2	1	3	0	Pressure waves from explosives cause disturbance to marine environment.	5	0	0	2	0	4.41	1	Human error/fatigue - Ship Personnel
																5	Human error/fatigue - Port/Marine Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place on-board vessel
																8	Fire/Explosion
																25	Communication failure - Personnel
																30	Failure to comply with VTS/LPS/SOPs
																31	Failure to observe standing notices
																32	Failure to observe Byelaws/local regulations
																37	Failure to comply with safe systems of work
																48	Risk Assessment, Incomplete/not reviewed
																59	Inadequate procedures shore side
																80	Human error
																86	Competence

Embedded Controls					Residual Risk	Current Risk	Additional Controls					Residual Risk	Final Risk	Date	Assessors
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction			Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction				
26	Communications equipment	VHF radio available for all craft and supervisory personnel	10%	5%	4.14	3.87	9	Local Port Services - Harbour control office	Point of contact to control Harbour operations	5%	0%	3.84	3.19	24-Oct-2016 Revised 02-Jun-2017	Anthony Hilliard - MCA Trevor Harris - Trinity House Wyn Parry - Stena Line Ports Ltd David Williams - Cemaes Harbour Committee Kim Argyle - Holyhead Sailing Club Monty Smedley - ABPmer Emma Beagley - Horizon
44	Safe systems of work (H&S)	Provided by contractors after risk assessment	15%	0%	4.05		16	LPS broadcast (navigation and safety information)	Security message broadcast prior to explosive operations	10%	5%	3.64			
95	Standing Orders/SOPs	Provided by the vessels owners/operators	5%	5%	3.87		39	Direction (Special) - Powers of Harbour/Pier Master	Issued to control traffic in the event of an incident	5%	0%	3.61			
							70	Marine Safety Management System	Prior to commencement of marine operations, MSMS established by the SHA.	5%	5%	3.43			
							112	PMSC compliance	SHA MSMS applies, which recognises the need for contractors RAMS to be agreed with the SHA in advance of marine works.	5%	5%	3.25			
							140	RAMS	Provided to HA and agreed prior to commencement of operations	10%	0%	3.19			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
12	Flooding	Dredger flooding whilst engaged in operations	Ingress of water due to weld failure, sea valve failure, hatches/ramps not secure, affects vessel stability leading to vessel sinking. Loss of life, pollution (Tier 2), multiple fatalities. Vessel wreck presents navigation hazard. Operations cease until wreck is removed and investigation complete. National adverse publicity	5	4	4	3	3	Ingress of water controlled before vessel stability affected. Operations delayed until investigation/repairs completed.	1	0	1	0	2	6.81	1	Human error/fatigue - Ship Personnel
																9	Loss of watertight integrity
																11	Vessel breakdown or malfunction
																14	Vessel has unreported defect
																25	Communication failure - Personnel
																26	Adverse weather conditions
																43	Malicious action by external parties
																57	Vessel Ramps or Hatches not secure
																75	Inadequate maintenance/inspection
																76	Inadequate training/competence - Others
																80	Human error
																86	Competence

Embedded Controls							Additional Controls									
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Current Risk	Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Final Risk	Date	Assessors
26	Communications equipment	VHF radio available for all craft and supervisory personnel	5%	0%	6.78	4.64	19	Port Facility Emergency Plan	Detailing the HA responsible to emergency situations	0%	5%	4.41	1.68	24-Oct-2016 Revised 02-Jun-2017	Anthony Hilliard - MCA Trevor Harris - Trinity House Wyn Parry - Stena Line Ports Ltd David Williams - Cemaes Harbour Committee Kim Argyle - Holyhead Sailing Club Monty Smedley - ABPmer Emma Beagley - Horizon
62	Emergency services equipment - shore side	Mayday or Pan-Pan call to Coastguards	0%	10%	6.29		21	Oil spill contingency plans	The MCA require an OPRC plan to be in place and approved by them prior to the commencement of marine works at the site.	0%	5%	4.19			
95	Standing Orders/SOPs	Provided by the vessels owners/operators	5%	5%	6.05		22	Contingency plan exercises	MoB drills at regular intervals	0%	5%	3.60			
110	Ramps/hatches closed when underway	Watertight doors should remain closed during operations	15%	0%	5.96		33	Training of port marine/operations personnel	This should include the use of equipment and implementation of the plans	0%	5%	3.28			
118	Vessel maintenance	Maintenance schedule part of the vessel SMS	15%	10%	5.44		36	Availability of pollution response equipment	Harbour and contractors to have equipment available	0%	5%	2.95			
119	Vessel inspection/survey	Port and flag state inspections and surveys by classification society	15%	10%	4.92		39	Direction (Special) - Powers of Harbour/Pier Master	Issued to control traffic in the event of an incident	5%	0%	2.93			
120	Vessel secured for sea		10%	5%	4.64		69	Training of pollution response personnel		0%	5%	2.55			
							70	Marine Safety Management System	Prior to commencement of marine operations, MSMS established by the SHA.	5%	5%	2.19			
							108	Requirement for notification of vessel defects	Defects will be reported to the SHA	10%	0%	2.15			
							112	PMSC compliance	SHA MSMS applies, which recognises the need for contractors RAMS to be agreed with the SHA in advance of marine works.	5%	5%	1.68			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
13	Grounding	Dredge/construction craft grounding due to marine works	Dredge/construction craft grounds marine works during the dredge/construction phase (this is a declining risk over time as works progress and depth increases). Hull damaged causing ingress of water and vessel sinking. Multiple fatalities, pollution (Tier 2), disruption to marine works until wreck is removed and investigation complete. National adverse publicity	5	4	4	3	3	Dredge/construction craft grounds on marine works during the dredge/construction phase (this is a declining risk over time as works progress and depth increases). Minor damage to the craft, minor injuries. Delay to marine works during repair to craft.	1	1	2	0	1	7.13	1	Human error/fatigue - Ship Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place on-board vessel
																11	Vessel breakdown or malfunction
																14	Vessel has unreported defect
																25	Communication failure - Personnel
																26	Adverse weather conditions
																27	Unexpected shoaling
																28	Restricted visibility
																30	Failure to comply with VTS/LPS/SOPs
																31	Failure to observe standing notices
																37	Failure to comply with safe systems of work
																43	Malicious action by external parties
																48	Risk Assessment, Incomplete/not reviewed
																60	Protest by external parties
																61	Incorrect assessment of tidal flow
																72	Failure to follow passage plan
																80	Human error
																86	Competence
																103	Excessive vessel speed
																104	Inadequate surveying at planning stage

Control ID	Embedded Controls				Residual Risk	Current Risk	Control ID	Additional Controls				Residual Risk	Final Risk	Date	Assessors
	Control	Comment	Likelihood Reduction	Consequence Reduction				Control	Comment	Likelihood Reduction	Consequence Reduction				
12	Draught, Accurate, declared and within max limits	Necessary for determining minimum depth that can be safely navigated	5%	0%	7.09		9	Local Port Services - Harbour control office	Point of contact to control Harbour operations	5%	5%	6.03			
17	Hydrographic surveying program	To monitor depths	10%	0%	7.03		16	LPS broadcast (navigation and safety information)		5%	0%	6.00			
26	Communications equipment	VHF radio all craft and supervisory personnel	5%	0%	7.00		19	Port Facility Emergency Plan		0%	5%	5.77			
31	Availability of latest hydrographic information	Accurate chart update following hydrographic survey	10%	0%	6.94		21	Oil spill contingency plans	The MCA require an OPRC plan to be in place and approved by them prior to the commencement of marine works at the site.	0%	5%	5.54			
41	Notices to mariners	Issued weekly by the Admiralty, provided safety information	5%	0%	6.91		22	Contingency plan exercises	MoB drills at regular intervals	0%	5%	5.31			
69	Training of pollution response personnel	Vessels crews trained in pollution response	0%	5%	6.57		30	Accurate tidal measurements	Tide level observed on-site and made available to vessels	5%	0%	5.28			
95	Standing Orders/SOPs	Provided by the vessels owners/operators	5%	5%	6.31		36	Availability of pollution response equipment	Shore side equipment provided by the SHA	5%	0%	5.26			
97	Visual observation (clear line of sight)		5%	0%	6.28	6.28	39	Direction (Special) - Powers of Harbour/Pier Master	Issued to control traffic in the event of an incident	0%	5%	5.02	2.83	24-Oct-2016 Revised 02-Jun-2017	Anthony Hilliard - MCA Trevor Harris - Trinity House Wyn Parry - Stena Line Ports Ltd David Williams - Cemaes Harbour Committee Kim Argyle - Holyhead Sailing Club Monty Smedley - ABPmer Emma Beagley - Horizon
							41	Notices to mariners	Issued by the SHA	0%	5%	4.79			
							57	Aids to navigation, provision and maintenance of	All marine works are required to be lit	10%	0%	4.73			
							108	Requirement for notification of vessel defects	Defects will be reported to the HA	5%	0%	4.70			
							112	PMSC compliance	SHA MSMS applies, which recognises the need for contractors RAMS to be agreed with the SHA in advance of marine works.	5%	5%	4.43			
							114	Directions (General) - issued by SHA		5%	5%	3.93			
							129	Vessel master simulation training	Ability for vessel Masters to practice on a ship simulator prior to navigating on-site.	15%	15%	2.85			
							133	Tidal flow atlas	Covering each hour for spring and neap, scaled for the Harbour Area, including the combined effect of Cooling Water intake and discharge.	15%	0%	2.83			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
14	Grounding	Dredger/barge on passage to Holyhead North disposal site	Dredger/barge grounds in restricted visibility on the rocks inshore of the Skerries lighthouse. Hull damaged leading to ingress of water and vessel sinking. Multiple fatalities, pollution (Tier 2), disruption to marine works until wreck is removed and investigation complete. National adverse publicity	5	4	4	3	4	Dredger/barge grounds in restricted visibility on the rocks inshore of the Skerries lighthouse. Hull damaged, vessel able to return safely to harbour. Vessel out of service during survey and repairs, minor injuries.	1	1	2	0	1	7.22	1	Human error/fatigue - Ship Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place on-board vessel
																11	Vessel breakdown or malfunction
																26	Adverse weather conditions
																28	Restricted visibility
																36	Failure of Aid to Navigation (out of position/unlit)
																72	Failure to follow passage plan
																86	Competence
																103	Excessive vessel speed
																105	Navigation equipment failure

Embedded Controls							Additional Controls								
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Current Risk	Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Final Risk	Date	Assessors
10	Passage planning	Vessels must complete a detailed plan for every voyage	15%	0%	7.13	4.63							4.63	24-Oct-2016 Revised 02-Jun-2017	Anthony Hilliard - MCA Trevor Harris - Trinity House Wyn Parry - Stena Line Ports Ltd David Williams - Cemaes Harbour Committee Kim Argyle - Holyhead Sailing Club Monty Smedley - ABPmer Emma Beagley - Horizon
57	Aids to navigation, provision and maintenance of	Available in the area to mark dangers to navigation	15%	0%	7.04										
60	International COLREGS 1972 (as amended)		10%	0%	6.98										
95	Standing Orders/SOPs	Provided by the vessels owners/operators	10%	10%	6.34										
125	Standards of Training, Certification and Watchkeeping for Seafarers (STCW)	Maintain training and competence levels for vessel crew	10%	15%	5.58										
142	International Convention for the Safety of Life at Sea (SOLAS) 1974	Details requirements for emergency drills	0%	15%	4.88										
69	Training of pollution response personnel	Crew of vessels are trained for oil spill response	0%	5%	4.63										

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
15	Grounding	Tug and tow grounding due to steering/propulsion failure	Steering/propulsion failure causes tug and tow to drift into the Skerries traffic separation scheme. Collision with commercial vessel occurs in deep water. At least one vessel receives major hull damage, ingress of water and sinks. Multiple fatalities, pollution (Tier 2). Disruption to marine works meaning temporary suspension of operations until investigation complete and wreck removed. National adverse publicity.	5	4	4	3	4	Tug and tow grounds on rocky seabed, hull is not punctured and vessel remains afloat. Minor damage to the vessel, minor injuries. Delay to marine works until repairs complete.	1	1	2	0	1	7.22	1	Human error/fatigue - Ship Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place on-board vessel
																9	Loss of watertight integrity
																11	Vessel breakdown or malfunction
																14	Vessel has unreported defect
																25	Communication failure - Personnel
																26	Adverse weather conditions
																37	Failure to comply with safe systems of work
																48	Risk Assessment, Incomplete/not reviewed
																75	Inadequate maintenance/inspection
																80	Human error
																86	Competence

Embedded Controls							Additional Controls								
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Current Risk	Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Final Risk	Date	Assessors
62	Emergency services equipment - shore side	Mayday or Pan-Pan call to Coastguards	0%	10%	6.74	6.51	9	Local Port Services - Harbour control office	Point of contact to control Harbour operations	0%	5%	6.28	5.35	24-Oct-2016 Revised 02-Jun-2017	Anthony Hilliard - MCA Trevor Harris - Trinity House Wyn Parry - Stena Line Ports Ltd David Williams - Cemaes Harbour Committee Kim Argyle - Holyhead Sailing Club Monty Smedley - ABPmer Emma Beagley - Horizon
118	Vessel maintenance	Maintenance schedule part of the vessel SMS	10%	0%	6.57		21	Oil spill contingency plans	The MCA require an OPRC plan to be in place and approved by them prior to the commencement of marine works at the site.	0%	5%	6.05			
119	Vessel inspection/survey	Port and flag state inspections and surveys by classification society	10%	0%	6.51		22	Contingency plan exercises	MoB drills at regular intervals	0%	5%	5.81			
							36	Availability of pollution response equipment	Shore side equipment provided by the SHA	0%	5%	5.58			
							69	Training of pollution response personnel	Response by the SHA	0%	5%	5.35			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
16	Hazardous substance accidents	Accidental spill	Marine incident, split hose or pipe causes pollution in water. Available equipment not sufficient to contain spill. Tier 2 contractor required. National adverse publicity	5	0	0	3	4	Refuelling machinery on marine plant such as generators, compressors or craneage. Pollution from leading to Tier 1 response. Available pollution response equipment deployed. No effect to other nearby vessels.	1	0	0	2	2	5.91	1	Human error/fatigue - Ship Personnel
																5	Human error/fatigue - Port/Marine Personnel
																7	Inadequate procedures in place on-board vessel
																11	Vessel breakdown or malfunction
																14	Vessel has unreported defect
																24	Communication failure - Equipment
																25	Communication failure - Personnel
																48	Risk Assessment, Incomplete/not reviewed
																59	Inadequate procedures shore side
																62	Illegal discharges into the water
																69	Port Equipment (inc. craft) mechanical breakdown/system malfunction
																75	Inadequate maintenance/inspection
																76	Inadequate training/competence - Others

Embedded Controls							Additional Controls								
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Current Risk	Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Final Risk	Date	Assessors
21	Oil spill contingency plans	Vessels will have oil spill contingency plans that are specific to that vessel	0%	10%	5.54	4.63	9	Local Port Services - Harbour control office	Emergency plan response coordination	0%	5%	4.44	1.46	24-Oct-2016 Revised 02-Jun-2017	Anthony Hilliard - MCA Trevor Harris - Trinity House Wyn Parry - Stena Line Ports Ltd David Williams - Cemaes Harbour Committee Kim Argyle - Holyhead Sailing Club Monty Smedley - ABPmer Emma Beagley - Horizon
22	Contingency plan exercises	Oil spill response drills run by vessels crew	0%	10%	5.18		20	Port waste management plan	Created by the SHA	5%	5%	4.23			
36	Availability of pollution response equipment	Vessels will have pollution response equipment	0%	10%	4.81		21	Oil spill contingency plans	The MCA require an OPRC plan to be in place and approved by them prior to the commencement of marine works at the site.	0%	10%	3.38			
69	Training of pollution response personnel	Crew of vessels are trained for oil spill response	0%	5%	4.63		22	Contingency plan exercises	MoB drills at regular intervals	0%	5%	3.08			
							27	CCTV coverage	Monitoring the HA area	10%	0%	3.04			
							36	Availability of pollution response equipment	Shore side equipment provided by the SHA	0%	5%	2.75			
							69	Training of pollution response personnel	Response by the SHA	0%	5%	2.40			
							70	Marine Safety Management System	Prior to commencement of marine operations, MSMS established by the SHA.	5%	5%	2.08			
							112	PMSC compliance	SHA MSMS applies, which recognises the need for contractors RAMS to be agreed with the SHA in advance of marine works.	5%	5%	1.46			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
17	Machinery related accidents	Heavy lift failure, or failure of lifting gear	Failure during unloading of vessels with load slung. Load released and lands on vessel deck causing major damage to vessel or failure during transfer of heavy cargo from vessel to quay. Multiple fatalities, no pollution (Tier 1), operations cease pending recovery and investigation.	5	4	3	0	3	Failure of lifting equipment causes automatic shutoff. Delay to operations while repairs are made.	1	0	0	0	2	5.94	1	Human error/fatigue - Ship Personnel
																5	Human error/fatigue - Port/Marine Personnel
																7	Inadequate procedures in place on-board vessel
																8	Fire/Explosion
																11	Vessel breakdown or malfunction
																23	Communication failure - Operational/procedural
																31	Failure to observe standing notices
																37	Failure to comply with safe systems of work
																69	Port Equipment (inc. craft) mechanical breakdown/system malfunction
																75	Inadequate maintenance/inspection
																76	Inadequate training/competence - Others
																80	Human error
																86	Competence

Embedded Controls							Additional Controls								
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Current Risk	Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Final Risk	Date	Assessors
26	Communications equipment	VHF radio all craft and supervisory personnel	5%	5%	5.73	4.65	9	Local Port Services - Harbour control office	Coordination of marine response and emergency plan enactment	0%	5%	4.46	3.68	24-Oct-2016 Revised 02-Jun-2017	Anthony Hilliard - MCA Trevor Harris - Trinity House Wyn Parry - Stena Line Ports Ltd David Williams - Cemaes Harbour Committee Kim Argyle - Holyhead Sailing Club Monty Smedley - ABPmer Emma Beagley - Horizon
44	Safe systems of work (H&S)	Provided by contractors after risk assessment	10%	10%	5.31		19	Port Facility Emergency Plan	Detailing the HA responsible to emergency situations	0%	5%	4.27			
62	Emergency services equipment - shore side	Mayday or Pan-Pan call to Coastguards	0%	5%	5.12		21	Oil spill contingency plans	The MCA require an OPRC plan to be in place and approved by them prior to the commencement of marine works at the site.	0%	5%	4.08			
95	Standing Orders/SOPs	Provided by the vessels owners/operators	10%	10%	4.70		22	Contingency plan exercises	MoB drills at regular intervals	0%	5%	3.88			
116	Weather forecasting	Advance warning gained from available met ocean forecasts.	10%	0%	4.65		70	Marine Safety Management System	Prior to commencement of marine operations, MSMS established by the SHA.	5%	0%	3.86			
							112	PMSC compliance	SHA MSMS applies, which recognises the need for contractors RAMS to be agreed with the SHA in advance of marine works.	5%	0%	3.83			
							116	Weather forecasting	Seastate model used throughout the build phase of the MOLF to predict weather conditions and downtime.	15%	0%	3.75			
							122	Shore side facility maintenance programme	Maintenance of craneage and all lifting equipment	15%	0%	3.68			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
18	Other	Malicious actions by third parties	Deliberate boarding of dredge/construction vessel during the marine works. Persons board vessels causing damage, vessel set adrift by malicious actions. Significant delay to construction works. Significant media interest	5	0	2	0	3	Deliberate boarding of dredge/construction vessel during the marine works. Persons boarding vessels are stopped and/or turned away by crew/security or police presence. Minor delay to marine works.	1	0	0	0	2	4.91	23	Communication failure - Operational/procedural
																30	Failure to comply with VTS/LPS/SOPs
																31	Failure to observe standing notices
																32	Failure to observe Byelaws/local regulations
																43	Malicious action by external parties
																59	Inadequate procedures shore side
																60	Protest by external parties
																63	Breach of security at berth/terminal/ship
																77	Port infrastructure failure

Embedded Controls					Residual Risk	Current Risk	Additional Controls					Residual Risk	Final Risk	Date	Assessors
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction			Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction				
62	Emergency services equipment - shore side	Police force consulted on plans to deter/prevent malicious actions	0%	10%	4.62	4.62	19	Port Facility Emergency Plan	Detailing the HA responsible to emergency situations	0%	10%	4.33	3.42	24-Oct-2016 Revised 02-Jun-2017	Anthony Hilliard - MCA Trevor Harris - Trinity House Wyn Parry - Stena Line Ports Ltd David Williams - Cemaes Harbour Committee Kim Argyle - Holyhead Sailing Club Monty Smedley - ABPmer Emma Beagley - Horizon
							22	Contingency plan exercises	MoB drills at regular intervals	0%	5%	4.18			
							27	CCTV coverage	Monitoring the HA area	20%	0%	4.09			
							70	Marine Safety Management System	The MSMS should detail relevant powers and procedures	5%	0%	4.07			
							112	PMSC compliance	SHA MSMS applies, which recognises the need for contractors RAMS to be agreed with the SHA in advance of marine works.	5%	0%	4.04			
							111	ISPS compliance	Requires plans to be implemented to maintain security at a harbour	20%	0%	3.95			
							123	Afloat deterrent	Patrol boat to provide visual security presence and deter entry as required	15%	15%	3.42			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
19	Other	Vessel damage due to weather conditions.	Adverse weather conditions lead to construction vessel grounding/stranding/allision. Weather related effects include waves, high wind and reduced visibility. Vessel hull damaged, takes on water and sinks. Multiple fatalities, pollution (Tier 2), operations cease and adverse publicity.	5	4	4	3	4	Construction operations cease until weather conditions drop below the operating threshold(s). Disruption to operations.	1	0	0	0	2	6.59	26	Adverse weather conditions
																30	Failure to comply with VTS/LPS/SOPs
																48	Risk Assessment, Incomplete/not reviewed
																79	Weather & hydro failure - equipment

Embedded Controls							Additional Controls								
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Current Risk	Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Final Risk	Date	Assessors
116	Weather forecasting	Advance warning gained from available internet resources and met ocean forecasts.	20%	0%	6.48	6.48	70	Marine Safety Management System	Prior to commencement of marine operations, MSMS established by the SHA.	5%	0%	6.45	5.50	24-Oct-2016 Revised 02-Jun-2017	Anthony Hilliard - MCA Trevor Harris - Trinity House Wyn Parry - Stena Line Ports Ltd David Williams - Cemaes Harbour Committee Kim Argyle - Holyhead Sailing Club Monty Smedley - ABPmer Emma Beagley - Horizon
							112	PMSC compliance	SHA MSMS applies, which recognises the need for contractors to risk assess marine operations and agree plans with the SHA in advance of marine works.	5%	0%	6.42			
							116	Weather forecasting	Seastate model used throughout the build phase of the MOLF to predict weather conditions and downtime.	15%	0%	6.33			
							21	Oil spill contingency plans	The MCA require an OPRC plan to be in place and approved by them prior to the commencement of marine works at the site.	0%	5%	6.13			
							22	Contingency plan exercises	MoB drills at regular intervals	0%	5%	5.92			
							36	Availability of pollution response equipment	Shore side equipment provided by the SHA	0%	5%	5.71			
							69	Training of pollution response personnel	Response by the SHA	0%	5%	5.50			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
20	Other	Mooring failure on Temporary moorings	Moorings part causing vessel to drift from berth and allision with marine works. Major injuries to crew or shore staff due to line snap-back and sudden movement. Extensive damage to marine works and craft, pollution (Tier 1), delay to operations until repairs complete.	5	2	4	2	3	Not all moorings part, vessel kept alongside but has impact with jetty. Minor damage to vessel and jetty, delays whilst repairs complete.	1	0	2	0	2	6.66	1	Human error/fatigue - Ship Personnel
																5	Human error/fatigue - Port/Marine Personnel
																11	Vessel breakdown or malfunction
																25	Communication failure - Personnel
																26	Adverse weather conditions
																40	Failure of berth mooring systems
																42	Non-attendance of boatmen
																43	Malicious action by external parties
																59	Inadequate procedures shore side
																60	Protest by external parties
																68	Interaction
																75	Inadequate maintenance/inspection
																76	Inadequate training/competence - Others
																80	Human error
																86	Competence

Embedded Controls							Additional Controls									
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Current Risk	Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Final Risk	Date	Assessors
95	Standing Orders/SOPs	Provided by the vessels owners/operators	10%	0%	6.60	6.60	9	Local Port Services - Harbour control office	Coordination of marine response and emergency plan enactment	5%	0%	6.57	4.99	24-Oct-2016 Revised 02-Jun-2017	Anthony Hilliard - MCA Trevor Harris - Trinity House Wyn Parry - Stena Line Ports Ltd David Williams - Cemaes Harbour Committee Kim Argyle - Holyhead Sailing Club Monty Smedley - ABPmer Emma Beagley - Horizon
							16	Communications - Traffic broadcast	LPS broadcast (navigation and safety information)	10%	0%	6.51			
							18	Safe allocation of berths (depth, available, suitable)	Berths located to minimise ranging due to weather	10%	0%	6.45			
							39	Direction (Special) - Powers of Harbour/Pier Master	Issued to control traffic in the event of an incident	0%	5%	6.24			
							59	Protective fendering	in place on jetties/quays and suitable for vessels being used	0%	5%	6.03			
							70	Marine Safety Management System	Prior to commencement of marine operations, MSMS established by the SHA.	5%	0%	6.00			
							112	PMSC compliance	SHA MSMS applies, which recognises the need for contractors RAMS to be agreed with the SHA in advance of marine works.	5%	0%	5.97			
							124	Mooring studies and plans	Berths designed for the prevailing Met ocean conditions and mooring arrangements suitable for vessel size	20%	20%	5.02			
							140	RAMS	Method Statement identifies practices for establishing temporary moorings.	5%	0%	4.99			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
21	Other	Displacement of vessels	Recreational and fishing vessels that would normally transit inshore, displaced into areas with higher traffic density offshore, or closer to the shore through areas with rocky outcrops and reefs (for example, Harry Furlong Reef). Vessel involved in collision (offshore) or grounding (inshore). Vessel hull damaged, ingress of water and sinks, multiple fatalities, national adverse publicity.	5	4	3	3	2	Recreational and fishing vessels are displaced from the footprint of the MOLF, Breakwater and Outfall during the construction phase. Routes into, and out of the construction area are also affected with laying of pots, fishing and recreational use displaced, leading to loss of sea area use and negative local publicity.	1	0	0	0	2	6.31	1	Human error/fatigue - Ship Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place on-board vessel
																16	Unplanned interaction with recreational/fishing craft
																25	Communication failure - Personnel
																26	Adverse weather conditions
																28	Restricted visibility
																33	High traffic density
																56	COLREGS failure to comply
																61	Incorrect assessment of tidal flow
																72	Failure to follow passage plan
																76	Inadequate training/competence - Others
																80	Human error
																86	Competence
																102	Language problems

Embedded Controls							Additional Controls								
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Current Risk	Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Final Risk	Date	Assessors
10	Passage planning	Vessels must complete a detailed plan for every voyage	10%	0%	6.25	5.66	9	Local Port Services - Harbour control office	Coordination of marine response and emergency plan enactment	5%	0%	5.63	5.57	24-Oct-2016 Revised 02-Jun-2017	Anthony Hilliard - MCA Trevor Harris - Trinity House Wyn Parry - Stena Line Ports Ltd David Williams - Cemaes Harbour Committee Kim Argyle - Holyhead Sailing Club Monty Smedley - ABPmer Emma Beagley - Horizon
41	Notices to mariners	Issued weekly by the Admiralty, provided safety information	10%	0%	6.20		16	LPS broadcast (navigation and safety information)	Provide to passing vessels by VHF on request	5%	0%	5.60			
60	International COLREGS 1972 (as amended)		15%	0%	6.11		28	AIS coverage	All dredge/construction vessels, including barges to carry AIS (A or B).	5%	0%	5.57			
62	Emergency services equipment - shore side	Mayday or Pan-Pan call to Coastguards	0%	5%	5.91										
125	Standards of Training, Certification and Watchkeeping for Seafarers (STCW)	Maintain training and competence levels for vessel crew	10%	5%	5.66										

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
22	Payload related accidents	Incorrect loading or unloading of vessel transporting rock affects vessel stability.	Vessel capsizes and sinks during unloading operations. Loss of vessel, multiple fatalities, pollution (Tier 2). Operations cease until wreck removed and investigation complete.	5	4	3	3	4	Vessel takes on list during unloading. Operations cease until vessel brought upright using ballast or cargo.	1	0	1	0	2	6.81	1	Human error/fatigue - Ship Personnel
																5	Human error/fatigue - Port/Marine Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place on-board vessel
																11	Vessel breakdown or malfunction
																14	Vessel has unreported defect
																22	Failure to comply with Towage guidelines
																24	Communication failure - Equipment
																25	Communication failure - Personnel
																26	Adverse weather conditions
																31	Failure to observe standing notices
																37	Failure to comply with safe systems of work
																42	Non-attendance of boatmen
																48	Risk Assessment, Incomplete/not reviewed
																49	Loss of vessels stability (due to other than loss of watertight integrity)
																55	Incapacitated master (drugs/alcohol)
																59	Inadequate procedures shore side
																76	Inadequate training/competence - Others
																78	Ship/Tug/Launch failure
																80	Human error
																86	Competence
																102	Language problems

Embedded Controls							Additional Controls								
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Current Risk	Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Final Risk	Date	Assessors
44	Safe systems of work (H&S)	Provided by contractors after risk assessment	10%	10%	6.26	4.64	9	Local Port Services - Harbour control office	Emergency response coordination	0%	10%	4.19	0.98	24-Oct-2016 Revised 02-Jun-2017	Anthony Hilliard - MCA Trevor Harris - Trinity House Wyn Parry - Stena Line Ports Ltd David Williams - Cemaes Harbour Committee Kim Argyle - Holyhead Sailing Club Monty Smedley - ABPmer Emma Beagley - Horizon
62	Emergency services equipment - shore side	Mayday or Pan-Pan call to Coastguards	10%	10%	5.77		19	Port Facility Emergency Plan	Detailing the HA responsible to emergency situations	0%	5%	3.60			
95	Standing Orders/SOPs	Provided by the vessels owners/operators	10%	10%	5.28		22	Contingency plan exercises	MoB drills at regular intervals	0%	5%	3.28			
118	Vessel maintenance	Maintenance schedule part of the vessel SMS	10%	5%	5.01		26	Communications equipment	For port marine personnel	5%	5%	2.93			
119	Vessel inspection/survey	Port and flag state inspections and surveys by classification society	10%	0%	4.95		33	Training of port marine/operations personnel	Safety training for personnel including the procedures for safety unloading vessels	5%	10%	2.19			
120	Vessel secured for sea	Heavy items lashed to ensure they do not shift	0%	5%	4.72		70	Marine Safety Management System	Prior to commencement of marine operations, MSMS established by the SHA.	5%	5%	1.68			
121	Loading/unloading plan	Provided by the contractor taking into account vessel stability	15%	0%	4.64		108	Requirement for notification of vessel defects	Defects reported to HA when entering port	5%	0%	1.68			
							112	PMSC compliance	SHA MSMS applies, which recognises the need for contractors RAMS to be agreed with the SHA in advance of marine works.	5%	5%	1.26			
							140	RAMS	Method statement identifies unloading process for rock armour and heavy loads to minimise vessel instability	20%	0%	0.98			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
23	Stranding	Small recreational vessel on breakwater	Small unpowered craft (for example, kayak or sailing boat) strands on marine works during adverse weather conditions and is unable to return to shore. Loss of life, no pollution, national adverse publicity.	5	3	2	0	4	Small unpowered craft (for example, kayak or sailing boat) strands on marine works but is able to make contact with local RNLI/emergency services. Minor injuries/hypothermia, canoe/kayak recovered but sustains major damage, no pollution, adverse publicity.	1	1	1	0	2	6.47	24	Communication failure - Equipment
																26	Adverse weather conditions
																28	Restricted visibility
																36	Failure of Aid to Navigation (out of position/unlit)
																61	Incorrect assessment of tidal flow
																80	Human error

Embedded Controls							Additional Controls								
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Current Risk	Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Final Risk	Date	Assessors
62	Emergency services equipment - shore side	Mayday or Pan-Pan call to Coastguards/RNLI	0%	15%	5.83	5.67	9	Local Port Services - Harbour control office	Coordination of emergency response from the HA	10%	10%	5.20	4.68	24-Oct-2016 Revised 02-Jun-2017	Anthony Hilliard - MCA Trevor Harris - Trinity House Wyn Parry - Stena Line Ports Ltd David Williams - Cemaes Harbour Committee Kim Argyle - Holyhead Sailing Club Monty Smedley - ABPmer Emma Beagley - Horizon
116	Weather forecasting	Advance warning gained from available internet resources and met ocean forecasts.	10%	0%	5.67		27	CCTV coverage	Monitoring	10%	0%	5.15			
							70	Marine Safety Management System	Prior to commencement of marine operations, MSMS established by the SHA.	5%	0%	5.12			
							112	PMSC compliance	SHA MSMS applies, which recognises the need for contractors RAMS to be agreed with the SHA in advance of marine works.	5%	0%	5.10			
							142	Safety boat	On call to be available in the event of emergency	0%	10%	4.68			

D Operation Phase Navigational Risk Assessments

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
1	Accidents to personnel	Man overboard	Person enters the water in the harbour during the operational phase, area hits head on the vessel leading to drowning. No pollution, minor delay to operations during investigation. National adverse publicity.	5	3	0	0	3	Person enters the water in the harbour during the operational phase, Person hits head on the vessel leading to drowning. No pollution, minor delay to operations.	1	1	0	0	1	4.69	1	Human error/fatigue - Ship Personnel
																5	Human error/fatigue - Port/Marine Personnel
																7	Inadequate procedures in place onboard vessel
																23	Communication failure - Operational/procedural
																24	Communication failure - Equipment
																25	Communication failure - Personnel
																26	Adverse weather conditions
																37	Failure to comply with safe systems of work
																59	Inadequate procedures shore side
																80	Human error

Embedded Controls					Residual Risk	Current Risk	Additional Controls					Residual Risk	Final Risk	Date	Assessors
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction			Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction				
26	Communications equipment	VHF radios available onboard vessels	0%	10%	4.33	3.11	9	Local Port Services - Harbour control office	Point of contact for harbour operation will coordinate emergency operations	5%	5%	2.91	0.98	24-Oct-2016 Revised 02-Jun-2017	Kevin Riley - Stena Line Ports Ltd Neil Humphreys - Stena Line Ports Ltd Geoff Price - Amlwch Port Sue James - Holyhead Sailing Club Mike Butterfield - RYA Jane Templeton - Jacobs Adam Fitzpatrick - ABPmer
30	Accurate tidal measurements	Tide level observed on-site and made available to vessels	0%	5%	4.15		19	Port Facility Emergency Plan	To include actions in the event of MoB	0%	5%	2.72			
62	Emergency services equipment - shore side	Mayday or Pan-Pan call to Coastguards	10%	5%	3.64		22	Contingency plan exercises		0%	5%	2.53			
95	Standing Orders/SOPs	Provided by the vessels owners/operators	0%	10%	3.32		27	CCTV coverage	Monitoring the harbour area	0%	10%	2.16			
130	Vessel safety management system (ISM code)	All vessels require procedures as part of its SMS in compliance with the ISM code	10%	5%	3.11		28	AIS coverage	All dredge/construction vessels, including barges to carry AIS (A or B).	0%	5%	1.97			
							44	Safe systems of work (H&S)	Based on risk assessment and industry best practice	10%	5%	1.46			
							70	Marine Safety Management System	Prior to commencement of marine operations, MSMS established by the SHA.	10%	5%	1.22			
							112	PMSC compliance	SHA MSMS applies, which recognises the need for contractors to risk assess marine operations and agree plans with the SHA in advance of marine works.	5%	5%	0.98			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
2	Allision	Vessel with breakwaters	Vessel makes contact with breakwaters on approach. Hull damaged leading to extensive flooding and vessel sinking in the approaches to the breakwaters. Multiple fatalities, pollution (Tier 2), loss of cargo, national adverse publicity. Hazard to navigation until wreck cleared causing financial losses and delay to operations. Potential for debris/cargo to enter water intake.	5	4	4	3	3	Vessel makes light contact at slow speed causing damage to vessel hull. Minor injuries, no pollution, vessel out of service until survey and repairs made.	1	1	3	0	1	7.59	1	Human error/fatigue - Ship Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place onboard vessel
																11	Vessel breakdown or malfunction
																14	Vessel has unreported defect
																16	Unplanned interaction with recreational/fishing craft
																25	Communication failure - Personnel
																26	Adverse weather conditions
																28	Restricted visibility
																31	Failure to observe standing notices
																32	Failure to observe Byelaws/local regulations
																36	Failure of Aid to Navigation (out of position/unlit)
																38	Shore side light backscatter
																55	Incapacitated master (drugs/alcohol)
																59	Inadequate procedures shore side
																61	Incorrect assessment of tidal flow
																72	Failure to follow passage plan
																78	Ship/Tug/Launch failure
																80	Human error
																87	Notice to Mariners failure to observe
																103	Excessive vessel speed

Control ID	Embedded Controls				Residual Risk	Current Risk	Control ID	Additional Controls				Residual Risk	Final Risk	Date	Assessors
	Control	Comment	Likelihood Reduction	Consequence Reduction				Control	Comment	Likelihood Reduction	Consequence Reduction				
10	Passage planning	From berth to berth containing all relevant information on the area and contingency planning	5%	0%	7.56	6.62	7	Pilotage service		30%	5%	6.21	1.60	24-Oct-2016 Revised 02-Jun-2017	Kevin Riley - Stena Line Ports Ltd Neil Humphreys - Stena Line Ports Ltd Geoff Price - Amlwch Port Sue James - Holyhead Sailing Club Mike Butterfield - RYA Jane Templeton - Jacobs Adam Fitzpatrick - ABPmer
26	Communications equipment	VHF radios available on board vessels	5%	5%	7.18		9	Local Port Services - Harbour control office	Point of contact for harbour operation will coordinate emergency operations	5%	5%	5.94			
62	Emergency services equipment - shore side	Mayday or Pan-Pan call to Coastguards	0%	5%	6.94		13	Arrival/departure, advance notice of	Notification sent to LPS	5%	0%	5.91			
97	Visual observation (clear line of sight)		5%	0%	6.91		16	LPS broadcast (navigation and safety information)	Promulgate conditions and movements within the harbour to approaching vessels	5%	0%	5.88			
116	Weather forecasting	Advance warning gained from available internet resources and met ocean forecasts	5%	0%	6.88		19	Port Facility Emergency Plan	Details actions to be taken in the event of emergency	0%	5%	5.65			
125	Standards of Training, Certification and Watchkeeping for Seafarers (STCW)	Maintain training and competence levels for vessel crew	5%	5%	6.62		21	Oil spill contingency plans	Details actions to be taken in the event of oil spill	0%	5%	5.40			
							22	Contingency plan exercises		0%	5%	5.13			
							28	AIS coverage	Monitored by LPS marine personnel	5%	0%	5.10			
							30	Accurate tidal measurements	Tide level observed on-site and made available to vessels	5%	0%	5.08			
							31	Availability of latest hydrographic information	Results of hydrographic survey provided to UKHO for update of navigation charts for the area	5%	0%	5.05			
							32	Towage, available and appropriate	Harbour tugs employed to escort vessel through the breakwaters to the berth	30%	20%	3.77			
							33	Training of port marine/operations personnel	This should include the use of equipment and implementation of the plans	0%	5%	3.47			
							36	Availability of pollution response equipment	Harbour to have equipment to deal with Tier 1 spills	0%	5%	2.76			
							57	Aids to navigation, provision and maintenance of	Provided after consultation with Trinity House Lighthouse Authority	10%	0%	2.74			
							59	Protective fendering	Along breakwaters to stop vessels making contact with the rock armour	0%	10%	1.60			
							70	Marine Safety Management System	Provides guidance and procedures based on risk assessments	5%	0%	1.60			
							108	Requirement for notification of vessel defects	Details of vessel defects sent to LPS	5%	0%	1.60			
							112	PMSC compliance	Ensures all risk is reduced to as low as reasonably practicable (ALARP)	5%	0%	1.60			
							129	Vessel master simulation training	Prior to operations, masters to practice berthing/unberthing using the vessels that will be entering the harbour and representative tidal flow at different states of tide and weather.	20%	0%	1.60			
							133	Tidal flow atlas	Covering each hour for spring and neap, scaled for the Harbour Area, including the combined effect of Cooling Water intake and discharge	15%	0%	1.60			
							156	Large scale navigational charts	The UKHO production of large-scale ENCs and paper charts for vessels using the Wylfa Marine Development Area	5%	0%	1.60			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
3	Allision	Vessel with the MOLF	Contact with the quay leading to damage to vessel and MOLF. Major injuries to crew and marine personnel on MOLF, no pollution, berth unavailable until repairs made.	5	2	3	0	2	Contact made at slow speed causing minor damage to vessel and quay. Minor injuries to vessel crew, operations delayed as inspections carried out.	1	1	2	0	1	5.91	1	Human error/fatigue - Ship Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place onboard vessel
																11	Vessel breakdown or malfunction
																14	Vessel has unreported defect
																25	Communication failure - Personnel
																26	Adverse weather conditions
																28	Restricted visibility
																31	Failure to observe standing notices
																32	Failure to observe Byelaws/local regulations
																38	Shore side light backscatter
																55	Incapacitated master (drugs/alcohol)
																59	Inadequate procedures shore side
																61	Incorrect assessment of tidal flow
																78	Ship/Tug/Launch failure
																80	Human error
																87	Notice to Mariners failure to observe
																103	Excessive vessel speed

Embedded Controls					Residual Risk	Current Risk	Additional Controls					Residual Risk	Final Risk	Date	Assessors
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction			Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction				
10	Passage planning	From berth to berth containing all relevant information on the area and contingency planning	5%	0%	5.88	5.10	7	Pilotage service		30%	0%	4.95	1.61	24-Oct-2016 Revised 02-Jun-2017	Kevin Riley - Stena Line Ports Ltd Neil Humphreys - Stena Line Ports Ltd Geoff Price - Amlwch Port Sue James - Holyhead Sailing Club Mike Butterfield - RYA Jane Templeton - Jacobs Adam Fitzpatrick - ABPmer
26	Communications equipment		5%	5%	5.55		9	Local Port Services - Harbour control office	Point of contact for harbour operation will coordinate emergency operations	5%	0%	4.92			
62	Emergency services equipment - shore side	Mayday or Pan-Pan call to Coastguards	0%	5%	5.36		13	Arrival/departure, advance notice of	Notification sent to LPS	5%	0%	4.90			
97	Visual observation (clear line of sight)		5%	0%	5.34		16	LPS broadcast (navigation and safety information)	Promulgate conditions and movements within the harbour to approaching vessels	10%	0%	4.85			
116	Weather forecasting	Advance warning gained from available internet resources and met ocean forecasts.	5%	0%	5.31		19	Port Facility Emergency Plan	Details actions to be taken in the event of emergency	0%	5%	4.66			
125	Standards of Training, Certification and Watchkeeping for Seafarers (STCW)	Maintain training and competence levels for vessel crew	5%	5%	5.10		21	Oil spill contingency plans	Details actions to be taken in the event of oil spill	0%	5%	4.48			
							22	Contingency plan exercises		0%	5%	4.30			
							28	AIS coverage	Monitored by LPS marine personnel	5%	0%	4.27			
							30	Accurate tidal measurements	Tide level observed on-site and made available to vessels	5%	0%	4.25			
							31	Availability of latest hydrographic information	Results of hydrographic survey provided to UKHO for update of navigation charts for the area	5%	0%	4.22			
							32	Towage, available and appropriate	Harbour tugs employed to escort vessel through the breakwaters to the berth	30%	20%	3.10			
							33	Training of port marine/ operations personnel		0%	5%	2.71			
							36	Availability of pollution response equipment	Harbour to have equipment to deal with Tier 1 spills	0%	5%	2.44			
							57	Aids to navigation, provision and maintenance of	Provided after consultation with Trinity House Lighthouse Authority	10%	0%	2.43			
							59	Protective fendering	Along breakwaters to stop vessels making contact structure	0%	10%	1.61			
							70	Marine Safety Management System	Provides guidance and procedures based on risk assessments	5%	0%	1.61			
							108	Requirement for notification of vessel defects	Details of vessel defects sent to LPS	5%	0%	1.61			
							112	PMSC compliance	Ensures all risk is reduced to as low as reasonably practicable (ALARP)	5%	0%	1.61			
							129	Vessel master simulation training	Prior to operations, masters to practice berthing/unberthing using the vessels that will be entering the harbour and representative tidal flow at different states of tide and weather.	20%	0%	1.61			
							133	Tidal flow atlas	Covering each hour for spring and neap, scaled for the Harbour Area, including the combined effect of Cooling Water intake and discharge	15%	0%	1.61			
							156	Large scale navigational charts	The UKHO production of large-scale ENCs for vessels using the Wylfa Marine Development Area	5%	0%	1.61			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
4	Collision	With moored vessel	Fully loaded Ro-Ro (underway) strikes fully loaded bulk vessel (berthed) with momentum due to unfavourable weather conditions. Ro-Ro hull damaged leading to ingress of water and vessel sinking with multiple fatalities, pollution (Tier 2), adverse publicity, loss of cargo. Operations cease until wreck removed and investigation complete	5	4	4	3	3	Fully loaded Ro-Ro (underway) strikes partially loaded bulk vessel (berthed) at low speed. Collision results in minor damage, no injuries, no pollution. Both vessels remain afloat and fully operational. Slight delays due to vessel damage survey	1	0	1	0	1	6.19	1	Human error/fatigue - Ship Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place onboard vessel
																11	Vessel breakdown or malfunction
																14	Vessel has unreported defect
																25	Communication failure - Personnel
																26	Adverse weather conditions
																28	Restricted visibility
																31	Failure to observe standing notices
																38	Shore side light backscatter
																55	Incapacitated master (drugs/alcohol)
																61	Incorrect assessment of tidal flow
																78	Ship/Tug/Launch failure
																80	Human error
																103	Excessive vessel speed

Embedded Controls					Residual Risk	Current Risk	Additional Controls					Residual Risk	Final Risk	Date	Assessors
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction			Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction				
10	Passage planning		5%	0%	6.16		7	Pilotage service		30%		4.70			
62	Emergency services equipment - shore side	Mayday or Pan-Pan call to Coastguards	0%	5%	5.57		9	Local Port Services - Harbour control office		5%	5%	4.46			
95	Standing Orders/SOPs	Provided by the vessels owners/operators	5%	5%	5.33		15	Hazardous cargoes, advance notice of	Vessels required to notify HA of any hazardous cargoes in advance	0%	5%	4.24			
116	Weather forecasting	Advance warning gained from available met ocean forecasts.	5%	0%	5.31		16	LPS broadcast (navigation and safety information)	Promulgate conditions and movements within the harbour to approaching vessels	5%	0%	4.22			
125	Standards of Training, Certification and Watchkeeping for Seafarers (STCW)	Maintain training and competence levels for vessel crew	5%	5%	5.07		19	Port Facility Emergency Plan		0%	5%	4.00			
126	Dangerous Goods in Harbour Areas Regulations 2016		0%	5%	4.85		21	Oil spill contingency plans		0%	5%	3.78			
							22	Contingency plan exercises		0%	5%	3.55			
							27	CCTV coverage	Covering harbour area	5%	0%	3.53			
							28	AIS coverage		5%	0%	3.50			
						4.85	39	Direction (Special) - Powers of Harbour/Pier Master		5%	5%	3.25	2.26	24-Oct-2016 Revised 02-Jun-2017	Kevin Riley - Stena Line Ports Ltd Neil Humphreys - Stena Line Ports Ltd Geoff Price - Amlwch Port Sue James - Holyhead Sailing Club Mike Butterfield - RYA Jane Templeton - Jacobs Adam Fitzpatrick - ABPmer
							40	Byelaws		5%	0%	3.23			
							69	Training of pollution response personnel		5%	5%	2.94			
							70	Marine Safety Management System	Provides guidance and procedures based on risk assessments	5%	5%	2.65			
							112	PMSC compliance	Ensures all risk is reduced to as low as reasonably practicable (ALARP)	5%	5%	2.36			
							114	Directions (General) - issued by SHA		10%	0%	2.33			
							129	Vessel master simulation training	Prior to operations, masters to practice berthing/unberthing using the vessels that will be entering the harbour and representative tidal flow at different states of tide and weather.	20%	0%	2.30			
							133	Tidal flow atlas	Covering each hour for spring and neap, scaled for the Harbour Area, including the combined effect of Cooling Water intake and discharge	15%	0%	2.27			
							156	Large scale navigational charts	The UKHO production of large-scale ENCs for vessels using the Wylfa Marine Development Area	5%	0%	2.26			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
5	Collision	Recreation/fishing/high speed/harbour vessel with vessel transiting to or from the Wylfa Newydd Development Area.	Collision in adverse weather conditions (high winds or reduced visibility). Fully loaded vessel on transit to the Wylfa Newydd Development Area in collision with recreation/fishing/high speed/harbour vessel at manoeuvring speed. Both vessels are damaged, one sinks with multiple fatalities. Pollution (Tier 2), operations immediately affected, damage to cargo, national adverse publicity.	5	4	4	3	3	Vessels make slow speed contact, damage to smaller vessel, minor injuries, no pollution, local adverse publicity.	1	1	2	0	2	7.25	1	Human error/fatigue - Ship Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place onboard vessel
																23	Communication failure - Operational/procedural
																25	Communication failure - Personnel
																26	Adverse weather conditions
																28	Restricted visibility
																56	COLREGS failure to comply
																80	Human error
																103	Excessive vessel speed

Control ID	Embedded Controls				Residual Risk	Current Risk	Control ID	Additional Controls				Residual Risk	Final Risk	Date	Assessors
	Control	Comment	Likelihood Reduction	Consequence Reduction				Control	Comment	Likelihood Reduction	Consequence Reduction				
3	Communications - Traffic broadcast	Information promulgated by the Holyhead Coastguard Operations Centre (CGOC)	5%	0%	7.22	6.52	7	Pilotage service	Control only applies between pilot boarding point and the Wylfa Marine Development Area	30%	5%	6.12	5.80	24-Oct-2016 Revised 02-Jun-2017	Kevin Riley - Stena Line Ports Ltd Neil Humphreys - Stena Line Ports Ltd Geoff Price - Amlwch Port Sue James - Holyhead Sailing Club Mike Butterfield - RYA Jane Templeton - Jacobs Adam Fitzpatrick - ABPmer
10	Passage planning	From berth to berth containing all relevant information on the area and contingency planning	5%	0%	7.19		9	Local Port Services - Harbour control office	Point of contact for harbour operation will coordinate emergency operations	5%	5%	5.86			
26	Communications equipment	VHF radios available on-board vessels	5%	5%	6.87		16	LPS broadcast (navigation and safety information)	Promulgate conditions and movements within the harbour to approaching vessels on request	5%	0%	5.83			
60	International COLREGS 1972 (as amended)		10%	0%	6.81		28	AIS coverage	Monitored by LPS marine personnel	5%	0%	5.80			
97	Visual observation (clear line of sight)		5%	0%	6.78										
125	Standards of Training, Certification and Watchkeeping for Seafarers (STCW)	Maintain training and competence levels for vessel crew	5%	5%	6.52										

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
6	Collision	Tanker with vessel transiting to or from the Wylfa Newydd Development Area	Tanker is struck side on causing hull and cargo tanks to be damaged. Fire/explosion and tanker cargo outflow into water causing major pollution (Tier 3), major injuries, operations cease as NCP used. Major national adverse publicity.	5	4	4	4	4	Vessels take avoiding action resulting in a glancing blow. Minor damage to both vessels, minor injuries, no pollution, adverse publicity.	1	1	2	0	2	7.44	1	Human error/fatigue - Ship Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place onboard vessel
																23	Communication failure - Operational/procedural
																25	Communication failure - Personnel
																26	Adverse weather conditions
																28	Restricted visibility
																56	COLREGS failure to comply
																80	Human error
																103	Excessive vessel speed

Embedded Controls							Additional Controls								
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Current Risk	Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Final Risk	Date	Assessors
3	Communications - Traffic broadcast	Information promulgated by the Holyhead Coastguard Operations Centre (CGOC)	10%	0%	7.38	4.70	7	Pilotage service	Control only applies between pilot boarding point and the Wylfa Marine Development Area	30%	0%	4.59	4.55	24-Oct-2016 Revised 02-Jun-2017	Kevin Riley - Stena Line Ports Ltd Neil Humphreys - Stena Line Ports Ltd Geoff Price - Amlwch Port Sue James - Holyhead Sailing Club Mike Butterfield - RYA Jane Templeton - Jacobs Adam Fitzpatrick - ABPmer
10	Passage planning	From berth to berth containing all relevant information on the area and contingency planning	15%	0%	7.29		9	Local Port Services - Harbour control office	Point of contact for harbour operation will coordinate emergency operations	5%	0%	4.58			
26	Communications equipment	VHF radios available onboard vessels	10%	10%	6.69		16	LPS broadcast (navigation and safety information)	Promulgate conditions and movements within the harbour to approaching vessels on request	5%	0%	4.57			
60	International COLREGS 1972 (as amended)		30%	0%	6.51		28	AIS coverage	Monitored by LPS marine personnel	5%	0%	4.55			
62	Emergency services equipment - shore side	Holyhead CGOC response following an incident in the area	0%	15%	5.80										
95	Standing Orders/SOPs	Vessel's procedures following an incident	0%	15%	5.09										
97	Visual observation (clear line of sight)		15%	0%	5.00										
125	Standards of Training, Certification and Watchkeeping for Seafarers (STCW)	Maintain training and competence levels for vessel crew	10%	5%	4.70										

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
7	Collision	Cargo vessel with vessel transiting to or from the Wylfa Newydd Development Area	Vessels make contact leading to hull being damaged, ingress of water and loss of cargo. Multiple fatalities, pollution (Tier 2), national adverse publicity. Cargo in navigational channel represents hazard to navigation delays to operations until cleared. Vessel out of service until repairs complete.	5	4	4	3	3	Vessels take avoiding action resulting in a glancing blow. Minor damage to both vessels, no injuries, no pollution, adverse publicity. Vessels out of service during survey and repair.	1	0	2	0	2	6.94	1	Human error/fatigue - Ship Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place onboard vessel
																23	Communication failure - Operational/procedural
																25	Communication failure - Personnel
																26	Adverse weather conditions
																28	Restricted visibility
																56	COLREGS failure to comply
																80	Human error
																103	Excessive vessel speed

Embedded Controls					Residual Risk	Current Risk	Additional Controls					Residual Risk	Final Risk	Date	Assessors
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction			Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction				
3	Communications - Traffic broadcast	Information promulgated by the Holyhead Coastguard Operations Centre (CGOC)	10%	0%	6.88	4.44	7	Pilotage service	Control only applies between pilot boarding point and the Wylfa Marine Development Area	30%	5%	4.10	3.48	24-Oct-2016 Revised 02-Jun-2017	Kevin Riley - Stena Line Ports Ltd Neil Humphreys - Stena Line Ports Ltd Geoff Price - Amlwch Port Sue James - Holyhead Sailing Club Mike Butterfield - RYA Jane Templeton - Jacobs Adam Fitzpatrick - ABPmer
10	Passage planning	From berth to berth containing all relevant information on the area and contingency planning	15%	0%	6.79		9	Local Port Services - Harbour control office	Point of contact for harbour operation will coordinate emergency operations	5%	5%	3.50			
26	Communications equipment	VHF radios available onboard vessels	10%	10%	6.30		16	LPS broadcast (navigation and safety information)	Promulgate conditions and movements within the harbour to approaching vessels	5%	0%	3.49			
60	International COLREGS 1972 (as amended)		30%	0%	6.12		28	AIS coverage	Monitored by LPS marine personnel	5%	0%	3.48			
62	Emergency services equipment - shore side	Holyhead CGOC response following an incident in the area	0%	15%	5.47										
95	Standing Orders/SOPs	Vessel's procedures following an incident	0%	15%	4.81										
97	Visual observation (clear line of sight)		15%	0%	4.73										
125	Standards of Training, Certification and Watchkeeping for Seafarers (STCW)	Maintain training and competence levels for vessel crew	10%	5%	4.44										

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
8	Fire/explosion	Vessel alongside the MOLF	Fire on-board vessel leads to explosion. Multipole fatalities, major damage to berth, pollution (Tier 2), debris enters power station water intake causing damage. Vessel out of service until repairs complete.	50	4	4	3	3	Vessels take avoiding action resulting in a glancing blow. Minor damage to both vessels, no injuries, no pollution, adverse publicity. Vessels out of service during survey and repair.	10	1	1	0	0	4.27	1	Human error/fatigue - Ship Personnel
																7	Inadequate procedures in place onboard vessel
																8	Fire/Explosion
																11	Vessel breakdown or malfunction
																14	Vessel has unreported defect
																37	Failure to comply with safe systems of work
																48	Risk Assessment, Incomplete/not reviewed
																75	Inadequate maintenance/inspection
																80	Human error
																86	Competence
																102	Language problems

Embedded Controls							Additional Controls								
Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Current Risk	Control ID	Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Final Risk	Date	Assessors
62	Emergency services equipment - shore side	Mayday or Pan-Pan call to Coastguards	0%	5%	4.11	3.53	9	Local Port Services - Harbour control office	Coordinate emergency response	0%	5%	3.34	2.04	24-Oct-2016 Revised 02-Jun-2017	Kevin Riley - Stena Line Ports Ltd Neil Humphreys - Stena Line Ports Ltd Geoff Price - Amlwch Port Sue James - Holyhead Sailing Club Mike Butterfield - RYA Jane Templeton - Jacobs Adam Fitzpatrick - ABPmer
95	Standing Orders/SOPs		5%	5%	3.54		15	Hazardous cargoes, advance notice of	Vessels required to notify HA of any hazardous cargoes in advance	5%	5%	3.13			
126	Dangerous Goods in Harbour Areas Regulations 2016		5%	0%	3.53		19	Port Facility Emergency Plan	To include actions in the event of MoB	0%	5%	2.94			
							21	Oil spill contingency plans	Details actions to be taken in the event of oil spill	0%	5%	2.83			
							22	Contingency plan exercises		0%	5%	2.57			
							33	Training of port marine/operations personnel	This should include the use of equipment and implementation of the plans	0%	5%	2.35			
							44	Safe systems of work (H&S)	Based on risk assessment and industry best practice	10%	5%	2.09			
							70	Marine Safety Management System	Provides guidance and procedures based on risk assessments	5%	0%	2.07			
							112	PMSC compliance	Ensures all risk is reduced to as low as reasonably practicable (ALARP)	5%	0%	2.04			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
9	Flooding	Vessel within the harbour	Vessel has ingress of water due to defect and strands within the harbour blocking the navigation channel. Multiple fatalities, pollution (Tier 2), loss of cargo, adverse publicity. Operations cease until wreck can be refloated or removed and investigation complete.	10	4	4	3	4	Ingress of water is contained and vessel berthed safely, minor injuries. Vessel out of service as survey/repairs completed, delays to operations.	5	1	2	0	2	6.41	6	Inadequate bridge resource management
																7	Inadequate procedures in place onboard vessel
																8	Fire/Explosion
																9	Loss of watertight integrity
																11	Vessel breakdown or malfunction
																25	Communication failure - Personnel
																26	Adverse weather conditions
																43	Malicious action by external parties
																55	Incapacitated master (drugs/alcohol)
																57	Vessel Ramps or Hatches not secure
																75	Inadequate maintenance/inspection
																76	Inadequate training/competence - Others
																78	Ship/Tug/Launch failure
																80	Human error
																86	Competence

Control ID	Embedded Controls				Residual Risk	Current Risk	Control ID	Additional Controls				Residual Risk	Final Risk	Date	Assessors
	Control	Comment	Likelihood Reduction	Consequence Reduction				Control	Comment	Likelihood Reduction	Consequence Reduction				
118	Vessel maintenance	Maintenance schedule part of the vessel SMS	20%	20%	5.28	4.98	9	Local Port Services - Harbour control office	Coordinate emergency response	0%	5%	4.75	3.21	24-Oct-2016 Revised 02-Jun-2017	Kevin Riley - Stena Line Ports Ltd Neil Humphreys - Stena Line Ports Ltd Geoff Price - Amlwch Port Sue James - Holyhead Sailing Club Mike Butterfield - RYA Jane Templeton - Jacobs Adam Fitzpatrick - ABPmer
119	Vessel inspection/survey	Port and flag state inspections and surveys by classification society	10%	0%	5.21		21	Oil spill contingency plans		0%	5%	4.52			
120	Vessel secured for sea	Heavy items lashed to ensure they do not shift	0%	5%	4.98		22	Contingency plan exercises		0%	5%	4.29			
							33	Training of port marine/operations personnel	This should include the use of equipment and implementation of the plans	0%	5%	4.05			
							36	Availability of pollution response equipment		0%	5%	3.82			
							70	Marine Safety Management System	Provides guidance and procedures based on risk assessments	5%	5%	3.22			
							112	PMSC compliance	Ensures all risk is reduced to as low as reasonably practicable (ALARP)	5%	0%	3.21			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
10	Grounding	Vessel within the harbour	Vessel grounds whilst manoeuvring to berth in adverse weather conditions. Hull damaged causing ingress of water. Vessel sinks causing obstruction in harbour. Multiple fatalities, pollution (Tier 2), loss of cargo, operations cease until vessel refloated/salvaged, and investigation complete national adverse publicity.	5	4	4	3	4	Vessel makes light contact with seabed, damaged holed but flooding contained and vessel berthed safely. Minor injuries, pollution (Tier 1), adverse publicity. Vessel out of service until repairs complete.	1	1	2	2	2	7.78	1	Human error/fatigue - Ship Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place onboard vessel
																8	Fire/Explosion
																9	Loss of watertight integrity
																10	Incorrect draught advised/promulgated
																11	Vessel breakdown or malfunction
																25	Communication failure - Personnel
																26	Adverse weather conditions
																28	Restricted visibility
																30	Failure to comply with VTS/LPS/SOPs
																38	Shore side light backscatter
																40	Failure of berth mooring systems
																43	Malicious action by external parties
																55	Incapacitated master (drugs/alcohol)
																61	Incorrect assessment of tidal flow
																72	Failure to follow passage plan
																76	Inadequate training/competence - Others
																78	Ship/Tug/Launch failure
																80	Human error
																84	Tugs - Inadequate/unavailable
																86	Competence
																102	Language problems
																103	Excessive vessel speed

Control ID	Embedded Controls: Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Current Risk	Control ID	Additional Controls: Control	Comment	Likelihood Reduction	Consequence Reduction	Residual Risk	Final Risk	Date	Assessors
10	Passage planning	From berth to berth containing all relevant information on the area and contingency planning	10%	0%	7.72	7.63	7	Pilotage service		30%	5%	7.14	3.83	24-Oct-2016 Revised 02-Jun-2017	Kevin Riley - Stena Line Ports Ltd Neil Humphreys - Stena Line Ports Ltd Geoff Price - Amlwch Port Sue James - Holyhead Sailing Club Mike Butterfield - RYA Jane Templeton - Jacobs Adam Fitzpatrick - ABPmer
12	Draught, Accurate, declared and within max limits	Vessels draught calculated before entry to harbour	5%	0%	7.69		9	Local Port Services - Harbour control office		5%	5%	6.86			
13	Arrival/departure, advance notice of	Tide level observed on-site and made available to vessels	5%	0%	7.66		11	Dredging programme	Informed by the results of hydrographic survey	10%	5%	6.56			
95	Standing Orders/SOPs	Provided by the vessels owners/operators	5%	0%	7.63		16	LPS broadcast (navigation and safety information)	Promulgate conditions and movements within the harbour to approaching vessels	5%	0%	6.53			
							17	Hydrographic surveying program	Regular scheduled surveys in line with PMSC requirements	10%	0%	6.46			
							18	Safe allocation of berths (depth, available, suitable)		10%	0%	6.40			
							19	Port Facility Emergency Plan	To include actions in the event of MoB	0%	5%	6.16			
							21	Oil spill contingency plans	Details actions to be taken in the event of oil spill	0%	5%	5.91			
							22	Contingency plan exercises		0%	5%	5.67			
							30	Accurate tidal measurements	Tide gauges measure levels within the Harbour	10%	0%	5.62			
							31	Availability of latest hydrographic information	Results of hydrographic survey provided to UKHO for update of navigation charts for the area	10%	0%	5.60			
							33	Training of port marine/operations personnel	This should include the use of equipment and implementation of the plans	0%	5%	5.35			
							36	Availability of pollution response equipment	Harbour and contractors to have equipment available	0%	5%	5.10			
							39	Direction (Special) - Powers of Harbour/Pier Master	Provided after consultation with Trinity House Lighthouse Authority	10%	5%	4.82			
							57	Aids to navigation, provision and maintenance of	Buoys and light to identify navigable water	10%	0%	4.79			
							70	Marine Safety Management System	Provides guidance and procedures based on risk assessments	5%	5%	4.25			
							108	Requirement for notification of vessel defects	Details of vessel defects sent to LPS	5%	5%	3.86			
							112	PMSC compliance	Ensures all risk is reduced to as low as reasonably practicable (ALARP)	5%	0%	3.85			
							114	Directions (General) - issued by SHA	Allows SHA to regulate vessel speed	10%	0%	3.83			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
11	Hazardous substance accidents	Accidental spill within the harbour	Pollutant/oil spill (Tier 1) from vessel/dock. Pollution is drawn into intake causing damage to drum screens. No injuries.	5	0	0	2	2	Small pollutant/oil spill from vessel/dock reported to marine personnel. Spill contained and removed.	1	0	0	1	0	3.81	1	Human error/fatigue - Ship Personnel
																5	Human error/fatigue - Port/Marine Personnel
																7	Inadequate procedures in place onboard vessel
																11	Vessel breakdown or malfunction
																23	Communication failure - Operational/procedural
																25	Communication failure - Personnel
																31	Failure to observe standing notices
																37	Failure to comply with safe systems of work
																43	Malicious action by external parties
																59	Inadequate procedures shore side
																62	Illegal discharges into the water
																69	Port Equipment (inc. craft) mechanical breakdown/system malfunction
																75	Inadequate maintenance/inspection
																76	Inadequate training/competence - Others
																80	Human error
																86	Competence

Control ID	Embedded Controls				Residual Risk	Current Risk	Control ID	Additional Controls				Residual Risk	Final Risk	Date	Assessors
	Control	Comment	Likelihood Reduction	Consequence Reduction				Control	Comment	Likelihood Reduction	Consequence Reduction				
							9	Local Port Services - Harbour control office	Coordinate emergency response	5%	5%	3.34		24-Oct-2016 Revised 02-Jun-2017	Kevin Riley - Stena Line Ports Ltd Neil Humphreys - Stena Line Ports Ltd Geoff Price - Amlwch Port Sue James - Holyhead Sailing Club Mike Butterfield - RYA Jane Templeton - Jacobs Adam Fitzpatrick - ABPmer
							15	Hazardous cargoes, advance notice of	Vessels required to notify HA of any hazardous cargoes in advance	5%	5%	3.19			
							20	Port waste management plan	Provide guidance to vessels on disposal of waste, produced by the SHA	5%	0%	3.17			
							21	Oil spill contingency plans	Details actions to be taken in the event of oil spill	0%	5%	3.03			
							22	Contingency plan exercises		0%	5%	2.89			
						3.81	27	CCTV coverage	Used by LPS for monitoring and enforcement	5%	0%	2.88	2.56		
							33	Training of port marine/operations personnel	This should include the use of equipment and implementation of the plans	0%	5%	2.74			
							36	Availability of pollution response equipment	Harbour and contractors to have equipment available	0%	5%	2.60			
							70	Marine Safety Management System	Provides guidance and procedures based on risk assessments	5%	0%	2.58			
							112	PMSC compliance	Ensures all risk is reduced to as low as reasonably practicable (ALARP)	5%	0%	2.56			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
12	Machinery related accidents	Steering/propulsion failure entering or leaving the harbour	Vessel inside harbour loses steerage/propulsion leading to allision/grounding at manoeuvring speed. Hull damaged leading to ingress of water and sinking of vessel. Harbour blocked by vessel, multiple fatalities, pollution (Tier 2), adverse publicity, debris enters intake. Operations cease until wreck removed and investigation complete.	5	4	4	3	3	Vessel loses steerage/propulsion. Emergency generator activates. Vessel berths safely and undergoes maintenance. No injuries, no pollution.	1	0	1	0	0	5.88	1	Human error/fatigue - Ship Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place onboard vessel
																11	Vessel breakdown or malfunction
																14	Vessel has unreported defect
																69	Port Equipment (inc. craft) mechanical breakdown/system malfunction
																75	Inadequate maintenance/inspection
																76	Inadequate training/competence - Others

Control ID	Embedded Controls				Residual Risk	Current Risk	Control ID	Additional Controls				Residual Risk	Final Risk	Date	Assessors
	Control	Comment	Likelihood Reduction	Consequence Reduction				Control	Comment	Likelihood Reduction	Consequence Reduction				
22	Contingency plan exercises	Vessel drills for loss of power/propulsion	0%	10%	5.44	5.44	7	Pilotage service		10%	0%	5.11	3.10	24-Oct-2016 Revised 02-Jun-2017	Kevin Riley - Stena Line Ports Ltd Neil Humphreys - Stena Line Ports Ltd Geoff Price - Amlwch Port Sue James - Holyhead Sailing Club Mike Butterfield - RYA Jane Templeton - Jacobs Adam Fitzpatrick - ABPmer
							9	Local Port Services - Harbour control office	Coordinate emergency response	0%	5%	4.90			
							19	Port Facility Emergency Plan	To include actions in the event of MoB	0%	5%	4.70			
							21	Oil spill contingency plans	Details actions to be taken in the event of oil spill	0%	5%	4.50			
							22	Contingency plan exercises	Details actions to be taken in the event of oil spill	0%	5%	4.29			
							33	Training of port marine/operations personnel	This should include the use of equipment and implementation of the plans	0%	5%	4.09			
							39	Direction (Special) - Powers of Harbour/Pier Master	Harbour and contractors to have equipment available	0%	10%	3.66			
							70	Marine Safety Management System	Provides guidance and procedures based on risk assessments	5%	5%	3.43			
							108	Requirement for notification of vessel defects	Details of vessel defects sent to LPS	10%	0%	3.38			
							112	PMSC compliance	Ensures all risk is reduced to as low as reasonably practicable (ALARP)	5%	5%	3.10			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
13	Machinery related accidents	Lifting equipment failure alongside the MOLF	Failure during unloading of vessels with load slung. Load released and lands on vessel deck causing major damage to vessel or failure during transfer of heavy cargo from vessel to quay. Multiple fatalities, no pollution (Tier 1), operations cease pending recovery and investigation.	5	4	4	0	3	Failure of lifting equipment causes automatic shutoff. Delay to operations while repairs are made.	1	0	0	0	1	5.41	1	Human error/fatigue - Ship Personnel
																5	Human error/fatigue - Port/Marine Personnel
																7	Inadequate procedures in place onboard vessel
																11	Vessel breakdown or malfunction
																14	Vessel has unreported defect
																23	Communication failure - Operational/procedural
																37	Failure to comply with safe systems of work
																69	Port Equipment (inc. craft) mechanical breakdown/system malfunction
																75	Inadequate maintenance/inspection
																76	Inadequate training/competence - Others
																80	Human error
																86	Competence

Control ID	Embedded Controls				Residual Risk	Current Risk	Control ID	Additional Controls				Residual Risk	Final Risk	Date	Assessors
	Control	Comment	Likelihood Reduction	Consequence Reduction				Control	Comment	Likelihood Reduction	Consequence Reduction				
26	Communications equipment	VHF radios available on-board vessels	5%	5%	4.88	4.44	9	Local Port Services - Harbour control office	Coordinate emergency response	0%	5%	4.25	3.33	24-Oct-2016 Revised 02-Jun-2017	Kevin Riley - Stena Line Ports Ltd Neil Humphreys - Stena Line Ports Ltd Geoff Price - Amlwch Port Sue James - Holyhead Sailing Club Mike Butterfield - RYA Jane Templeton - Jacobs Adam Fitzpatrick - ABPmer
62	Emergency services equipment - shore side	Fire/ambulance service available onshore	0%	5%	4.69		19	Port Facility Emergency Plan	To include actions in the event of MoB	0%	10%	3.87			
95	Standing Orders/SOPs	Provided by the vessels owners/operators	5%	5%	4.48		44	Safe systems of work (H&S)	Used by port marine personnel based on risk assessment and industry best practice	15%	10%	3.42			
116	Weather forecasting	Advance warning gained from available met ocean forecasts.	10%	0%	4.44		70	Marine Safety Management System	Provides guidance and procedures based on risk assessments	5%	0%	3.40			
							112	PMSC compliance	Ensures all risk is reduced to as low as reasonably practicable (ALARP)	5%	0%	3.38			
							122	Shore side facility maintenance programme	All craneage and lifting equipment to undertake regular maintenance	10%	0%	3.33			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
14	Other	Towage operations within the harbour	Towed cargo/barge caught by strong currents and/or wind. Tug unable to control barge and is girded leading to capsize and sinking. Multiple fatalities, pollution (Tier 2), loss of tug and cargo/barge, national adverse publicity. Operations cease until wreck removed and investigation complete.	5	4	4	3	3	Towed cargo/barge caught by strong currents and/or wind. Tug forced to stem the tide/wind or return to berth and await weather window. Delay to operations.	1	0	0	0	1	5.88	1	Human error/fatigue - Ship Personnel
																5	Human error/fatigue - Port/Marine Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place onboard vessel
																20	Tug failure towing equipment
																22	Failure to comply with Towage guidelines
																24	Communication failure - Equipment
																26	Adverse weather conditions
																37	Failure to comply with safe systems of work
																48	Risk Assessment, Incomplete/not reviewed
																61	Incorrect assessment of tidal flow
																76	Inadequate training/competence - Others
																78	Ship/Tug/Launch failure
																80	Human error
																84	Tugs - Inadequate/unavailable
																86	Competence
																103	Excessive vessel speed

Control ID	Embedded Controls				Residual Risk	Current Risk	Control ID	Additional Controls				Residual Risk	Final Risk	Date	Assessors
	Control	Comment	Likelihood Reduction	Consequence Reduction				Control	Comment	Likelihood Reduction	Consequence Reduction				
10	Passage planning	From berth to berth containing all relevant information on the area and contingency planning	5%	0%	5.85		7	Pilotage service	Pilot required it tug/tow exceed set criteria	5%	5%	4.73			
26	Communications equipment		5%	5%	5.31		9	Local Port Services - Harbour control office		5%	5%	4.50			
81	Tug/Workboat certification		5%	0%	5.28		13	Arrival/departure, advance notice of		5%	0%	4.48			
116	Weather forecasting	Advance warning gained from available internet resources and met ocean forecasts.	5%	0%	5.26		16	LPS broadcast (navigation and safety information)	Promulgate conditions and movements within the harbour to approaching vessels	5%	0%	4.45			Kevin Riley - Stena Line Ports Ltd Neil Humphreys - Stena Line Ports Ltd Geoff Price - Amlwch Port Sue James - Holyhead Sailing Club Mike Butterfield - RYA Jane Templeton - Jacobs Adam Fitzpatrick - ABPmer
125	Standards of Training, Certification and Watchkeeping for Seafarers (STCW)	Maintain training and competence levels for vessel crew	5%	5%	5.03		30	Accurate tidal measurements	Tide level observed on-site and made available to vessels	5%	0%	4.43			
134	Designated anchorages	Carried out by classification society and sets maximum limits for wind and wave height	15%	0%	4.96	4.96	31	Availability of latest hydrographic information	Results of hydrographic survey provided to UKHO for update of navigation charts for the area	0%	5%	4.22	3.87	24-Oct-2016 Revised 02-Jun-2017	
							40	Byelaws		5%	0%	4.20			
							44	Safe systems of work (H&S)	Based on risk assessment and industry best practice	5%	5%	3.97			
							57	Aids to navigation, Provision & maintenance of	Provided after consultation with Trinity House Lighthouse Authority	5%	0%	3.94			
							70	Marine Safety Management System	Provides guidance and procedures based on risk assessments	5%	0%	3.92			
							112	PMSC compliance	Ensures all risk is reduced to as low as reasonably practicable (ALARP)	5%	0%	3.89			
							114	Directions (General) - issued by SHA		5%	0%	3.87			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
15	Other	Malicious actions by third party	Deliberate boarding of vessel. Protestors board vessels causing damage, vessel set adrift by malicious actions.	5	0	2	0	3	Deliberate boarding of vessel. Protestors attempting board vessels are stopped by security presence. No effects to operations.	1	0	0	0	1	4.28	43	Malicious action by external parties
																60	Protest by external parties
																63	Breach of security at berth/terminal/ship

Control ID	Embedded Controls				Residual Risk	Current Risk	Control ID	Additional Controls				Residual Risk	Final Risk	Date	Assessors
	Control	Comment	Likelihood Reduction	Consequence Reduction				Control	Comment	Likelihood Reduction	Consequence Reduction				
62	Emergency services equipment - shore side	Mayday or Pan-Pan call to Coastguards	0%	10%	3.96	3.50	9	Local Port Services - Harbour control office	Coordinate emergency response	0%	5%	3.35	1.33	24-Oct-2016 Revised 02-Jun-2017	Kevin Riley - Stena Line Ports Ltd Neil Humphreys - Stena Line Ports Ltd Geoff Price - Amlwch Port Sue James - Holyhead Sailing Club Mike Butterfield - RYA Jane Templeton - Jacobs Adam Fitzpatrick - ABPmer
130	Vessel safety management system (ISM code)		10%	5%	3.50		19	Port Facility Emergency Plan	To include actions in the event of MoB	0%	10%	3.06			
							27	CCTV coverage	Monitoring harbour area	20%	0%	2.98			
							70	Marine Safety Management System	Provides guidance and procedures based on risk assessments	5%	0%	2.97			
							111	ISPS compliance	Plans and procedures for safety of port facilities	15%	15%	2.42			
							112	PMSC compliance	Ensures all risk is reduced to as low as reasonably practicable (ALARP)	5%	0%	2.40			
							113	Port Security Plan		10%	10%	2.00			
							114	Directions (General) - issued by SHA		5%	0%	1.98			
							123	Afloat deterrent	Safety/guard boat	15%	15%	1.33			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
16	Other	Displacement of vessels	Recreational and fishing vessels that would normally transit inshore, displaced into areas with higher traffic density offshore, or closer to the shore through areas with rocky outcrops and reefs (for example, Harry Furlong Reef). Collision (offshore) or grounding (inshore) due to vessel taking action to avoid vessels transiting to/from the Wylfa Marine Development Area. Vessel has major damage and sinks, loss of life, pollution (Tier 2), national adverse publicity.	5	4	4	3	4	Recreational and fishing vessels are displaced from the footprint of the MOLF, Breakwater and Outfall. Routes into, and out of the harbour area are also affected with laying of pots, fishing and recreational use displaced, leading to loss of sea area use and negative local publicity.	1	0	0	0	2	6.59	1	Human error/fatigue - Ship Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place onboard vessel
																16	Unplanned interaction with recreational/fishing craft
																25	Communication failure - Personnel
																26	Adverse weather conditions
																28	Restricted visibility
																33	High traffic density
																56	COLREGS failure to comply
																61	Incorrect assessment of tidal flow
																72	Failure to follow passage plan
																76	Inadequate training/competence - Others
																80	Human error
																86	Competence
																102	Language problems

Control ID	Embedded Controls				Residual Risk	Current Risk	Control ID	Additional Controls				Residual Risk	Final Risk	Date	Assessors
	Control	Comment	Likelihood Reduction	Consequence Reduction				Control	Comment	Likelihood Reduction	Consequence Reduction				
10	Passage planning	From berth to berth containing all relevant information on the area and contingency planning	10%	0%	6.54	5.92	9	Local Port Services - Harbour control office	Coordinate emergency response	5%	0%	5.86	5.80	24-Oct-2016 Revised 02-Jun-2017	Kevin Riley - Stena Line Ports Ltd Neil Humphreys - Stena Line Ports Ltd Geoff Price - Amlwch Port Sue James - Holyhead Sailing Club Mike Butterfield - RYA Jane Templeton - Jacobs Adam Fitzpatrick - ABPmer
41	Notices to mariners	Issued weekly by the Admiralty	10%	0%	6.48		16	LPS broadcast (navigation and safety information)	Promulgate conditions and movements within the harbour to approaching vessels	10%	0%	5.83			
60	International COLREGS 1972 (as amended)		15%	0%	6.39		28	AIS coverage	All dredge/construction vessels, including barges to carry AIS (A or B)	5%	0%	5.80			
62	Emergency services equipment - shore side	Mayday or Pan-Pan call to Coastguards	0%	5%	6.18										
125	Standards of Training, Certification and Watchkeeping for Seafarers (STCW)	Maintain training and competence levels for vessel crew	10%	5%	5.92										

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
17	Other	Berth unavailable	Tug and tow arrives at the MOLF with no berth available for use. Tug inside breakwaters unable to maintain position leading to grounding or collision with moored vessel. Multiple fatalities, cargo enters water causing hazard to navigation, pollution (Tier 1), major delays to operations.	5	4	3	3	3	Tug and tow notified that a berth is not available before entering breakwaters. Tug holds position in sheltered waters to wait for a berth to be vacated. Delays to operations.	1	0	0	0	2	6.41	1	Human error/fatigue - Ship Personnel
																5	Human error/fatigue - Port/Marine Personnel
																24	Communication failure - Equipment
																25	Communication failure - Personnel
																30	Failure to comply with VTS/LPS/SOPs
																33	High traffic density
																42	Non-attendance of boatmen
																80	Human error
																86	Competence
																102	Language problems

Control ID	Embedded Controls				Residual Risk	Current Risk	Control ID	Further Applicable Controls				Residual Risk	Final Risk	Date	Assessors
	Control	Comment	Likelihood Reduction	Consequence Reduction				Control	Comment	Likelihood Reduction	Consequence Reduction				
10	Passage planning	Vessels must complete a detailed plan for every voyage	10%	0%	6.35	6.26	7	Pilotage service	Pilot required it tug/tow exceed set criteria	50%	10%	5.58	4.12	12-Dec-2017	Jane Templeton - Jacobs Adam Fitzpatrick - ABPmer
28	AIS coverage	Approaching vessel able to see location of vessels at the MOLF	15%	0%	6.26		9	Local Port Services - Harbour control office		20%	5%	5.26			
							16	LPS broadcast (navigation and safety information)	Promulgate conditions and movements within the harbour to approaching vessels	30%	0%	5.17			
							19	Port Facility Emergency Plan		0%	5%	4.97			
							21	Oil spill contingency plans	Details actions to be taken in the event of oil spill	0%	5%	4.77			
							22	Contingency plan exercises		0%	5%	4.58			
							33	Training of port marine/operations personnel		5%	5%	4.36			
							36	Availability of pollution response equipment	Harbour and contractors to have equipment available	0%	5%	4.15			
							70	Marine Safety Management System	Provides guidance and procedures based on risk assessments	5%	0%	4.14			
							112	PMSC compliance	Ensures all risk is reduced to as low as reasonably practicable (ALARP)	5%	0%	4.12			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
17	Payload related accidents	Vessel unloaded incorrectly alongside the MOLF	Vessel stability compromised, large sheer forces and/or hogging/sagging cause loss of hull integrity. Ingress of water leads to vessel sinking alongside. Multiple fatalities, pollution (Tier 2), adverse publicity. Operations cease until wreck removed and investigation complete	5	4	4	3	4	Vessel takes on list. Operation stopped and list corrected with ballast or movement of cargo. Delay to operations, no injuries or pollution.	1	0	0	0	1	5.97	1	Human error/fatigue - Ship Personnel
																5	Human error/fatigue - Port/Marine Personnel
																7	Inadequate procedures in place onboard vessel
																8	Fire/Explosion
																9	Loss of watertight integrity
																11	Vessel breakdown or malfunction
																14	Vessel has unreported defect
																23	Communication failure - Operational/procedural
																25	Communication failure - Personnel
																26	Adverse weather conditions
																31	Failure to observe standing notices
																37	Failure to comply with safe systems of work
																49	Loss of vessels stability (due to other than loss of watertight integrity)
																59	Inadequate procedures shore side
																69	Port Equipment (inc.craft) mechanical breakdown/system malfunction
																75	Inadequate maintenance/inspection
																76	Inadequate training/competence - Others
																80	Human error
																86	Competence
																105	Navigation equipment failure

Control ID	Embedded Controls				Residual Risk	Current Risk	Control ID	Additional Controls				Residual Risk	Final Risk	Date	Assessors
	Control	Comment	Likelihood Reduction	Consequence Reduction				Control	Comment	Likelihood Reduction	Consequence Reduction				
95	Standing Orders/SOPs	Provided by the vessels owner/operator	5%	5%	5.42	5.12	9	Local Port Services - Harbour control office	Ensures all risk is reduced to as low as reasonably practicable (ALARP)	0%	5%	4.91	1.92	24-Oct-2016 Revised 02-Jun-2017	Kevin Riley - Stena Line Ports Ltd Neil Humphreys - Stena Line Ports Ltd Geoff Price - Amlwch Port Sue James - Holyhead Sailing Club Mike Butterfield - RYA Jane Templeton - Jacobs Adam Fitzpatrick - ABPmer
120	Vessel secured for sea		5%	5%	5.19		15	Hazardous cargoes, advance notice of	Vessels required to notify HA of any hazardous cargoes in advance	0%	5%	4.70			
121	Loading/unloading plan	Provided by the vessel using stability calculations and confirmed before operations proceed	15%	0%	5.12		18	Safe allocation of berths (depth, available, suitable)		0%	10%	4.28			
							19	Port Facility Emergency Plan	To include actions in the event of MoB	0%	5%	4.08			
							21	Oil spill contingency plans	Details actions to be taken in the event of oil spill	0%	5%	3.86			
							22	Contingency plan exercises	Details actions to be taken in the event of oil spill	0%	5%	3.65			
							33	Training of port marine/operations personnel	This should include the use of equipment and implementation of the plans	10%	5%	3.39			
							36	Availability of pollution response equipment	Harbour and contractors to have equipment available	0%	5%	3.13			
							44	Safe systems of work (H&S)	Based on risk assessment and industry best practice	15%	10%	2.54			
							70	Marine Safety Management System		5%	5%	2.23			
							108	Requirement for notification of vessel defects	Details of vessel defects sent to LPS	5%	0%	2.21			
							112	PMSC compliance	Provides guidance and procedures based on risk assessments	5%	5%	1.92			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
18	Ranging	Vessel on bulk quay ranging due to interaction with other vessel	Ro-Ro vessel manoeuvring to berth in adverse weather conditions causes excessive propeller wash and wake wave. Bulk vessel ranges on berth and moorings part causing vessel to drift from berth. Slow speed collision between vessels resulting in minor damage, minor injuries. Bulk vessel drifting until engines online and safely berthed.	5	1	3	0	2	Excessive wake from Ro-Ro manoeuvring causes bulk vessel to range on berth. Moorings hold, no injuries, no pollution.	1	0	1	0	0	4.53	1	Human error/fatigue - Ship Personnel
																6	Inadequate bridge resource management
																7	Inadequate procedures in place onboard vessel
																11	Vessel breakdown or malfunction
																24	Communication failure - Equipment
																25	Communication failure - Personnel
																26	Adverse weather conditions
																30	Failure to comply with VTS/LPS/SOPs
																31	Failure to observe standing notices
																32	Failure to observe Byelaws/local regulations
																40	Failure of berth mooring systems
																55	Incapacitated master (drugs/alcohol)
																72	Failure to follow passage plan
																76	Inadequate training/competence - Others
																78	Ship/Tug/Launch failure
																80	Human error
																86	Competence
																102	Language problems
																103	Excessive vessel speed

Control ID	Embedded Controls				Residual Risk	Current Risk	Control ID	Additional Controls				Residual Risk	Final Risk	Date	Assessors
	Control	Comment	Likelihood Reduction	Consequence Reduction				Control	Comment	Likelihood Reduction	Consequence Reduction				
3	Communications - Traffic broadcast	Information promulgated by the Holyhead Coastguard Operations Centre (CGOC)	5%	0%	4.51		7	Pilotage service	Pilot required it tug/tow exceed set criteria	30%	5%	3.64			
10	Passage planning	From berth to berth containing all relevant information on the area and contingency planning	5%	0%	4.48		9	Local Port Services - Harbour control office		5%	5%	3.47			
60	International COLREGS 1972 (as amended)		5%	0%	4.45		13	Arrival/departure, advance notice of	Notification sent to LPS	5%	0%	3.45			
95	Standing Orders/SOPs	Provided by the vessels owner/operator	5%	5%	3.93		16	LPS broadcast (navigation and safety information)	Promulgate conditions and movements within the harbour to approaching vessels	5%	0%	3.43			
116	Weather forecasting	Advance warning gained from available internet resources and met ocean forecasts.	5%	0%	3.91		18	Safe allocation of berths (depth, available, suitable)		10%	5%	3.24			
							19	Port Facility Emergency Plan	To include actions in the event of MoB	0%	5%	3.08			
							21	Oil spill contingency plans	Details actions to be taken in the event of oil spill	0%	5%	2.93			
							22	Contingency plan exercises	Details actions to be taken in the event of oil spill	0%	5%	2.77			
							32	Towage, available and appropriate		0%	25%	1.85			
						3.91	33	Training of port marine/operations personnel	This should include the use of equipment and implementation of the plans	0%	5%	1.67	0.18	24-Oct-2016 Revised 02-Jun-2017	Kevin Riley - Stena Line Ports Ltd Neil Humphreys - Stena Line Ports Ltd Geoff Price - Amlwch Port Sue James - Holyhead Sailing Club Mike Butterfield - RYA Jane Templeton - Jacobs Adam Fitzpatrick - ABPmer
							36	Availability of pollution response equipment	Harbour and contractors to have equipment available	0%	5%	1.39			
							39	Direction (Special) - Powers of Harbour/Pier Master	Provided after consultation with Trinity House Lighthouse Authority	5%	5%	1.16			
							70	Marine Safety Management System	Provides guidance and procedures based on risk assessments	5%	5%	0.93			
							112	PMSC compliance	Ensures all risk is reduced to as low as reasonably practicable (ALARP)	5%	5%	0.69			
							114	Directions (General) - issued by SHA	Allows HA to regulate vessel speed	5%	0%	0.53			
							124	Mooring studies and plans	Berths designed for the prevailing Met ocean conditions and mooring arrangements suitable for vessel size	0%	10%	0.18			
							129	Vessel master simulation training	Prior to operations, masters to practice berthing/unberthing using the vessels that will be entering the harbour and representative tidal flow at different states of tide and weather.	15%	0%	0.18			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
19	Ranging	Adverse weather conditions affecting moored vessels	High wind speed off berth causes vessels to range. Moorings break causing vessel to drift. Minor damage to vessel, bollards pulled from quay, major injuries from mooring line snap back and bollards. Vessel unable to return safely to berth goes to emergency anchor in harbour until engines started.	5	2	3	0	2	High wind speed off berth causes vessels to range. Moorings break causing vessel to drift. Minor damage to vessel, bollards pulled from quay, major injuries from snap back and bollards. Vessel unable to return safely to berth goes to emergency anchor in harbour until engines started.	1	0	1	0	1	4.97	1	Human error/fatigue - Ship Personnel
																7	Inadequate procedures in place onboard vessel
																26	Adverse weather conditions
																37	Failure to comply with safe systems of work
																48	Risk Assessment, Incomplete/not reviewed
																61	Incorrect assessment of tidal flow
																80	Human error

Control ID	Embedded Controls				Residual Risk	Current Risk	Control ID	Additional Controls				Residual Risk	Final Risk	Date	Assessors
	Control	Comment	Likelihood Reduction	Consequence Reduction				Control	Comment	Likelihood Reduction	Consequence Reduction				
10	Passage planning	From berth to berth containing all relevant information on the area and contingency planning	5%	0%	4.94	4.84	9	Local Port Services - Harbour control office	Ensures all risk is reduced to as low as reasonably practicable (ALARP)	0%	5%	4.31	3.48	24-Oct-2016 Revised 02-Jun-2017	Kevin Riley - Stena Line Ports Ltd Neil Humphreys - Stena Line Ports Ltd Geoff Price - Amlwch Port Sue James - Holyhead Sailing Club Mike Butterfield - RYA Jane Templeton - Jacobs Adam Fitzpatrick - ABPmer
116	Weather forecasting	Advance warning gained from available internet resources and met ocean forecasts.	20%	0%	4.84		44	Safe systems of work (H&S)	Based on risk assessment and industry best practice	5%	5%	4.12			
							70	Marine Safety Management System	Provides guidance and procedures based on risk assessments	5%	5%	3.93			
							112	PMSC compliance	Ensures all risk is reduced to as low as reasonably practicable (ALARP)	5%	5%	3.74			
							124	Mooring studies and plans	Berths designed for the prevailing Met ocean conditions and mooring arrangements suitable for vessel size	20%	5%	3.48			

Assessment Number	Hazard Category	Hazard Scenario	Worst Credible	Frequency (Years)	Consequence				Most Likely	Frequency (Years)	Consequence				Baseline Risk	Cause ID	Causes
					People	Property	Planet	Port			People	Property	Planet	Port			
20	Stranding	Small recreational vessel on breakwater	Small unpowered craft (for example, kayak or sailing boat) strands on marine works during adverse weather conditions and is unable to return to shore. Loss of life, no pollution, national adverse publicity.	5	3	2	0	4	Small unpowered craft (for example, kayak or sailing boat) strands on marine works but is able to make contact with local RNLI/emergency services. Minor injuries/hypothermia, canoe/kayak recovered but sustains major damage, no pollution, adverse publicity.	1	1	1	0	2	6.47	24	Communication failure - Equipment
																26	Adverse weather conditions
																28	Restricted visibility
																36	Failure of Aid to Navigation (out of position/unlit)
																61	Incorrect assessment of tidal flow
																80	Human error

Control ID	Embedded Controls				Residual Risk	Current Risk	Control ID	Additional Controls				Residual Risk	Final Risk	Date	Assessors
	Control	Comment	Likelihood Reduction	Consequence Reduction				Control	Comment	Likelihood Reduction	Consequence Reduction				
62	Emergency services equipment - shore side	Mayday or Pan-Pan call to Coastguards	0%	15%	5.83	5.67	9	Local Port Services - Harbour control office	Point of contact to control harbour operations	10%	10%	5.20	4.68	24-Oct-2016 Revised 02-Jun-2017	Kevin Riley - Stena Line Ports Ltd Neil Humphreys - Stena Line Ports Ltd Geoff Price - Amlwch Port Sue James - Holyhead Sailing Club Mike Butterfield - RYA Jane Templeton - Jacobs Adam Fitzpatrick - ABPmer
116	Weather forecasting	Advance warning gained from available met ocean forecasts.	10%	0%	5.67		27	CCTV coverage	Monitoring harbour area	10%	0%	5.15			
							70	Marine Safety Management System	Provides guidance and procedures based on risk assessments	5%	0%	5.12			
							112	PMSC compliance	Ensures all risk is reduced to as low as reasonably practicable (ALARP)	5%	0%	5.10			
							142	International Convention for the Safety of Life at Sea (SOLAS) 1974	On call to be available in the event of emergency	0%	10%	4.68			

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Wylfa Newydd Project

Environmental Statement Addendum
Appendix I4-2-A
Project-wide and WNDA Development Intra-project Air Quality Assessment

PINS Reference Number: EN010007

25 March 2019

Revision 2.0
Examination Deadline 8

Regulation Number: 5(2)(a)

Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

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Contents

1 Introduction 1
2 Design basis and activities 2
3 Results 3

List of Tables

Table 3-1 Peak earthworks and Marine Works (year 2) – predicted intra-project additive annual mean air pollutant concentrations at key human receptors 4
Table 3-2 Peak earthworks and Marine Works (year 2) – predicted intra-project additive short-term air pollutant concentrations at key human receptors 5
Table 3-3 Peak earthworks and Marine Works (year 2) – predicted intra-project additive annual mean NOx concentrations at ecological receptors 6
Table 3-4 Peak earthworks and Marine Works (year 2) – predicted intra-project additive maximum 24-hour mean NOx concentrations at ecological receptors 6
Table 3-5 Peak earthworks and Marine Works (year 2) – predicted intra-project additive nitrogen deposition rates (kgN/ha/yr) at ecological receptors 7
Table 3-6 Peak earthworks and Marine Works (year 2) – predicted intra-project additive acid deposition rates (keq/ha/yr) at ecological receptors 7
Table 3-7 Peak construction (year 5) – predicted intra-project additive annual mean air pollutant concentrations at key human receptors 8
Table 3-8 Peak construction (year 5) – predicted intra-project additive short-term air pollutant concentrations at key human receptors 9
Table 3-9 Peak construction (year 5) – predicted intra-project additive annual mean NOx concentrations at ecological receptors 10
Table 3-10 Peak construction (year 5) – predicted intra-project additive maximum 24-hour mean NOx concentrations at ecological receptors 10
Table 3-11 Peak construction (year 5) – predicted intra-project additive nitrogen deposition rate (kgN/ha/yr) at ecological receptors 11
Table 3-12 Peak construction (2023) – predicted intra-project additive acid deposition rate (keq/ha/yr) at ecological receptors 11

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1 Introduction

1.1.1 This document provides the full results tables for the dispersion modelling undertaken to determine the potential intra-project additive cumulative effects due to emissions to air from sources within the Wylfa Newydd Development Area and emissions from road traffic associated with the Wylfa Newydd Project. The assessment considers those receptors which would experience the largest increases in pollutant concentrations from both source types during the construction of the Power Station. The results presented in this document take account of the relevant Requests for Non-Material Changes accepted into the DCO examination (i.e. the changes to marine vessel movements [AS-021] (Request for Non-Material Change no. 1) and working hours [REP4-012] (Request for Non-Material Change no. 4)).

1.1.2 Appendix I4-2 of the Environmental Statement [APP-393] should be referred to for the intra-project additive cumulative effects during operation of the Power Station as these are not altered by the changes or any other updates.

1.1.3 The modelling considers the predicted increase in pollutant concentrations (oxides of nitrogen (NOx), nitrogen dioxide (NO_2) and particulate matter (i.e. PM_{10} and $PM_{2.5}$)) at key human receptor locations and NOx, nitrogen deposition and acid deposition at ecological receptor locations in close proximity to both the Wylfa Newydd Development Area and the A5025.

1.1.4 The results are provided for the same five key human receptors and three ecological receptors that were considered in Appendix I4-2 [APP-393]. These receptors represent locations where the potentially highest intra-project additive cumulative effects would occur.

1.1.5 The magnitude of the changes in pollutant concentrations or deposition rates and significance of the residual air quality effects are summarised in ES Addendum chapter 10.

2 Design basis and activities

2.1.1 The design basis for the assessment results presented in this document remains as described for the assessment of road traffic emissions and emission sources within the Wylfa Newydd Development Area provided in detail in chapter C4 [APP-091] and chapter D5 [APP-124], respectively. The main changes are as follows.

- Changes to the emissions from construction plant, machinery and marine vessels to reflect the relevant Requests for Non-Material Changes accepted into the DCO examination (i.e. the changes to marine vessel movements [AS-021] and working hours [REP4-012] (Request for Non-Material Change no. 1 and 4, respectively)). The methodology, input data and assumptions used for the dispersion modelling of the emissions from construction plant, machinery and marine vessels are provided in appendix D5-2-A of the ES Addendum.
- The modelling results include the effect of applying the additional mitigation to reduce NOx emissions from construction plant and machinery as proposed in chapter D5. This is secured in the Main Power Station Site sub-Code of Construction Practice (CoCP) [as submitted at Deadline 8 (25 March 2019)] (see paragraph 7.5.2, first bullet). The results also include the effect of applying additional mitigation to reduce NOx emissions from marine vessels involved in the Marine Works which is also set out in the Main Power Station Site sub-CoCP [as submitted at Deadline 8 (25 March 2019)] (see paragraph 7.5.2, second bullet).

2.1.2 The assessment scenarios for the construction phase remain as considered for the original intra-project additive effects assessment set out in section 4.2 of appendix I4-2 [APP-393] (i.e. year 2 (2020) and year 5 (2023)).

3 Results

3.1.1 This section presents the findings of the assessment of intra-project additive effects, which are presented in Table 3-1 to Table 3-6 (year 2 (2020) scenario) and Table 3-7 to Table 3-12 (year 5 (2023) scenario). The assessment criteria are based on the Air Quality Objectives (AQOs), Environmental Assessment Levels (EALs) and relevant critical loads for nitrogen and acid deposition (see chapter B5, [APP-070]).

3.1.2 The table column headers for each pollutant have been shortened for ease and clarity of reporting the short-term concentrations as follows:

- 1-hour NO_2 = 99.8th percentile of one-hour means; and
- 24-hour PM_{10} = 90.4th percentile of 24-hour means.

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Table 3-1 Peak earthworks and Marine Works (year 2) – predicted intra-project additive annual mean air pollutant concentrations at key human receptors

Receptor	Year 2 baseline concentration			Year 2 total intra-project additive concentration with Wylfa Newydd Project			Magnitude of change as percentage of AQO value[1,2,3]		
	NO_2 (µg/m^3)	PM_{10} (µg/m^3)	$PM_{2.5}$ (µg/m^3)	NO_2 (µg/m^3)	PM_{10} (µg/m^3)	$PM_{2.5}$ (µg/m^3)	NO_2 (AQO = 40µg/m^3)	PM_{10} (AQO = 40µg/m^3)	$PM_{2.5}$ (AQO = 25µg/m^3)
R4	10.4	15.6	8.2	12.7	15.8	8.4	+6% (s)	0% (n)	+1% (n)
R5	7.5	15.3	8.0	11.0	15.4	8.2	+9% (s)	0% (n)	+1% (n)
R6	8.4	15.4	8.1	13.4	15.7	8.3	+13% (m)	+1% (n)	+1% (n)
R7	6.1	15.1	7.9	12.0	15.3	8.1	+15% (m)	+1% (n)	+1% (n)
R8	5.1	15.0	7.9	6.7	15.1	7.9	+4% (n)	0% (n)	0% (n)

Note 1: Impact magnitude rounded to whole numbers and reported as a percentage of the respective AQO value.

Note 2: Descriptors of effects at individual receptors in parentheses as per table B5-15 of chapter B5 [APP-070]: 'n' is negligible, 's' is small, 'm' is medium and 'l' is large.

Note 3: Any changes of 0% (i.e. less than 0.5%) are described as negligible ('n') regardless of the total concentration.

Table 3-2 Peak earthworks and Marine Works (year 2) – predicted intra-project additive short-term air pollutant concentrations at key human receptors

Receptor	Year 2 baseline concentration		Year 2 total intra-project additive concentration with Wylfa Newydd Project		Magnitude of change as percentage of AQO value[1,2]	
	1-hour NO_2 ($\mu g/m^3$)	24-hour PM_{10} ($\mu g/m^3$)	1-hour NO_2 ($\mu g/m^3$)	24-hour PM_{10} ($\mu g/m^3$)	1-hour NO_2 (AQO = 200$\mu g/m^3$)	24-hour PM_{10} (AQO = 50$\mu g/m^3$)
R4	20.7	31.2	41.0	31.7	+10% (n)	+1% (n)
R5	14.9	30.5	43.1	31.0	+14% (s)	+1% (n)
R6	16.7	30.8	57.7	31.5	+20% (s)	+1% (n)
R7	12.2	30.2	58.3	30.8	+23% (m)	+1% (n)
R8	10.3	30.0	27.4	30.3	+9% (n)	+1% (n)

Note 1: Impact magnitude rounded to whole numbers and reported as a percentage of the respective AQO value.

Note 2: Descriptors of effects at individual receptors in parentheses as per table B5-16 of chapter B5 [APP-070]: 'n' is negligible, 's' is small, 'm' is medium and 'l' is large.

Table 3-3 Peak earthworks and Marine Works (year 2) – predicted intra-project additive annual mean NOx concentrations at ecological receptors

Receptor	Critical level (AQO) ($\mu g/m^3$)	Total concentration for ($\mu g/m^3$)		Change as percentage of AQO	Total concentration as a percentage of AQO	Further consideration required
		Future baseline	Year 2 intra-project additive concentration with Wylfa Newydd Project			
Afon Wygyr Wildlife Site	30	10.4	13.7	11%	46%	No
Ancient Woodland (26051)	30	12.9	14.0	4%	47%	No
Ancient Woodland (26076)	30	6.4	8.8	8%	29%	No

Table 3-4 Peak earthworks and Marine Works (year 2) – predicted intra-project additive maximum 24-hour mean NOx concentrations at ecological receptors

Receptor	Critical level (EAL) ($\mu g/m^3$)	Total concentration for ($\mu g/m^3$)		Change as percentage of EAL	Total concentration as a percentage of EAL	Further consideration required
		Year 2 baseline	Year 2 intra-project additive concentration with Wylfa Newydd Project			
Afon Wygyr Wildlife Site	200	20.8	65.1	22%	33%	No
Ancient Woodland (26051)	200	25.8	63.1	19%	32%	No
Ancient Woodland (26076)	200	12.7	52.3	20%	26%	No

Table 3-5 Peak earthworks and Marine Works (year 2) – predicted intra-project additive nitrogen deposition rates (kgN/ha/yr) at ecological receptors

Receptor	Vegetation type	Nutrient nitrogen deposition (kgN/ha/yr)				Change as percentage of CL	Total deposition rate as a percentage of CL	Further consideration required
		Critical load (CL)	Year 2 baseline	Year 2 intra-project additive cumulative contributions	Total			
Afon Wygyr Wildlife Site	Short	10	13.0	0.3	13.4	3%	134%	No
	Tall	10	20.4	0.7	21.1	7%	211%	No
Ancient Woodland (26051)	Tall	5	16.0	0.2	16.2	4%	324%	No
Ancient Woodland (26076)	Tall	5	20.4	0.5	20.9	10%	419%	No

Table 3-6 Peak earthworks and Marine Works (year 2) – predicted intra-project additive acid deposition rates (keq/ha/yr) at ecological receptors

Receptor	Vegetation type	Acid deposition (keq/ha/yr)				Change as percentage of CL	Total deposition rate as a percentage of CL	Further consideration required
		Critical load (CLmax N)	Year 2 baseline (N + S)	Year 2 intra-project additive cumulative contributions	Total			
Afon Wygyr Wildlife Site	Short	1.99	1.10	0.03	1.13	1%	57%	No
	Tall	2.77	1.66	0.06	1.72	2%	62%	No
Ancient Woodland (26051)	Tall	2.74	1.32	0.02	1.34	1%	49%	No
Ancient Woodland (26076)	Tall	2.77	1.66	0.04	1.70	2%	62%	No

Table 3-7 Peak construction (year 5) – predicted intra-project additive annual mean air pollutant concentrations at key human receptors

Receptor	Year 5 baseline concentration			Year 5 total intra-project additive concentration with Wylfa Newydd Project			Magnitude of change as percentage of AQO value[1,2,3]		
	NO_2 ($\mu g/m^3$)	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	NO_2 (AQO = 40$\mu g/m^3$)	PM_{10} (AQO = 40$\mu g/m^3$)	$PM_{2.5}$ (AQO = 25$\mu g/m^3$)
R4	9.7	15.6	8.2	11.4	15.8	8.3	+4% (n)	0% (n)	0% (n)
R5	7.1	15.2	8.0	9.1	15.4	8.1	+5% (n)	0% (n)	0% (n)
R6	7.8	15.4	8.1	10.9	15.6	8.2	+8% (s)	+1% (n)	+1% (n)
R7	5.8	15.1	7.9	8.6	15.3	8.0	+7% (s)	0% (n)	0% (n)
R8	5.0	15.0	7.9	6.2	15.1	7.9	+3% (n)	0% (n)	0% (n)

Note 1: Impact magnitude rounded to whole numbers and reported as a percentage of the respective AQO value.

Note 2: Descriptors of effects at individual receptors in parentheses as per table B5-15 of chapter B5 [APP-070]: 'n' is negligible, 's' is small, 'm' is medium and 'l' is large.

Note 3: Any changes of 0% (i.e. less than 0.5%) are described as negligible ('n') regardless of the total concentration.

Table 3-8 Peak construction (year 5) – predicted intra-project additive short-term air pollutant concentrations at key human receptors

Receptor	Year 5 baseline concentration		Year 5 total intra-project additive concentration with Wylfa Newydd Project		Magnitude of change as percentage of AQO value[1,2]	
	1-hour NO_2 ($\mu g/m^3$)	24-hour PM_{10} ($\mu g/m^3$)	1-hour NO_2 ($\mu g/m^3$)	24-hour PM_{10} ($\mu g/m^3$)	1-hour NO_2 (AQO = 200$\mu g/m^3$)	24-hour PM_{10} (AQO = 50$\mu g/m^3$)
R4	19.4	31.2	28.9	31.6	+5% (n)	+1% (n)
R5	14.1	30.5	29.2	30.8	+8% (n)	+1% (n)
R6	15.6	30.8	33.0	31.3	+9% (n)	+1% (n)
R7	11.6	30.2	28.5	30.6	+8% (n)	+1% (n)
R8	9.9	30.0	21.0	30.2	+6% (n)	0% (n)

Note 1: Impact magnitude rounded to whole numbers and reported as a percentage of the respective AQO value.

Note 2: Descriptors of effects at individual receptors in parentheses as per table B5-16 of chapter B5 [APP-070]: 'n' is negligible, 's' is small, 'm' is medium and 'l' is large.

Table 3-9 Peak construction (year 5) – predicted intra-project additive annual mean NOx concentrations at ecological receptors

Receptor	Critical level (AQO) (µg/m^3)	Total concentration for (µg/m^3)		Change as percentage of AQO	Total concentration as a percentage of AQO	Further consideration required
		Year 5 baseline	Year 5 intra-project additive concentration with Wylfa Newydd Project			
Afon Wygyr Wildlife Site	30	10.0	11.5	5%	38%	No
Ancient Woodland (26051)	30	12.2	13.5	4%	45%	No
Ancient Woodland (26076)	30	6.3	7.1	3%	24%	No

Table 3-10 Peak construction (year 5) – predicted intra-project additive maximum 24-hour mean NOx concentrations at ecological receptors

Receptor	Critical level (EAL) (µg/m^3)	Total concentration for (µg/m^3)		Change as percentage of EAL	Total concentration as a percentage of EAL	Further consideration required
		Year 5 baseline	Year 5 intra-project additive concentration with Wylfa Newydd Project			
Afon Wygyr Wildlife Site	200	20.0	29.6	5%	15%	No
Ancient Woodland (26051)	200	24.4	36.1	6%	18%	No
Ancient Woodland (26076)	200	12.7	20.3	4%	10%	No

Table 3-11 Peak construction (year 5) – predicted intra-project additive nitrogen deposition rate (kgN/ha/yr) at ecological receptors

Receptor	Vegetation type	Nutrient nitrogen deposition (kgN/ha/yr)				Change as percentage of CL	Total deposition rate as a percentage of CL	Further consideration required
		Critical load (CL)	Year 5 baseline	Year 5 intra-project additive cumulative contributions	Total			
Afon Wygyr Wildlife Site	Short	10	13.0	0.15	13.2	2%	132%	No
	Tall	10	20.4	0.30	20.7	3%	207%	No
Ancient Woodland (26051)	Tall	5	16.0	0.26	16.2	5%	324%	No
Ancient Woodland (26076)	Tall	5	20.4	0.15	20.6	3%	412%	No

Table 3-12 Peak construction (2023) – predicted intra-project additive acid deposition rate (keq/ha/yr) at ecological receptors

Receptor	Vegetation type	Acid deposition (keq/ha/yr)				Change as percentage of CL	Total deposition rate as a percentage of CL	Further consideration required
		Critical load (CLmaxN)	Year 5 baseline (N + S)	Year 5 intra-project additive cumulative contributions	Total			
Afon Wygyr Wildlife Site	Short	1.99	1.10	0.01	1.11	1%	56%	No
	Tall	2.77	1.66	0.03	1.69	1%	61%	No
Ancient Woodland (26051)	Tall	2.74	1.32	0.02	1.34	1%	49%	No
Ancient Woodland (26076)	Tall	2.77	1.66	0.02	1.68	1%	61%	No