

From: [Kieran Somers](#)
To: [Wylfa Newydd](#); [Kay Sully](#); [KJ Johansson](#)
Cc: [Aaron.Buckley@jacobs.com](#); [David Palmer \(Contractor\)](#); [Iwan.Williams@cyfoethnaturiolcymru.gov.uk](#); [Aron.Henry](#); [energyisland@cyfoethnaturiolcymru.gov.uk](#); [James.Hooker@gov.wales](#); [Dylan Williams](#); [PMO](#); [Neil Burke](#)
Subject: FW: Email 1 of 8 [NOT PROTECTIVELY MARKED]
Date: 17 December 2018 18:02:14
Attachments: [07 Horizon's Response to Written Representation - Brynawran Cymunedol Ltd .pdf](#)
[08 Horizon's Response to Written Representation - Cemaes Bay History Group .pdf](#)
[09 Horizon's Response to Written Representation - Conwy County Borough Council .pdf](#)
[10 Horizon's Response to Written Representation - Dafydd Griffiths .pdf](#)
[11 Horizon's Response to Written Representation - Greenpeace .pdf](#)
[12 Horizon's Response to Written Representation - Gwynedd Council .pdf](#)
[13 Horizon's Response to Written Representation - Magnox Ltd .pdf](#)
[14 Horizon's Response to Written Representation - Michael Cominetti .pdf](#)
[15 Horizon's Response to Written Representation - Nuclear Free Local Authorities .pdf](#)
[0 Deadline 3 Cover Letter.pdf](#)
[01 1.3 Guide to the Application.pdf](#)
[02 1.3 Guide to the Application \(Rev 4.0\) Welsh Language.pdf](#)
[03 Horizon's Response to IACC's Local Impact Report.pdf](#)
[04 Horizons response to Interested Parties responses to the ExA First Round Written Questions.pdf](#)
[05 Horizon's Response to Written Representation - Arthur Wyn Owen .pdf](#)
[06 Horizon's Response to Written Representation - Betsi Cadwaladr University Health Board .pdf](#)

Good Evening

This is the first in a series of 8 e-mails for the Wylfa Newydd DCO Examination Deadline 3 deliverables.

The list below provides a complete list of all documents attached to this e-mail and we will also be delivering 2x USB pen drives containing all of our Deadline 3 submission to your offices at 10:00 tomorrow (Tuesday 18th December).

Our covering letter in support of the submissions is also attached.

0 Deadline 3 Cover Letter.pdf
01 1.3 Guide to the Application.pdf
02 1.3 Guide to the Application (Rev 4.0) Welsh Language.pdf
03 Horizon's Response to IACC's Local Impact Report.pdf
04 Horizons response to Interested Parties responses to the ExA First Round Written Questions.pdf
05 Horizon's Response to Written Representation - Arthur Wyn Owen .pdf
06 Horizon's Response to Written Representation - Betsi Cadwaladr University Health Board .pdf
07 Horizon's Response to Written Representation - Brynawran Cymunedol Ltd .pdf
08 Horizon's Response to Written Representation - Cemaes Bay History Group .pdf
09 Horizon's Response to Written Representation - Conwy County Borough Council .pdf
10 Horizon's Response to Written Representation - Dafydd Griffiths .pdf
11 Horizon's Response to Written Representation - Greenpeace .pdf
12 Horizon's Response to Written Representation - Gwynedd Council .pdf
13 Horizon's Response to Written Representation - Magnox Ltd .pdf
14 Horizon's Response to Written Representation - Michael Cominetti .pdf
15 Horizon's Response to Written Representation - Nuclear Free Local Authorities .pdf

Kind Regards

Kieran Somers
Head of Planning
Pennaeth Cynllunio

HORIZON NUCLEAR POWER
Sunrise House
1420 Charlton Court
Gloucester Business Park
Gloucester
GL3 4AE

Tel: +44 (0) 1242 507 681
Mobile: [REDACTED]
kieran.somers@Horizonnuclearpower.com

NOT PROTECTIVELY MARKED

This email was classified on 17 December 2018 17:59:46.

Disclaimer Notice - This message and any attachments are confidential and should only be read by those to whom they are addressed. If you are not the intended recipient, please contact us immediately by emailing or telephoning the sender, delete the message from your computer and destroy any copies. Any distribution or copying without our prior permission is prohibited. For the avoidance of doubt the contents of this email are subject to contract and will not constitute a legally binding contract, unless specifically stated otherwise. Internet communications are not always secure and therefore Horizon Nuclear Power Limited and its affiliates do not accept legal responsibility for this message. The recipient is responsible for verifying its authenticity before acting on the contents. Any views or opinions presented are solely those of the author and do not necessarily represent those of Horizon Nuclear Power Limited or any of its affiliates.

Horizon Nuclear Power Limited is registered in England and Wales with company number 06660388 and its registered office is at Sunrise House, 1420 Charlton Court, Gloucester Business Park, Gloucester, GL3 4AE. Horizon Nuclear Power Oldbury Limited (registered in England and Wales with company number 06811995), Horizon Nuclear Power Wylfa Limited (registered in England and Wales with company number 06811987), Horizon Nuclear Power Wylfa Holdings Limited (registered in England and Wales with company number 09641958) and Horizon Nuclear Power Services Limited (registered in England and Wales with company number 06812099) are all affiliates of Horizon Nuclear Power Limited and have the same registered office as that company. For further information about Horizon Nuclear Power Limited and its affiliates, please see our website at www.horizonnuclearpower.com.

This email has been scanned by the Symantec Email Security.cloud service.
For more information please visit <http://www.symanteccloud.com>



Wylfa Newydd Project

Horizon's Response to IACC's Local Impact Report

PINS Reference Number: EN010007

18 December 2018

Revision 1.0

Examination Deadline 3

Planning Act 2008

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

[This page is intentionally blank]

Contents

1	Response to the Introduction to IACC's Local Impact Report.....	1
1.1	Introduction	1
1.2	Approach taken to responding to the LIR	1
1.3	Other LIRs submitted	2
1.4	Response to IACC LIR Chapter 1: Introduction	2
1.5	Approach to mitigation	2
1.6	Securing of mitigation	3
1.7	Contingency funding approach	3
1.8	Engagement with Horizon post-DCO submission	4
2	Local Impact Report – Policy	5
2.1	Introduction	5
2.2	Planning balance	5
2.3	Regard to well-being goals and objectives	6
2.4	Compliance with PPW9	7
	<i>Enabling better cycle access to the logistics centre.....</i>	<i>7</i>
	<i>Provide cohesive communities and improve access to service, cultural opportunities and recreation facilities.....</i>	<i>8</i>
	<i>Promote safe, cohesive communities and addressing impacts on leisure and recreation, and open space and use of walking routes.....</i>	<i>8</i>
2.5	Reactive to Impacts	9
2.6	Skills mitigation	10
2.7	Valuing, protecting and enhancing landscapes and historic environment.....	10
2.8	Delivering a positive legacy benefit.....	11
2.9	Conclusion	11
3	Local Impact Report – Local Employment	13
3.1	Introduction	13
3.2	Local Employment	13
3.3	Displacement.....	20
3.4	Skills Gap Analysis	22
3.5	Information Gaps	24
3.6	Obligations & Requirements	25
3.7	Conclusions	25
4	Local Impact Report – Supply Chain	26
4.1	Introduction	26
4.2	Collaboration and Supply Chain Action Plan	26
4.3	Displacement.....	28
4.4	Port of Holyhead	29
4.5	Local spend/Boom & Bust Scenario	29
4.6	Contract opportunities for local & regional businesses	31
4.7	Flexible supply chain fund revenue/capital funding.....	31
4.8	Use of local regional materials/Môn Larder	32
4.9	Amlwch & Cemaes Community fund	32

4.10	Horizon to build into its procurement strategy the need for commitment by major suppliers to establish long terms bases on Anglesey/North Wales and invest in the local labour force	32
5	Local Impact Report – Tourism.....	34
5.1	Introduction.....	34
5.2	Value of tourism to the economy	34
5.3	Visitor Behaviour and Visitation	36
	<i>Traffic issues and impact on tourism</i>	<i>39</i>
5.4	The Wales Coastal Path, AONB and PRoW	40
5.5	Displacement.....	44
5.6	Tourism bed stock	44
5.7	Visitor Centre (temporary & permanent)	45
5.8	DCO Obligations and Requirements.....	46
	<i>Tourism sector support and mitigation.....</i>	<i>46</i>
6	Local Impact Report – Safeguarding	50
6.1	Introduction	50
6.2	Process.....	50
	<i>Safeguarding in the Health Impact Assessment report and engagement with well-being partners</i>	<i>51</i>
6.3	Overview of mitigation with regards to safeguarding	52
7	Local Impact Report – Education and Skills	56
7.1	Introduction	56
7.2	Local impact 1 and local impact 2: Increasing local labour participation - construction and operation	56
7.3	Local impact 3: Displacement and disruption to schools	56
7.4	Local impact 4: Physical capacity to accommodate dependents of migrant workers	57
7.5	Local impact 5: Staff capacity	59
7.6	Local impact 6: Welsh language immersion services	59
7.7	Local impact 7: Disruption to education of others	60
7.8	Local impact 8: Special-needs provision.....	60
7.9	Local impact 9: Pre-school provision	60
7.10	IACC requests	60
7.11	DCO obligations and requirements.....	65
8	Local Impact Report – Housing.....	82
8.1	Introduction	82
8.2	New build housing, owner occupied, & Private Rented Sector	86
	<i>New housing supply.....</i>	<i>86</i>
	<i>Absorption capacity of the housing market.....</i>	<i>87</i>
	<i>Void rates</i>	<i>87</i>
	<i>Empty Homes</i>	<i>88</i>
	<i>Effects of withdrawal of demand.....</i>	<i>88</i>
	<i>Summary</i>	<i>88</i>
8.3	Latent Accommodation	90
8.4	Caravans and Tourist Accommodation.....	90

8.5	Campus Phasing	92
8.6	Evidence from Hinkley Point C	93
	<i>Spatial Distribution of Workers</i>	93
	<i>Sectoral Distribution of Workers</i>	93
	<i>Housing Costs and Homelessness</i>	93
8.7	Use of the Housing Fund	96
8.8	Workers and their Dependants	97
8.9	DCO Obligations & Requirements	97
9	Local Impact Report – Welsh Language and Culture	98
9.1	Introduction	98
9.2	Issue 1 - Welsh language and culture as a golden thread	98
9.3	Issue 2 - WLIA methodology.....	99
9.4	Issue 3 - planning policy tests.....	99
9.5	Issue 4 - Accommodation	100
9.6	Issue 5 - Welsh traditions and culture.....	102
9.7	Issue 6 - Welsh language in the workplace	103
9.8	Issue 7 - infrastructure, education and linguistic character of schools	106
9.9	Issue 8 - children, young people, families, community groups and local services	108
9.10	Issue 9 – DCO obligations and Requirements.....	109
	<i>Workforce</i>	109
	<i>Children, young people and families</i>	114
	<i>Community and local services</i>	115
	<i>Accountability</i>	117
10	Local Impact Report – Traffic and Transport	119
10.1	Introduction	119
10.2	Peak hour traffic flow	119
10.3	Effect on tourism.....	120
10.4	Early Years Strategy.....	120
10.5	Dalar Hir Park & Ride	122
10.6	Construction Worker Car Sharing Strategy.....	123
10.7	Shuttle Bus Service	124
10.8	Use of unsuitable roads	124
10.9	Damage to the Highway Network	125
10.10	Resilience to Britannia Bridge.....	125
10.11	A5025 between Camaes and Amlwch	126
10.12	Accident Analysis.....	127
10.13	Cumulative Impact (North Wales Connection Project).....	127
10.14	Joint Local Development Plan	128
10.15	Wylfa Newydd Supplementary Planning Guidance.....	128
10.16	Cycle link at Valley.....	129
10.17	Vehicle tracking	129
10.18	Use of clearways	130
10.19	Mode-share targets.....	130
10.20	Further corrections.....	130

11	Local Impact Report – Waste Management.....	139
11.1	Introduction	139
11.2	Assessment of existing waste management capacity	140
11.3	Impact on waste management infrastructure	141
11.4	Transportation of waste	142
11.5	Economic benefit from waste management.....	142
11.6	Monitoring and Mitigation.....	144
11.7	Funding of monitoring and additional waste management mitigation	144
12	Local Impact Report – Lighting	145
12.1	Introduction	145
12.2	Clarification of environmental zones	145
12.3	Potential nuisance to individual properties.....	146
12.4	Quantitative assessment	152
12.5	Temporal Assessment.....	153
12.6	Construction Detail	153
12.7	Control measures for construction lighting.....	153
12.8	Colour temperature of LED luminaire	154
12.9	Ecological impact criteria	154
12.10	Ecological impact criteria at Cemlyn Bay	154
12.11	Compliance monitoring	155
12.12	Existing Power Station.....	155
12.13	Dimming	155
12.14	Site Campus lighting.....	156
13	Local Impact Report – Air Quality	157
13.1	Introduction	157
13.2	Issue 1 – Adoption of WHO guideline value	157
13.3	Issue 2 – A55 layby	159
13.4	Issue 3 – Further detail requested	161
14	Local Impact Report – Noise and Vibration	163
14.1	Introduction	163
14.2	Well-being of Future Generations (Wales) Act 2015.....	163
	<i>Embedded mitigation</i>	163
	<i>Good practice mitigation</i>	163
	<i>Noise and vibration monitoring</i>	164
	<i>Off-Site Mitigation</i>	164
14.3	Practicality of mitigation	164
14.4	Eglwys Sant Padrig Church and Cemaes Primary School.....	166
14.5	Blasting strategy	166
14.6	Schedule of requirements and conditions.....	167
a)	Restrictions on total number of daily vehicle movements and movements during peak periods;	167
b)	Weight limits on construction traffic;.....	167
c)	Routing of traffic;	167
	<i>a) Daily and peak period vehicle movements</i>	167
	<i>b) Weight limits on construction traffic</i>	167

c) Routing of traffic.....	168
d) Construction/operation Hours.....	168
e) Sequencing of construction operations.....	168
f) Noise, dust and odour management.....	168
g) Community consultation on issues/activities likely to significantly impact upon amenity	168
14.7 Health and well-being of workers.....	168
14.8 Local Noise Mitigation Strategy	169
Secondary glazing	170
Double glazing.....	170
Acoustic ventilation	170
Acoustic treatment for external doors	171
Internal solar blinds or blackout blinds.....	171
Mitigation of noise at businesses.....	171
14.9 Financial contribution for Environmental Health staff.....	172
15 Local Impact Report – Community.....	173
15.1 Introduction	173
15.2 Leisure	173
Leisure Facilities	173
15.3 Community cohesion	176
Community Liaison and Communications	194
15.4 Utilities and Infrastructure	195
15.5 DCO Requirements and Obligations.....	196
16 Local Impact Report – Cumulative Impacts	198
16.1 Introduction	198
16.2 Reasonably Foreseeable Future Projects.....	198
16.3 Wylfa Newydd and the North Wales Connection Project	199
16.4 IACC analysis of cumulative effects.....	200
16.5 Mitigation	201
17 Local Impact Report – Wylfa Newydd Development Area	203
17.1 Introduction	203
17.2 Planning policy.....	203
17.3 Landscape	205
17.4 Visual.....	211
Context	211
Impacts and evidence base	211
Policy position.....	218
Gaps in information.....	220
17.5 Historic environment.....	223
Issue 1	224
Issue 2	227
Issue 3.....	227
Issue 4	229
Issue 5.....	236
Issue 6.....	237

Issue 7	238
Issue 8	239
Issue 9	240
Issue 10	240
Issue 11	241
Issue 12	241
Issue 13	242
Issue 14	243
17.6 Ecology	244
17.7 Hydrology and groundwater	249
<i>Surface water drainage design</i>	249
<i>Off-site flood risk</i>	251
17.8 Land contamination	252
Issue 1	253
Issue 2	253
Issue 3	253
Issue 4	254
Issue 5	254
Issue 6	254
17.9 Soils and geology	254
17.10 DCO requirements and s106 obligations	256
<i>DCO requirements</i>	256
<i>Planning obligations</i>	257
18 Local Impact Report – Site Campus	259
18.1 Introduction	259
18.2 Planning policy	259
18.3 Recreation	261
18.5 Health	264
<i>The provision of services</i>	264
<i>The timing/phasing of the services</i>	265
18.6 Design	266
18.7 DCO requirements and planning obligations	267
19 Local Impact Report – Dalar Hir	269
19.1 Introduction	269
19.2 Planning policy	269
19.3 Landscape and visual	271
<i>Detailed lighting scheme</i>	272
<i>Assessment of visual effects</i>	272
<i>Assessment of residential views</i>	273
<i>Assessment of effects on Gwyddfor Residential Home</i>	273
<i>Requirement for additional on-site planting and off-site planting</i>	273
<i>Update of Extended Phase 1 Habitat Survey figures</i>	274
<i>Important hedgerows</i>	275
<i>Fencing and other security measures</i>	275
<i>Decommissioning and post-operation strategy</i>	276

19.4	Hydrology and groundwater	277
	<i>Approach to the management of construction activities.....</i>	<i>277</i>
	<i>Flood risk at Dalar Hir</i>	<i>277</i>
	<i>Application of SuDS and water quality.....</i>	<i>279</i>
	<i>Llynau y Fali - Valley Lakes SSSI / Llyn Dinam SAC.....</i>	<i>280</i>
	<i>Package treatment plant.....</i>	<i>281</i>
	<i>Existing Well within Park and Ride site.....</i>	<i>281</i>
19.5	Traffic and transport.....	282
	<i>Dalar Hir Junction – LIR Paragraph 1.2.31 - Modelling and Operation</i>	<i>282</i>
	<i>Dalar Hir Junction – LIR Paragraph 1.2.32 and 1.2.33– Traffic Flows</i>	<i>283</i>
	<i>Dalar Hir Junction – LIR Paragraph 1.2.34 1.2.35 – Design Issues.....</i>	<i>284</i>
	<i>Junctions 3 and 4 – LIR Paragraph 1.2.36 - Traffic Flows.....</i>	<i>284</i>
	<i>Monitoring of Travel Behaviour – LIR Paragraph 1.2.37.....</i>	<i>284</i>
	<i>Dalar Hir Bus Stop – LIR Paragraph 1.2.38.....</i>	<i>284</i>
	<i>Dalar Hir – Impact of Flooding – LIR Paragraph 1.2.39.....</i>	<i>285</i>
	<i>Flood Risk and Impact on Transport – LIR Paragraph 1.4.16.....</i>	<i>285</i>
	<i>Capacity of Junction 3 and 4 – LIR Paragraph 1.4.17</i>	<i>285</i>
	<i>Queuing at entrance to Park and Ride facility – LIR Paragraph 1.4.17 and 1.4.18 parts a), b) and c)</i>	<i>285</i>
	<i>Traffic Flows – LIR Paragraph 1.4.18 parts d) and e).....</i>	<i>287</i>
	<i>Dalar Hir Roundabout – LIR paragraphs 1.4.19 and 1.4.20.....</i>	<i>287</i>
19.6	DCO requirements and planning obligations	287
19.7	Other matters.....	290
20	Local Impact Report – Parc Cybi Logistics Centre.....	346
20.1	Introduction	346
20.2	Planning policy.....	346
20.3	Landscape and visual	349
	<i>Effects on landscape fabric.....</i>	<i>349</i>
	<i>Enhanced planting</i>	<i>349</i>
	<i>Structural planting in the wider Parc Cybi site</i>	<i>350</i>
	<i>Colour of fencing and other structures, and height of lighting columns.....</i>	<i>350</i>
20.4	Historic environment	351
	<i>Issue 1</i>	<i>351</i>
	<i>Issue 2</i>	<i>353</i>
	<i>Issue 3.....</i>	<i>354</i>
20.5	Traffic and transport.....	354
	<i>Sustainable staff transport.....</i>	<i>354</i>
	<i>Construction traffic management.....</i>	<i>355</i>
20.6	Hydrology and groundwater	356
	<i>Groundwater level and SuDS</i>	<i>356</i>
	<i>Discharge rates.....</i>	<i>356</i>
	<i>A55 culvert capacity.....</i>	<i>357</i>
	<i>Clarification of abstraction licensing text.....</i>	<i>358</i>
20.7	DCO requirements and planning obligations	358
	<i>Response to the DCO requirements sought by IACC in section 1.6.....</i>	<i>358</i>

	<i>Horizon's response to the planning obligations sought by IACC.....</i>	<i>360</i>
21	Local Impact Report – Offsite Power Station Facilities	361
21.1	Introduction	361
21.2	Planning policy.....	361
21.3	Landscape and visual	364
	<i>On-site planting along boundaries</i>	<i>364</i>
	<i>Off-site planting mitigation</i>	<i>365</i>
	<i>Compensation measures.....</i>	<i>366</i>
	<i>Assessment of residential views.....</i>	<i>366</i>
	<i>Retention of boundary vegetation</i>	<i>367</i>
	<i>Lighting effects.....</i>	<i>367</i>
	<i>Effects on Landscape Fabric</i>	<i>368</i>
	<i>Monitoring impacts and reviewing mitigation</i>	<i>368</i>
21.4	Ecology	368
21.5	Hydrology and flooding	370
21.6	DCO requirements and planning obligations	371
	<i>Horizon's response to the DCO requirements sought by IACC</i>	<i>371</i>
	<i>Horizon's response to the planning obligations sought by IACC.....</i>	<i>373</i>
22	Local Impact Report – A5025 Off-line Highway Improvements	374
22.1	Introduction	374
22.2	Planning policy.....	374
22.3	Landscape and visual impacts.....	376
	<i>Issue 1 – Short-term landscape effects.</i>	<i>377</i>
	<i>Issue 2 – Effects on the Isle of Anglesey AONB.....</i>	<i>377</i>
	<i>Issue 3 – Effects on the landscape fabric</i>	<i>378</i>
	<i>Issue 4 – Additional mitigation measures at Valley.....</i>	<i>378</i>
	<i>Issue 5 – Off-site planting at Valley</i>	<i>378</i>
	<i>Issue 6 – PRow Improvements</i>	<i>378</i>
	<i>Issue 7 – Assessment of visual effects at section 3 Llanfachraeth</i>	<i>379</i>
	<i>Issue 8 – Off-site planting at Llanfachraeth</i>	<i>382</i>
	<i>Issue 9 – On and off-site planting at Llanfaethlu.....</i>	<i>383</i>
	<i>Issue 10 – Assessment of visual effects at section 7 Cefn Coch.....</i>	<i>384</i>
	<i>Issue 11 – Off-site planting at Cefn Coch</i>	<i>385</i>
	<i>Issue 12 – Field boundary enhancement.....</i>	<i>385</i>
	<i>Issue 13 – Gaps in information</i>	<i>385</i>
22.4	Historic environment.....	387
22.5	Hydrology and groundwater	388
	<i>Flood risk at Section 3 (Afon Alaw viaduct)</i>	<i>388</i>
	<i>Private Water Supplies</i>	<i>388</i>
	<i>Afon Cafnan natural bedrock cascade.....</i>	<i>390</i>
	<i>Drainage of road embankments.....</i>	<i>390</i>
22.6	Ecology	391
22.7	DCO requirements and planning obligations	393
	<i>Horizon's response to the DCO requirements sought by IACC</i>	<i>393</i>
	<i>Horizon's response to the planning obligations sought by IACC.....</i>	<i>398</i>

23	Local Impact Report – Conclusion	399
23.1	Introduction	399

[This page is intentionally blank]

1 Response to the Introduction to IACC's Local Impact Report

1.1 Introduction

- 1.1.1 Horizon Nuclear Power Wylfa Limited ("Horizon") is seeking a Development Consent Order ("DCO") to enable the construction, operation and maintenance of the Wylfa Newydd DCO Project. The DCO application was submitted on 1 June 2018 and accepted for examination by the Secretary of State for Business, Energy and Industrial Strategy on 28 June 2018. Examination of the DCO application began on 24 October 2018.
- 1.1.2 This document provides Horizon's response to the Local Impact Report ("LIR") submitted by the Isle of Anglesey County Council ("IACC") at Deadline 2 [REP2-061 to REP2-152]. Unless defined otherwise in this document, the terms used have the same meaning as in the General Glossary [APP-006].
- 1.1.3 A Local Impact Report is defined (in section 60(3) of the Planning Act 2008 ("PA 2008") as "*a report in writing giving details of the likely impact of the proposed development on the authority's area (or any part of that area)*". The content of the LIR is a matter for the local authority to the extent it falls within this statutory definition (Advice Note One: Local Impact Reports, April 2012).

1.2 Approach taken to responding to the LIR

- 1.2.1 Horizon has reviewed and considered the matters identified in IACC's LIR. Many of the issues raised have been overtaken by progress with Statements of Common Ground ("SoCGs") and answers to First Written Questions ("FWQs"), as well as progress made on the draft DCO s.106 agreement. However, it is also the case that some of the evidence submitted by IACC in the LIR has been published there for the first time, despite the ongoing SoCG discussions and requests for information.
- 1.2.2 Taking these factors into account, in order to respond to the LIR as comprehensively as possible in the time available, Horizon's response is structured with reference to the key themes raised, rather than seeking to address the LIR line-by-line. This approach has also been taken to assist the Examining Authority ("ExA") by avoiding unnecessary repetition.
- 1.2.3 Horizon's response follows the structure of the LIR comprising two sections: the first responding to IACC's project wide 'thematic issues'; and the second responding to IACC's 'site specific issues' (across both the Wylfa Newydd Development Area, the Site Campus, and the associated off-site development locations).
- 1.2.4 This chapter provides a general introduction to Horizon's response to the LIR and also serves as the specific response to the LIR's own introductory chapter (see paragraph 1.4 below).

1.3 Other LIRs submitted

- 1.3.1 A number of other stakeholders (Gwynedd Council and Conwy County Borough Council) have also submitted documents which have been titled Local Impact Reports. Section 60 of the PA 2008 provides that only local authorities which fall within section 56A are invited to provide a LIR. In accordance with PINS' decision that Gwynedd Council and Conwy County Borough Council are not relevant local authorities for the purposes of section 56A of the PA 2008, their submitted documents have been separately responded to as Written Representations rather than LIRs; only the IACC LIR is responded to in this document.

1.4 Response to IACC LIR Chapter 1: Introduction

- 1.4.1 Horizon has reviewed the introduction chapter of the LIR. The following text responds to the key issues presented there, with reference to the corresponding paragraph numbers where appropriate.
- Section 1.0: Introduction – this sets out the purpose, structure and foundations of the LIR, and Horizon has additional comment to make, but refers also to its Written Representation submitted at Deadline 2 [REP2-003] in terms of policy and legacy considerations.
 - Section 2.0: Pre-Application Consultation & Subsequent Engagement – this sets out IACC's view of Horizon's pre-application consultation, approach to and securing of mitigation, contingency funding approach, post-submission engagement, and collaboration with key public sector partners. Horizon has addressed specified matters as set out below.

1.5 Approach to mitigation

- 1.5.1 In response to paragraphs 2.2.2 to 2.2.4, it is not agreed that Horizon's approach is reactive. The approach throughout the emergence of the design has been to embed mitigation into the project where possible to avoid effects arising, and commit to mitigation including via the Codes of Construction Practice to avoid and mitigate any adverse effects. Further, the draft DCO s.106 agreement provides primarily for contributions which are triggered on implementation (for capital expenditure – recognising long lead times for items) or on a regular annualised basis for matters which are expected to require mitigation year-on-year. Accordingly, this comment is assumed to relate solely to the contingency funds, which form only a small part of the mitigation offer. Of the 45 planning obligation-led contributions, 40 of these are proactive and are triggered by reference to implementation or on an annual basis. Only five obligations are "contingency" based rather than triggered by reference to implementation or on an annual basis. (In addition to those five obligations, the Community Fund is reactive to applications and the Skills Fund is allocated by the jobs and skills sub-group.)

- 1.5.2 In respect of these five contingency funds, it is not correct that they are purely reactive (in that effects must necessarily have arisen for the contingency funds to be accessed). The Tourism (Contingency) Fund, Accommodation (Contingency) Fund, and Education (Contingency) Fund are all structured to release funds both where trends indicate an adverse effect is likely, as well as where there is an adverse effect revealed by monitoring. In addition, Horizon has signalled its willingness to discuss specific triggers for release of these funds. It is anticipated that the Health Fund is reactive to specific triggers for which formula-led mitigation payments are then due; hence the forecasting was considered of less importance. The Transport (Contingency) Fund is also anticipated to be similarly reactive to specific triggers, although this is a matter on which it is agreed further discussion is needed.
- 1.5.3 In terms of early release of key contributions, please refer to Horizon's response to paragraph 10 of IACC's Written Representation [REP2-218] which specifies the millions of pounds in capacity enhancement funding that Horizon is providing in the early years of development.
- 1.5.4 In respect of paragraph 2.2.5, Horizon considers that it has appropriately secured commitments to positive benefits and enhancements. For example, securing the jobs and skills implementation plan, Wylfa Newydd Employment and Skills Service, and Supply Chain Action Plan, via the draft DCO s.106 agreement. In addition, the early capacity enhancement funding will kick start delivery of new home building.

1.6 Securing of mitigation

- 1.6.1 In respect of paragraph 2.3, Horizon considers that mitigation has been appropriately secured. Comments on the proposed approach of WNMPOP allocation of the contingency funds is provided in Horizon's response to paragraph 10 of IACC's Written Representation [REP2-218].
- 1.6.2 In terms of the CoCPs, Horizon has always acknowledged that the Wylfa Newydd CoCP and sub-CoCPs would be further refined during Examination, in response to input and comments from the Examining Authority, other interested parties and stakeholders. Horizon has already submitted pro-active revisions of the Wylfa Newydd CoCP and relevant sub-CoCPs [REP2-031 to REP2-036] at Deadline 2 and will provide additional revisions at Deadline 4 (17 January 2019). It is Horizon's opinion that, by the close of the DCO Examination period, the Wylfa Newydd CoCP and sub-CoCPs will contain the necessary level of detail sought by the relevant stakeholders.

1.7 Contingency funding approach

- 1.7.1 In respect of paragraph 2.4.3, it is agreed that the quantum of the Community Fund is not yet determined, and needs to be further developed with stakeholders in light of the overall mitigation offer to ensure it meets the tests for planning obligations. The proposed eligibility criteria to access to the Community Fund is set out in the draft DCO s.106 agreement and is consistent with that agreed in the draft site preparation and clearance s.106 agreement.

- 1.7.2 In respect of paragraph 2.4 generally, and specifically paragraph 2.4.4: please see the responses above and Horizon's response to paragraph 10 of IACC's Written Representation [REP2-218].

1.8 Engagement with Horizon post-DCO submission

- 1.8.1 The record of engagement with IACC is set out in the draft Statement of Common Ground between Horizon Nuclear Power Wylfa Limited and the IACC, submitted at Deadline 2 [REP2-041].
- 1.8.2 The topic letters referred to by IACC in the LIR have been used to inform ongoing development of mitigation (including in the draft DCO s.106 agreement) but, given the timing of their receipt, Horizon considered that it would be most appropriate to use that information to feed into the discussions on the SoCGs (required for submission at Deadline 2) rather than both responding to topic papers and agreeing the SoCG separately. The information received from IACC in the topic letters was used as the basis of setting agendas for topic meetings and was then fed into the drafting of the SoCG tables.

2 Local Impact Report – Policy

2.1 Introduction

- 2.1.1 Horizon has reviewed chapter 2: Policy Framework of the IACC LIR. This section responds to the key issues presented within this chapter with reference to the corresponding paragraph numbers in chapter 2 where appropriate.
- 2.1.2 In responding to matters raised in chapter 2, Horizon refers to its Written Representation [REP2-002] submitted at Deadline 2 (4 December 2018) which provides a focused response (drawing together information in the Planning Statement) to the Wylfa Newydd specific policies of the Joint Local Development Plan (JLDP), as well as an update in relation to the IACC's Wylfa Newydd Supplementary Planning Guidance ("SPG"). The Written Representation does not supersede any of the policy analysis in the Planning Statement [APP-406] but provides supplementary information for the benefit of the Examining Authority. This document does not therefore repeat matters which have already been addressed in the Written Representation.
- 2.1.3 Key issues in this response are:
- Planning Balance;
 - Regard to the Well-being and Future Generation (Wales) Act 2015;
 - Compliance with PPW9;
 - Mitigation being reactive to impacts;
 - Skills mitigation;
 - Valuing, protecting and enhancing landscapes and historic environment; and
 - Positive legacy benefit.

2.2 Planning balance

- 2.2.1 Section 3 of Horizon's Written Representation [REP2-003] submitted at Deadline 2 (4 December 2018) provides an update on the status of the relevant documents and provides a focused analysis of the Wylfa Newydd specific policies in the JLDP. The Written Representation [REP2-003] should be referred to by way of a response to chapter 2: Policy: paragraphs 1.2.4 and 1.2.5 (regarding the relationship between the NPS and the JLDP); section 1.3 (in respect of the acceptability criteria); paragraph 1.27 (the status of the SPG) and section 2.0 (policy compliance).
- 2.2.2 In addition, NPS EN-1 and NPS EN-6 together form the primary policy basis for deciding DCO applications for nuclear NSIPs. Welsh national and local policy can be 'important and relevant' to decision making under section 105(2) of the Act – although where there is a conflict with an NPS, the NPS prevails for the purposes of decision making.

- 2.2.3 Welsh national and local policy also has an important role in the context of IACC LIR. This highlights that, whilst unlikely to be fundamental to the consideration of the principles of an NSIP, such policy may be particularly important, for example, in informing mitigation.

2.3 Regard to well-being goals and objectives

- 2.3.1 In response to the matters raised in paragraphs 2.1.2 and 2.18 of chapter 2, Horizon does not agree that it has failed to engage with the goals and objectives of the Well-being and Future Generation (Wales) Act 2015 ("the Act") and local objectives in respect of well-being. The Act makes clear that it is for the listed public bodies, including IACC among others, to work towards achieving all the seven well-being goals. Nevertheless, a summary of how the Wylfa Newydd DCO Project does engage with the goals in the Act is set out below.
- 2.3.2 The Wylfa Newydd DCO Project contributes to '**a prosperous Wales**' as it strongly supports the recognition of a low carbon energy, as set out in the Carbon and Energy Report [APP-423] and the Sustainability Statement [APP-426]. The Wylfa Newydd DCO Project will help with the development of a skilled and well-educated population and the provision of employment opportunities with reference to the Jobs and Skills Strategy [APP-411] and the flexible Skills Fund (secured through the DCO s.106 agreement) which will deliver training and employment initiatives to maximise employment and education opportunities for local communities.
- 2.3.3 The Wylfa Newydd DCO Project contributes to '**a resilient Wales**' by maintaining a biodiverse natural environment and providing the capacity to adapt to change including climate change as set out in section 5.6 of the Sustainability Statement [APP-426] and the Environmental Statement [APP-055 to APP-402].
- 2.3.4 The Welsh Language Impact Assessment ("WLIA") [APP-432], Health Impact Assessment Report ("HIA") [APP-429] and the Equality Impact Assessment ("EqIA") [APP-434] demonstrate how the Wylfa Newydd DCO Project assists with achieving '**a Wales of vibrant culture and thriving Welsh Language**', a '**a healthier Wales**' and '**a more equal Wales**'.
- 2.3.5 The Wylfa Newydd DCO Project engages with the goal to achieve '**a Wales of cohesive communities**' and this is addressed below. The Wylfa Newydd DCO Project will provide a positive contribution to global well-being whilst ensuring there is no harm to economic, social, environmental and cultural well-being of Wales consistent with achieving a '**globally responsive Wales**'.
- 2.3.6 Horizon refers to its response to the Examining Authority's First Written Questions [REP2-002] Q9.0.19 and Q10.1.1 which set out how Horizon has engaged with these matters through its application documents including the Sustainability Statement [APP-426], the Environmental Statement [APP-055 to APP-402] and other technical studies and plans that have informed the

development of the Wylfa Newydd DCO Project including the WLIA [APP-432], HIA [APP-429] and the EqIA [APP-434].

- 2.3.7 Contrary to paragraphs 2.1.2 and 2.18 of chapter 2, Horizon considers that the Wylfa Newydd DCO Application is consistent with the seven well-being goals recognised in the Well-being and Future Generation (Wales) Act 2015. It is also noted from paragraph 1.3.3 that these well-being goals now underpin the recently published PPW10 (referred to in below) with policies updated to reflect new Welsh Government strategies. On this basis it is considered that Horizon also complies with local goals and objectives in respect of well-being.

2.4 Compliance with PPW9

- 2.4.1 In response to the matters raised in paragraph 2.1.3 of the chapter 2, Horizon disagrees with the statement that the Wylfa Newydd DCO Project is not in compliance with PPW9. The Planning Statement [APP-406] paragraphs 5.4.35 to 5.4.45 set out the relevance of Welsh national planning policy to the Wylfa Newydd DCO Project, including PPW9. This is also addressed in section 3.2 of the Written Representation [REP2-003] submitted at Deadline 2 (4 December 2018) and in Horizon's response to First Round Written Questions [REP2-002] at Q11.1.33, Q17.0.1 and Q17.0.2.
- 2.4.2 PPW9 does not contain any specific policy relating to nuclear power generation. Whilst it does contain a range of broad objectives that are relevant to the Wylfa Newydd DCO Project (including promoting sustainable transport options, seeking to minimise impacts on the environment and local communities, protection of cultural heritage etc.), these were already policy objectives at the time that the NPSs were prepared and therefore, it can be concluded that they have been taken into consideration in their preparation.
- 2.4.3 It should be noted that PPW10 was published on 5 December 2018 and now supersedes PPW9. It should be noted that PPW10 does not contain any specific policy on nuclear and contains a number of broad policy objectives that are relevant to, and supported by, the Wylfa Newydd DCO Project. For the reasons given in Horizon's response to the Welsh Government Written Representation [REP2-003] Horizon considers that the Wylfa Newydd DCO Project also complies with PPW10.

Enabling better cycle access to the logistics centre

- 2.4.4 The Planning Statement [APP-406] Appendix E Logistics Centre paragraphs 4.4.169 to 4.4.173 provide an assessment of the proposed Logistics Centre against the NPS EN-1 and EN-6 and relevant Welsh national policy including PPW9. As detailed in the Design and Access Statement – Volume 3 – Associated Developments and Off-Site Power Station Facilities (Part 2 of 2) [REP2-030], the existing Lôn Trefnath Cycle Path to the south western edge of the site will be retained and integrated into the development thereby improving cycle access. Highways improvements at the site entrance/exit would extend to this cycle path.

Provide cohesive communities and improve access to service, cultural opportunities and recreation facilities

- 2.4.5 The Community Cohesion Report [APP-097] provides an assessment of the potential community-related effects of non-home-based workers arriving in the area. This draws on various other assessments in the application, including the project-wide socio-economic assessment of the Wylfa Newydd DCO Project (Chapter C1 – Socio-Economics of the Environmental Statement [APP-088]), the WLIA [APP-432], EqlA and HIA [APP-429]. In addition, the draft DCO s.106 agreement provides for Horizon to fund an IACC Community Involvement Officer and to itself employ a Community Involvement Officer, whose roles include:
- Supporting the integration of the workforce and dependents;
 - Promoting community cohesion; and
 - Supporting the integration of incomers into host communities.
- 2.4.6 The draft DCO s.106 agreement secures contributions for upgrades to existing indoor and outdoor leisure facilities (including the Amlwch and Holyhead Leisure Centres) which will improve access to recreational facilities for local communities beyond the construction period.
- 2.4.7 Financial contributions will also be secured under the s.106 agreement for maintaining and improving the public rights of way networks within the vicinity of the WNDA as well as the delivery of new public rights of way networks.

Promote safe, cohesive communities and addressing impacts on leisure and recreation, and open space and use of walking routes.

- 2.4.8 This objective is largely addressed above. In addition however, the Workforce Management Strategy [APP-413] establishes a series of key principles for a Code of Conduct for the construction workforce. These include measures specifically relating to community cohesion including (among others) attendance on training programmes including information on community relations and demonstration of respect and appreciation for the Welsh language and culture.
- 2.4.9 The Community Fund (secured through the draft DCO s.106 agreement) will seek to provide funding for localised issues resulting from the Wylfa Newydd DCO Project such as those associated with leisure facilities, recreational resources and open spaces, along with other unforeseen effects.
- 2.4.10 Overall the Site Campus provides a range of facilities, which will provide on-site entertainment, medical facilities, outdoor recreation and high quality public spaces, which will allow Horizon to keep more workers on-site, reduce the impact on the local community and thus manage the workforce effectively.

2.5 Reactive to Impacts

- 2.5.1 In response to the matters raised in paragraph 2.1.7 of the Policy Chapter, it is not agreed that the Wylfa Newydd DCO Project is generally reactive to effects.
- 2.5.2 The Wylfa Newydd DCO Project has been designed to avoid effects as far as possible including the use of embedded mitigation which includes all those measures which avoid or reduce environmental effects that are directly incorporated into the design of the development in addition to good practice measures which will be followed by Horizon and its contractors and are detailed in the Wylfa Newydd CoCP [REP2-031] and sub-CoCPs [REP2-032 to REP2-036, REP2-373]. The measures in these documents seek to avoid, minimise and mitigate the potential effects rather than being reactive to impacts.
- 2.5.3 Since the submission of its application for a Development Consent Order, Horizon has been working diligently with key stakeholders through the Statement of Common Ground (SoCG) process. This has facilitated the identification of additional mitigation measures and further detailed development of mitigation measures already identified.
- 2.5.4 In respect of the mitigation proposed to be secured in the s.106 agreement, the second draft agreement was issued to IACC on 30 November 2018 in accordance with the timetable set out in the Development Consent Order Section 106 Agreement Status Note [REP1-010]. This draft DCO s.106 agreement has been provided to the Examining Authority at Deadline 3 (18 December 2018). The draft DCO s.106 agreement proposes obligations which Horizon must comply with on commencement of the development, and financial obligations which must be paid on implementation or early in the development (as well as annual payments). This offer includes substantial upfront and annual financial payments comprising over £3.7 million in contributions payable upon implementation and over £13.76 million within the following year (which includes significant capacity enhancement payments provided early to enable delivery of long lead items such as housing capacity in advance of peak construction).
- 2.5.5 Horizon has carefully considered these mitigation proposals and considers they are an appropriate, evidence based, approach to managing effects, which are compliant with the tests for planning obligations.
- 2.5.6 In respect of the contingency funds which have been proposed in five key topic areas (tourism, education, accommodation, health and transport), these funds are reactive to a degree, by their very nature. They are designed as a contingency in the event that committed mitigation is insufficient to manage an effect. However, to ensure that these funds do not sit unused until an effect emerges, the draft DCO s.106 agreement already provides that the Tourism (Contingency) Fund, Accommodation (Contingency) Fund, and Education (Contingency) Fund are released both in the event an adverse effect arises and where monitoring reveals trends that indicate that an adverse effect is

forecast to arise. Horizon is willing to discuss similar wording for the Health (Contingency) Fund and Transport (Contingency) Fund, although these are anticipated to be based more heavily on set triggers.

2.6 Skills mitigation

- 2.6.1 In response to the matters raised in paragraph 2.1.8 of chapter 2, the draft DCO s.106 agreement incorporates a number of employment, skills and supply chain mitigation measures in Schedule 4. Among other measures it commits Horizon to establish the Wylfa Newydd Employment and Skills Service (WNESS), Supply Chain Action Plan and Jobs and Skills Implementation Plan.
- 2.6.2 Horizon undertakes to:
- Support the WNESS;
 - Operate the Supply Chain Portal in accordance with the Supply Chain Action Plan;
 - Implement and continuously update the Jobs and Skills Implementation Plan.
- 2.6.3 Together these measures will engage the local supply chain and maximise local employment opportunities at the Wylfa Newydd DCO Project. These measures will be backed by a flexible Skills Fund which will be available for training and employment initiatives that may be identified by the Jobs and Skills Sub-Group. The enhancement of local skills, and initiatives such as Horizon's apprenticeship programme, will provide lasting benefits beyond the construction period.

2.7 Valuing, protecting and enhancing landscapes and historic environment

- 2.7.1 In response to the matters raised in paragraph 2.1.9 of chapter 2, the national and local policy context that applies to matters of cultural heritage is set out in Part 6.4 of the Planning Statement [APP-406] under Historic Environment. Of particular relevance, it summarises the key cultural heritage policies from NPS EN-1, PPW and the JLDP between Gwynedd County Council and IACC. Horizon's responses to First Written Questions [REP2-002] FWQ6.0.8 and 6.0.9 further demonstrate how the proposals will value, protect and enhance the historic environment. Furthermore, the draft DCO s.106 agreement submitted at Deadline 3 (18 December 2018) incorporates a number of environment and historic heritage mitigation measures in Schedule 11.
- 2.7.2 The Planning Statement [APP-406], starting at paragraph 6.4.216, provides a policy analysis of landscape and visual impacts (which is identified as both a Generic Impact in NPS EN-1 and a Nuclear impact in NPS EN-6). This includes the relevant NPS policy and relevant Welsh national and local policy (including this criterion of Strategic Policy PS9). This assessment is not reiterated here. The Landscape and Habitat Management Strategy ("LHMS")

[APP-424 and APP-425] applies to the WNDA and will be a certified document. Landscape and habitat details for the WNDA will be designed in accordance with the landscape and habitat principles established in the LHMS, as secured by a DCO Requirement.

2.8 Delivering a positive legacy benefit

- 2.8.1 In response to the matters raised in paragraph 2.1.10 of chapter 2, it is not agreed that the Wylfa Newydd DCO Project fails to deliver a legacy benefit. Section 4 of Horizon's Written Representation [REP2-003] submitted at Deadline 2 (4 December 2018) provides a detailed summary of the legacy benefits of the Wylfa Newydd DCO Project beyond the construction period.
- 2.8.2 In particular it is not agreed that the use of the site campus means that Horizon avoids legacy benefits. Horizon is proposing a £10,000,000 accommodation capacity enhancement contribution (split 75/20/5 between IACC, Gwynedd and Conwy). This will enable:
- Interventions to stimulate supply of latent accommodation;
 - Providing new build permanent housing, including Affordable Housing;
 - Bringing empty homes back into use.
- 2.8.3 While accommodation will initially be used by the workforce, this is for a temporary period only and will leave Anglesey, Gwynedd and Conwy with significant stocks of new and upgraded accommodation.
- 2.8.4 Additionally since the issue of the draft DCO s.106 agreement Horizon has reconsidered its position on direct delivery of residential units and is now willing to commit to early delivery of the Madyn Farm Site in Amlwch. This is set out in more detail in the response to chapter 8: Housing, LIR.
- 2.8.5 In terms of Dalar Hir, once the construction phase of the Wylfa Newydd DCO Project is completed it is not clear what legacy benefit a park and ride in this location would have. Horizon considers the focus of the legacy benefits is more appropriately directed to improvements to housing, increasing the capacity of the supply chain, and the upskilling of the local community rather than retention of project-specific temporary infrastructure, where it may not be appropriate. Horizon's intention is to restore the land after construction, but Horizon is open to discussing alternative legacy uses at the appropriate time.

2.9 Conclusion

- 2.9.1 As set out in Section 3 of Horizon's Written Representation [REP2-003], the Wylfa Newydd DCO Project is compliant with Welsh national and local planning policy (including the JLDP and SPG) where it is considered 'important and relevant' to decision making under section 105(2) of the Planning Act 2008. However, it is emphasised that to the extent that there is any conflict between NPS EN-1 and NPS EN-6 and local planning policy, the policies in the NPS will prevail because they form the primary basis for decision making. Therefore, in respect of the matters identified by IACC in

chapter 2 paragraph 2.1.12 as being 'non-compliant' with the JLDP and SPG, it is Horizon's position that the NPS provisions prevail and/or are already addressed by the proposed mitigation measures which effectively offset any adverse effects to the extent that they are acceptable in the context of NPS EN-1 and NPS EN-6.

- 2.9.2 In conclusion, the Wylfa Newydd DCO Project as a whole is, therefore, compliant with the NPS policy and any relevant national and local policy including the JLDP and SPG.

3 Local Impact Report – Local Employment

3.1 Introduction

3.1.1 Horizon has reviewed chapter 3: Economic Development - Local Employment of the IACC LIR. This document responds to the key issues presented within that chapter, with reference to the corresponding paragraph numbers in the LIR chapter where appropriate. Key issues in this response are:

- Local employment
- The risk of economic displacement
- Skills gap analysis
- Information gaps
- Obligations and requirements

3.1.2 For ease of reference the following three acronyms are used extensively in this response:

- Jobs and Skills Strategy (JSS) – the strategy for maximising local employment at Wylfa and managing impacts on the wider area;
- Jobs and Skills Implementation Plan (JSIP) – which delivers the JSS;
- Wylfa Newydd Employment and Skills Service (WNESS) – The body that will be established with partners to deliver the commitments in the JSS, via the JSIP secured through the draft DCO s.106 agreement.

3.2 Local Employment

3.2.1 Horizon will create a significant number of jobs in an area where more employment is needed, and a substantial package of measures has been proposed to help make the most of this Project benefit locally.

3.2.2 It is the policy of both Welsh Government (“WG”) and IACC to create more jobs on Anglesey. WG has designated Anglesey as an Enterprise Zone. The first objective of the Enterprise Zones is to “Grow the local economy and provision of new jobs”. The Anglesey Enterprise Zone is focused on the energy sector. IACC has adopted a Local Plan which includes a housing target that is explicitly based on an increase in the number of jobs on the island¹.

3.2.3 These policies aim to address Anglesey’s fundamental economic problem which is that it does not have enough jobs and, in particular, it does not have enough full-time, year-round jobs.

¹ <https://gov.wales/topics/businessandeconomy/growing-the-economy/enterprisezones/?lang=en>

- 3.2.4 Table 4-11 (Comparative Job Densities by Area) in ES Appendix C1-1 Socio-economic Baseline Report [APP-095] shows that Anglesey has far fewer jobs per working age resident (0.63) than either North Wales (0.79) or Wales as a whole (0.74). Anglesey would require an additional 3,500 jobs to achieve the average for Wales (and 5,000 to match North Wales).
- 3.2.5 Horizon is therefore helping to deliver a key government policy, the objective of which is to address the recognised lack of jobs in Anglesey.
- 3.2.6 IACC is already planning for this growth. In paragraph 5.4.5 of chapter 3 of the LIR, the IACC states that its housing target would lead to an increase in out-commuting from Anglesey, as more housing is provided than is required to fill jobs on the island.
- 3.2.7 The Wylfa Newydd DCO Project is therefore an important part of the solution to the main labour market problem facing Anglesey. Horizon believes its package of investment through the Jobs and Skills Strategy (JSS) and accompanying Skills Fund will enable the benefits of the Project to be enhanced and wider labour market risks to be managed.
- 3.2.8 IACC states at paragraph 1.5.3 that the level of estimated local employment is “unacceptably low” and that more could be achieved “without significantly increasing the risk of displacement.”
- 3.2.9 However, IACC then goes on to state that the proposed use of local labour will cause displacement that would be a negative impact of the project. This is dealt with in more detail below.
- 3.2.10 Horizon’s assessment is based on what it believes is a realistic share of both employment at Wylfa and the capacity of the local labour market to deliver it. Horizon has put in place a range of measures that seek to ensure that the number of home-based (“HB”) workers is delivered and that this is focused in Anglesey and North Wales. The WNESS will be key to achieving this and Horizon will require its contractors to advertise all external vacancies through the WNESS and for there to be a period of exclusivity during which they are only advertised through the WNESS and only to local residents.
- 3.2.11 The LIR chapter 7: Education and Skills makes similar points about the lack of ambition in local recruitment in paragraph 4.1.1. Sections 4.1 and 4.2 of that chapter address the issue of maximising local labour participation in the construction and operational phases and set out a number of reasons for Horizon to invest in education to enhance the quality of school leavers.
- 3.2.12 Horizon supports IACC’s aspiration to improve attainment among school leavers and has set out its proposals in section 7 of the JSS. This will be supported by a ring-fenced element of the Skills Fund. It has also committed through the JSSIP to update its education strategy. Further detail on the proposed activity with schools to support the operational workforce is set out below.
- 3.2.13 In its response to the chapter 7: Education and Skills of the LIR, Horizon sets out its position that its plans will not have an adverse impact on schools that

requires additional mitigation beyond that already identified. The draft DCO s.106 agreement provides for £1,000,000 upfront capacity enhancement for which Horizon has noted to IACC the need to agree an appropriate allocation to deliver capacity enhancement (which could include anything from physical capacity to teaching capacity). Additionally, a further £3,000,000 is proposed for contingency funding in the event additional adverse effects are forecast or emerge.

- 3.2.14 IACC also raises a number of issues about the level of jobs available and the training required to support it.
- 3.2.15 At paragraph 1.5.8 IACC states that it wants more of the higher skilled roles to be “made available to local workers.” This may not be the best way to understand how local recruitment will work. Horizon cannot choose which jobs are made available – that will be a function of the staff resource that contractors bring to the project. Horizon is not reserving higher level jobs for non-locals and nor can Horizon insist that contractors make higher level jobs available.
- 3.2.16 The ES assessment is based on the fact that the higher or more specialist level of skill a job requires, the less likely it is to be found in any particular local area and the more likely it is that it will need to be drawn from a wider area. Horizon’s commitments, including the JSS and Skills Fund will benefit local employment, but do not change that natural characteristic of labour markets.
- 3.2.17 At paragraph 1.5.9 of chapter 3, IACC also requests specific information on which training courses will need additional places and at what level. Horizon has provided as much information as it currently has (including a recent update to the Jobs & Skills Working Group of which IACC and WG are members) and has committed to regular updates when more information is available. The next milestone for this is likely to be the end of Q2 2019, with at least quarterly updates available thereafter.
- 3.2.18 Horizon does not believe that a commitment to expand provision of specific courses is the right course of action at this point. Decisions on increasing capacity can be taken through the Jobs & Skills Working Group and informed by the JSIP which will keep the need for training under review.
- 3.2.19 The reality is that it is impossible to predict with certainty the number and type of available “new” jobs on any major project due to the fact that much of the supply chain will bring with it suitably qualified and experienced personnel (some of whom will be local residents). The opportunity is to maximise the potential for local candidates to access those vacancies likely to come to the wider market. Hence the assessments made for the potential for HB workers in occupational groupings. With the appointment of Horizon’s Project Management Contractor, the knowledge of labour requirements is growing and Horizon has committed to sharing forecasts as they develop over time.

- 3.2.20 Many of the roles will be created within the supply chain companies who themselves will already have a skilled pool of labour from which to draw in order to staff the project. These individual companies will inevitably offer employment first to those with the requisite skills within their own workforce. Local employment opportunities are likely to be created locally by the presence of skills gaps (where a significant volume outstrips the available supply) or where part of the supply chain is unable to source someone with suitable skills from within, that results in a need to recruit externally.
- 3.2.21 As set out above, priority for local workers to access vacancies will be achieved through Horizon's commitments to the WNESS, including periods where vacancies are exclusively advertised to local residents.
- 3.2.22 It is for this reason that the JSS (and by extension the JSIP) focuses on maximising opportunities for local people in occupations that meet the following criteria:
- Those which are in high demand at Wylfa Newydd;
 - Those for which there are existing skills shortages in the construction industry; and,
 - Those for which there is a reasonable prospect of workers being trained locally to achieve the necessary standards.
- 3.2.23 The JSIP focuses on training provision for such roles in a way that is consistent with the approach set out in the strategy, and aims to provide the means by which local people are suitably skilled to compete for roles that are likely to be recruited externally. For example, in relation to general labouring roles, carpentry, scaffolding and steel-fixing, the JSIP sets out Horizon's intention to agree the content of and create training provision to meet the competency requirements for these roles. This is intended to provide local people with the best possible prospect of securing employment in the roles it anticipates will be in demand.
- 3.2.24 Training in such roles also maximises the opportunities for local people to secure ongoing employment in the construction sector after completion of the Project. More specialist skills are less likely to be in regular demand locally in future.
- 3.2.25 Horizon aspires to build and operate a world class nuclear facility capable of operating in the top decile of nuclear power stations worldwide. To do this safely and efficiently, Horizon will aim to attract and retain the best talent to do so. In addition to qualifications, attitudes and behaviour are key indicators in selecting talent for Wylfa Newydd.
- 3.2.26 In terms of the operational phase, Horizon believes that to ensure local people feature heavily in the station compliment, it must do three things:
- Set the required standards and communicate them,
 - Enthuse children and young adults to consider a career at Wylfa Newydd,

- Provide support and advice to children and young adults and those that might seek employment at Wylfa Newydd.
- 3.2.27 Horizon sees skills and education as a vital component to successful construction and operation of Wylfa Newydd. For many years, Horizon has communicated the required standards for the operational workforce through its careers route maps. These have been available to schools, colleges and universities and are prevalent at careers fairs, county shows and in outreach events attended by Horizon. These career route maps, supplemented with career profiles of individuals within the Horizon organisation, outline the key departments within the operational power station, a short outline of the posts available in those departments and the necessary routes and subjects of study required to obtain those roles.
- 3.2.28 Horizon needs a sustained pipeline of workers for the Wylfa Newydd DCO Project and has, for many years, been active in schools engagement. Starting with primary children, Horizon's schools engagement, branded under the 'Dyfodol/Futures' banner has engaged with younger children to trigger an enthusiasm for the environment, energy and STEM subjects, morphing into targeted engagement on energy, nuclear and STEM subject for older school children. The engagement includes resources for teachers and students, materials for demonstrations and hundreds of hours of volunteer time in attendance at STEM events, careers fairs, the Big Bang, careers options events and parents' evenings. Many of the Horizon team are qualified STEM Ambassadors and freely give of their time to enthuse children for STEM subjects. In addition to advising and coaching on Wylfa Newydd entry requirements and STEM subjects, Horizon conducts many sessions on softer skills such as CV writing, interview techniques and other such interventions to help equip young people with the skills they need to succeed on merit. In order to provide children with an insight into the world of work and potential careers at Wylfa Newydd, Horizon provides a Work Insight Week for two age groups each year, teaching children interview and interpersonal skills, public speaking skills and about the nuclear industry.
- 3.2.29 There are a number of routes into the operational utility for Wylfa Newydd:
- From the open jobs market;
 - From the existing nuclear industry;
 - Transfer from the existing Horizon business;
 - Apprentices; and
 - Graduates.
- 3.2.30 Horizon has held numerous discussions with Magnox and has participated in a number of talks with teams at Wylfa and Trawsfynydd in order to educate the staff as to the standards required, timelines as to when jobs will become available and the nature of the technology to be used at Wylfa Newydd. Provision of career route maps, job profiles and other such information is freely available and widely distributed through attendance at open surgeries, county

shows, Eisteddfod and other public facing events to encourage and educate the wider population as to the opportunities available at Wylfa Newydd.

- 3.2.31 In order to ensure a sustained pipeline of talent for the future plant, Horizon has invested heavily in apprenticeships even in the pre-FID stage of the project. Prior to setting up Horizon's own Technical Apprenticeship Scheme, Horizon has provided £450,000 to Cwmni Prentis Menai to help secure apprenticeships for local young people. Horizon has a strong relationship with Grŵp Llandrillo Menai and works with the group to ensure that Horizon's future apprentice needs are communicated and any assistance that Horizon can provide is rendered. Horizon is currently in the third year of its Technical Apprenticeship and at the time of writing has 33 young people in employment with the business with the ultimate aim of working on the Wylfa Newydd site. Horizon's third year apprentices are currently working on nuclear power plants in Spain to gain the skills and practical experience needed to be able to operate at Wylfa.
- 3.2.32 Horizon's Jobs and Skills Implementation Plan (years 1-3) sets two main objectives on apprentices:
- To target an average of at least 2.3% of the on-site construction workforce (taken as a proportion of both manual and non-manual workforce on-site) for the Wylfa Newydd development are employed as apprentices. This would be measured against a target against the Full Time Equivalent (FTE) total workforce taken at the start of the relevant reporting year and include both existing apprentices and those new to company/project.
 - To operate and expand its Technical Apprenticeship Scheme throughout the construction period such that it is anticipated that 'graduates' from the Technical Apprentice Scheme will ultimately comprise approximately 20% of the site-based operational workforce.
- 3.2.33 On completion of their apprenticeship, Horizon's apprentices will be able to undertake overseas secondments to bring back valuable nuclear skills to the plant at Wylfa. In order to facilitate provision of high quality education, Horizon has provided £1m to help relocate the Group's engineering provision from an outdated 1950s campus to a purpose built suite at the Llangefni site. In leveraging the wider Hitachi Group, Horizon has been able to assist the Colleges of the group through provision of heavy machinery for use in the Heavy Plant Centre, substantial donations of power tools and media equipment. Horizon also provides technical advice and assistance to the College.
- 3.2.34 Horizon's graduate programme is run from the corporate centre and will provide high quality graduates to the operational business. In addition to universities across the UK, Horizon has a memorandum of understanding with Bangor University and works with the university to find opportunities for students and to help the University in nuclearizing their courses as well as participating in careers days and recruitment fairs.

- 3.2.35 Through the engagement of its Training Support Partner, Horizon intends to expand cooperation with Grŵp Llandrillo Menai and Bangor University to ensure that both institutions are equipped to continue to supply Wylfa Newydd with the talent it needs to operate as a top decile plant worldwide.
- 3.2.36 By continuing to engage at all points of the educational chain, providing support to educational and skills partners and communicating its entry standards, Horizon intends to ensure that local people are the qualified choice for employment at the station.
- 3.2.37 In respect of paragraphs 1.5.14 and 1.5.15 of chapter 3, IACC has requested clarification of the outage workers in terms of local employment.
- 3.2.38 Outages are transient activities for all nuclear sites, they require a highly skilled and experienced workforce for a short-period of time at each site. However, these activities are continuously occurring across the UK and the world, leading to suppliers basing personnel at a location which best supports the demand from multiple sites. Personnel are then mobilised to individual sites for each outage and provide a large financial benefit to the area for the duration of the outage.
- 3.2.39 For these reasons, while the outage workers will bring economic benefit to the area over the outage period, the outage workforce is not one for which a local employment target is appropriate or even possible. However, Horizon notes its commitment to developing STEM jobs and skills in the local community including through its ongoing promotion of the STEM Gogledd Project (being the programme set up by the Developer which establishes a programme ensuring the promotion of the subjects of science, technology, engineering and mathematics within schools in the local community), and funding under the £10 million Skills Fund (secured in the draft DCO s.106 agreement) including for STEM subjects to promote skills and interest in the nuclear and construction industries. This funding therefore does provide a route through to the outage industry for local people.
- 3.2.40 In terms of specific skills and experience:
- Work on a nuclear site requires personnel to be familiar with the highly regulated environment and to operate within nuclear standards and therefore a high proportion of workers need to have relevant experience. Maintaining an experienced and skilled work force requires training and exposure to nuclear sites which is not normally economic for an operator to maintain at their site.
 - Horizon is required to justify to regulators that it is acting as an intelligent customer when using contract organisations to perform work and therefore it must ensure all staff used are competent for their role.
 - Key inspection and maintenance must be performed by Original Equipment Manufacturers (OEM) who have a track record of similar work to ensure the appropriate standards are present and to ensure

warrantees are maintained. This will mean for example that Horizon must use:

- Specialist Hitachi personnel for maintenance of specialist ABWR equipment, for example Fine Motion Control Rod Drive and Reactor Internal Pump maintenance.
 - Specialist GE personnel for maintenance of specialist Turbine/Generator equipment.
 - Specialist Radiation Protection Technicians (of which Horizon will employ some, but not the numbers required for the intense outage period).
 - Specialist inspection personnel for inspection of the reactor vessel and other components with critical welds require specialist qualifications (for example In-Service Inspection and ABWR In-Vessel Visual Inspections).
 - Specialist nuclear fuel personnel for refuelling.
- Some items of equipment are proprietary with the intellectual property owned by the supplier, this limits who can be used to support work on this equipment to specific organisations approved by supplier.
 - The expectation is that Horizon will operate in the same manner as other nuclear sites (such as the EDF fleet and Magnox sites) which use contracts with suppliers who have a UK-wide presence and many years of experience of working on nuclear sites. The contracts for maintenance and outage support have not yet been put in place and will be competitively let, this is likely to result in contracts with large companies that can carry the financial risk and have sufficient personnel to meet the requirements the value of which will need to be justified to investors.

3.2.41 In summary, while the outage workforce can be expected to provide a financial benefit to the local economy, particularly the hospitality industry, outage work at any one site is only short-term. Due to the skills and experience to be maintained, this leads to teams than go from station to station. It is not therefore possible to impose local employment percentages on these contracts, although the Skills Fund and training provided by Horizon may lead to local personnel ultimately entering this industry.

3.3 Displacement

3.3.1 Horizon does not consider that the evidence supports IACC's position that displacement is likely because there are not enough workers on Anglesey.

3.3.2 Horizon notes that paragraph 1.5.17 quotes an example of how displacement arises, but does not define what displacement is. The official Government definition of displacement is set out in the HM Treasury Green Book which is then referenced in the Welsh Government's 'Guide to Developing the Project

Business Case' (2018)² which states that:³ *"Displacement is the degree to which an increase in economic activity promoted by an intervention is offset by reductions in economic activity elsewhere."*

- 3.3.3 The example given in paragraph 1.5.20 illustrates the point. The 600 people who took roles at Sizewell B do not represent displacement. They are simply people changing job. At paragraph 1.5.28 chapter 3 references the number of employers with vacancies that were hard to fill. Again, this is not displacement. Hard to fill vacancies are a feature of the economy at all points of the economic cycle. At the last peak of unemployment in Wales (in 2011) 29% of vacancies were hard to fill.
- 3.3.4 Paragraph 1.5.31 suggests that there is evidence from other major infrastructure projects of effects, including "artificial wage inflation." IACC does not provide this evidence in the LIR and so it is not possible to comment on it. Wage inflation is not a form of displacement nor is it bad for the economy – it is clearly good for the workers and increases their spending power which will in turn benefit other sectors of the local economy.
- 3.3.5 Paragraph 1.5.28 suggests that there is limited spare capacity in the labour market, but does not provide evidence to support that. Horizon's assessment sets out that there are significant numbers of local residents who are not working but who want to, or who are working but want more hours. There are also large numbers of Anglesey residents who commute off the island to work every day (with far fewer making the reverse journey) and IACC's LIR chapter 8: Housing acknowledges that without more jobs, that number would increase.
- 3.3.6 As acknowledged in paragraphs 1.5.25 and 1.5.26 there are pre-existing problems in some sectors. These include the fact that pay and conditions in these parts of these sectors can be poor. Horizon does not accept the suggestion that "mitigation must be identified to address these issues upfront" nor that "no mitigation is proposed." It is not the responsibility of Horizon to mitigate pre-existing issues. There is no evidence of a likely significant impact to which mitigation is definitely required. However, there is a risk of non-significant impacts and Horizon's proposals provide for that to be monitored and mitigated through the JSIP, the WNESS, the Skills Fund and through specific commitments to support early workforce planning in the care and health sectors.
- 3.3.7 IACC raises the risk of product market displacement at paragraph 1.5.38 and Annex 5C of the LIR raises a specific concern about locally produced foods being diverted to the worker campus. It states that, "this will starve the local tourism industry of the produce needed to differentiate the Ynys Mon 'offer.' This weakening of the links between the tourism sector and local producers

² <https://beta.gov.wales/better-business-cases-investment-decision-making-framework>

³ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/685903/The_Green_Book.pdf. Glossary, Page 109

on Anglesey will undermine the distinctive offer and support for farming, fishing and local craft producers.”

- 3.3.8 At this stage, Horizon has not determined its procurement process for either construction materials or food for the campus. Both could be locally procured which would provide benefits to the suppliers and local economy, but no decision has yet been made so no assessment of likely product displacement can be undertaken. Any displacement that did occur would reduce the net benefits of any such spending.

3.4 Skills Gap Analysis

- 3.4.1 It is unclear whether the analysis provided in paragraph 1.5.29 chapter 3 pertains to the skills needs of the whole area or is intended specifically to reference demand created by Wylfa Newydd. Nevertheless, it is true to say that nationally there is a critical need for low volume, niche skills such as high level STEM skills at Levels 4/5+ and this is recognised within the JSS.
- 3.4.2 Skills required at these levels are, however, broader than IACC's reference to NVQs. National Vocational Qualifications, particularly at Level 3 and above are in-work qualifications that recognise an individual's competency in meeting the National Occupational Standards of a given occupation. They are typically assessed against an employee's ability in the workplace through a combination of portfolio assessment and on-the-job observations.
- 3.4.3 As a result, NVQs for these skill levels are most likely to be used by employers on Wylfa Newydd as part of their approach to professional development of the workforce rather than as a means of gaining entry into the workforce. As has been noted elsewhere, Wylfa Newydd has committed through the JSIP to upskilling its own workforce over time with the intention of progressing people into higher-level, better paid roles and NVQs will undoubtedly be one mechanism by which this is achieved.
- 3.4.4 In addition, it should be emphasised that the shortage of higher level STEM skills is an issue of national concern and is being approached as such by the UK government as part of its Industrial Strategy. Recognising Horizon has a role to play in supporting the development of these skills as a project of regional and national significance, Horizon is committed to delivering apprenticeships, promoting STEM skills and career pathways through its educational outreach work, and has agreed to explore the creation of a bursary programme to provide support for certain higher and further education (HE and FE) routes that align with the skills needs of the Wylfa Newydd DCO Project.
- 3.4.5 Finally, in respect of level 3 skills referenced above, analysis undertaken in 2018 by the North Wales Economic Ambition Board, in partnership with CITB identifies a relative lack of construction provision at Level 3 within north Wales training providers. This has been shared with the Jobs & Skills Working Group and it identifies that the local colleges both offer level 3 courses in construction project managers and trades supervisors and both

could grow further if required. Horizon has supported this work through its engagement with the FE sector and is committed to doing so further, as set out within the JSS and supporting JSIP. As set out above, Horizon does not believe that a commitment to expand provision of specific courses is the right course of action at this point. The Jobs & Skills Working Group can review and consider this further in the future.

3.4.6 The CITB's report from 2017, Forecasting Wales Future Construction Skills⁴ analyses labour supply and demand and associated gap analysis for construction projects in the North Wales area totalling some £7,439,000,000 over the period to 2021 as well as taking a national view across Wales and a range of projects' labour requirements and available supply.

3.4.7 Whilst not directly informed by the CITB analysis, the JSS and draft JSIP aligns with a number of the core recommendations emerging from the reports including:

- Support for short term and longer term interventions to address identified skills gaps – with the JSIP identifying (as with the CITB report findings) the need for continuous and consistent provision that meets employers' needs, for example in wood trades, as well as approaches to training, upskilling and attracting new entrants where demand is prevalent
- Partnering to build a positive image of construction – through ongoing educational outreach activity and commitment to a wider schools and public awareness campaign on job opportunities and careers pathways – by working with CITB and Career Wales with a view to challenging negative and inaccurate stereotypes of the industry.
- Developing a demand-led curriculum with training providers – the JSIP proposes formalising the means by which Horizon's engages with the FE sector and other stakeholders to develop the training curriculum and highlights this as an action for early implementation. This step will help to deliver what CITB's report terms: "effective decision making regarding future curriculum development...supported by industry at local contractor level." Horizon would welcome the involvement of other projects and developments in this proposed group, recognising however that the needs of the Wylfa Newydd DCO Project vary significantly from those of the wider construction and house building sectors.
- Continued development of apprenticeships
- Maintain the evidence base - through Horizon's proposal to share up-to-date forecasting as it emerges on a quarterly basis from Q2 2019

4

https://www.citb.co.uk/global/research/forecasting_wales_future_construction_skills_final_dec_2017.pdf

onwards, more regularly than the proposed 6 monthly intervals suggested by CITB.

- 3.4.8 Although Wylfa Newydd and the North Wales Connection Project are relatively large individual schemes, they are less significant in the context of the overall construction workforce. The construction industry is made up of a large number of short-term projects and so aggregate demand fluctuates as projects start and stop. The demands from Wylfa need to be considered against the capacity of the construction industry as a whole. As set out in the JSS, the priorities for investment in training are highlighted as the trades within the construction industry where there is forecast to be significant growth and emerging skills shortages and where there is a reasonable prospect of local people being trained to fill any vacancies that arise.
- 3.4.9 Horizon's analysis in the Environmental Statement also takes account of wider background growth in the sector including a number of specific larger projects. IACC is wrong to say at paragraph 1.5.32 that Horizon has not provided any assessment of the cumulative labour effects of other projects. The assessment of these issues is set out in Chapter 15 - Inter-project cumulative effects of the Environmental Statement [APP-388].

3.5 Information Gaps

- 3.5.1 As set out above, supplying detailed analysis of what the competencies, qualifications and skills levels might be for individual occupations within the Wylfa Newydd workforce profile is unlikely to substantially increase the likelihood of locals gaining employment with the project. This is due to the fact that many of the roles will be created within the supply chain companies who themselves will already have a skilled pool of labour from which to draw in order to staff the programme. These individual companies will inevitably offer employment first to those with the requisite skills within their own workforce. Local employment opportunities are likely to be created locally by the presence of skills gaps (where a significant volume outstrips the available supply) or where part of the supply chain is unable to source someone with suitable skills from within, that results in a need to recruit externally.
- 3.5.2 Horizon has nonetheless provided a great deal of information including the draft SCAP and a recent update to the Jobs & Skills Working Group of which IACC is a member. Horizon has also committed to continuing regular updates when more information is available. The next milestone for this is likely to be the end of Q2 2019, with at least quarterly updates available thereafter.
- 3.5.3 The workforce information in the JSS and the JSIP is similar to that provided at the point of applications for other Nationally Significant Infrastructure Projects such as Hinkley Point C (HPC) and Thames Tideway Tunnel (TTT). Horizon's proposals for the WNESS are also similar to those in place for HPC and TTT, where the developer and Jobcentre Plus/Department for Work & Pensions will both provide staff to support a joint job brokerage service.

3.6 Obligations & Requirements

- 3.6.1 IACC makes a series of requests for further interventions to be secured. Horizon shares IACC's ambition to ensure that substantial opportunities for the local economy are realised. It believes that the draft JSIP, the WNESS and the Skills Fund together offer the appropriate approach to enhance benefits and avoid adverse impacts.
- 3.6.2 For the reasons set out in the skills gap analysis above, Horizon does not believe that a commitment to expand provision of specific courses is the right course of action at this point. The Jobs & Skills Working Group (of which IACC is a member) has agreed a draft JSIP that sets out the shared priorities for the first three years of the project. Horizon's intention is to work with partners to develop and shape the content of courses over the short term so that the provision of the necessary courses can be expanded at the right point in time in line with training lead times for specific trades and occupations.
- 3.6.3 The range of activity supported by the Skills Fund could also include return to work projects and top-up or nuclear-specific courses as requested by IACC. Notwithstanding Horizon's position on IACC's use of the term "displacement", it could also support all the mitigation measures raised in the construction phase Summary Table at 1.11 of chapter 3. It also supports some of those set out for the operational phase (for the reasons set out above, Horizon does not believe it is appropriate to create additional FE and HE places).
- 3.6.4 Monitoring is subject to ongoing discussions with IACC and others.

3.7 Conclusions

- 3.7.1 Horizon believes that the Wylfa Newydd DCO Project will deliver a strong positive economic benefit to Anglesey and North Wales during both the construction and operational phase.
- 3.7.2 It acknowledges IACC's concerns about the risks to the labour market, but does not believe there is evidence of likely significant displacement effects. There are also pre-existing recruitment issues in some sectors. Horizon therefore does not believe that it is its responsibility to provide mitigation for these issues.
- 3.7.3 Horizon believes that the flexible package of skills support measures it is putting in place (including the Skills Fund and the WNESS) are capable of both enhancing the benefits of the scheme and helping to manage the risk of non-significant impacts and the difficulties that may arise in recruitment for local businesses.
- 3.7.4 Horizon agrees with the measures set out in IACC's summary tables and looks forward to developing further the JSIP to turn these principles into practical measures once the construction phase gets underway.

4 Local Impact Report – Supply Chain

4.1 Introduction

4.1.1 Horizon has reviewed Chapter 4: Economic Development and Supply Chain of the IACC LIR. This section responds to the key issues presented within chapter 4, with reference to the corresponding paragraph numbers in the LIR chapter where appropriate.

4.1.2 The key issues identified in this response are:

- Collaboration/Supply Chain Action Plan (“SCAP”)
- Displacement
- Port of Holyhead
- Local Spend
- Contract opportunities for local and regional businesses
- Cemaes Bay / Amlwch
- Flexible supply chain fund revenue/capital funding
- Use of local regional materials/Môn Larder
- Horizon to build into its procurement strategy the need for commitment by major suppliers to establish long terms bases on Anglesey/north Wales and invest in the local labour force
- Corporate presence on Anglesey or north Wales

4.1.3 Horizon details below its response to the issues identified, and the requested mitigation by IACC.

4.2 Collaboration and Supply Chain Action Plan

4.2.1 Horizon has collaborated closely with IACC, WG and NWEAB in respect of supply chain issues. Discussions (listed below) have taken place on the development of the commercial strategy and the development of the framework to work with stakeholders to support the maximisation of supply chain opportunities arising from Wylfa Newydd. The meetings listed below are in addition to Statement of Common Ground discussions:

- 16 February 2017 – Supply Chain Update
- 04 July 2017 – Supply Chain Action Plan development discussion
- November 2017 – Supply Chain Service Terms of Reference/ Supply Chain Action Plan
- 05 March 2018 – Supply Chain Update (SCS ToR/ SCAP)
- 06 March 2018 – Procurement Portal Update (Competefor)
- 13 July 2018 – Contract Strategy Update
- 24 October 2018 – Supply Chain Update

- 11 December 2018 – Supply Chain Update/ Workshop SCAP
- 4.2.2 With reference to the SCAP (paragraphs 1.1.5 and 1.7.2 of chapter 4) Horizon has committed that this will be secured via the DCO s.106 agreement. IACC have been included in discussions on the SCAP (see above) and a draft copy of the SCAP has been shared with IACC for comment. The principles referenced in paragraph 1.7.3 are included within the draft SCAP which was shared on the 6 December 2018 and the following meetings/ workshops have been arranged to discuss and develop the SCAP collaboratively with IACC and other statutory stakeholders
- Workshop number 1 on SCAP, held on 11 December 2018
 - Workshop number 2 on SCAP scheduled for 29 January 2019
- 4.2.3 Following from these workshops and comments/review of the draft SCAP Horizon will issue a final draft for review/acceptance that will then be attached to the DCO s.106 agreement.
- 4.2.4 With reference to section 1.7.4, Horizon confirms agreement on these points, which duplicate those from the Draft Terms of Reference ("ToR") for the Supply Chain Service which is intended to be secured via the DCO s.106 agreement, which will be updated in this regard.
- 4.2.5 Horizon therefore believes that IACC's statement at paragraph 1.7.6 has been superseded and a clearer picture is now emerging in respect of the SCAP.
- 4.2.6 On the 11 December 2018 a workshop was held between IACC, the Welsh Government and Horizon to discuss the SCAP and the commercial approach to it. At the meeting it was agreed that all to clarify comments on the ToR for the Supply Chain Service by the 18 December 2018 and to share SCAP comments by mid-January 2019. At the workshop it was agreed that the following commitments would be included within the SCAP:
- Horizon will consult and inform Supply Chain Service Working Group (SCSWG) early in the procurement commercial workflow to optimise the opportunity for all parties to influence Horizon's procurement methodology. The main mechanism for this will be the regular monthly SCSWG meetings
 - Horizon to share the Commercial Procurement Workflow and use the Earthworks contract for the facilitation of construction of the Wylfa Newydd Development as the first opportunity to test this approach to ensuring early direct engagement with Tier 2/3/4 via Welsh Government, IACC and other channels – providing specific examples of contract qualifications and accreditations required
 - A draft Supply Chain Engagement Programme will be produced by 29th January 2019

- Key Performance Indicators will be agreed that will be used to monitor delivery of the SCAP. These will be recorded in the Terms of Reference for the SCSWG by the end of February 2019.
- The SCSWG will together identify current best/accepted practise for optimising opportunities for the Welsh Supply Chain in existing capital and EU contracts with examples or guidance to be exchanged on, or prior to, the next meeting on 29th January 2019.
- There will be SCWSG standing agenda items on updates from other relevant DCO working groups/Major Projects Oversight Group and the Engagement Programme

4.3 Displacement

- 4.3.1 With respect to section 1.8 Displacement and the impact upon Supply Chain Horizon believes the framework and structure it has developed via the Wylfa Newydd Employment and Skills Service (WNESS), the draft Wylfa Newydd Jobs and Skills Implementation Plan Yrs1-3, the draft Supply Chain Action Plan (SCAP) and the implementation of the Supply Chain Service provides the framework to support and mitigate any negative impact of displacement. Horizon also refers to its comments on displacement in its response to chapter 3 of the LIR.
- 4.3.2 The interaction and joint working between the Jobs and Skills group, including the WNESS as an integral part of this group and the Supply Chain Service will be a key interface. Therefore the implementation of the WNESS is identified within the SCAP.
- 4.3.3 Horizon through the SCAP will ensure monitoring of all tiers of the Supply Chain to better understand the sustainability of the supply chain and the extent to which suppliers undertaking works on the project could risk becoming fully reliant on Wylfa Newydd.
- 4.3.4 Horizon as part of its procurement process will review suppliers financial standing and their percentage of annual turnover against the value of the opportunity pre tender opportunity, only the supply chain members that pass this assessment will be eligible to tender for works.
- 4.3.5 With respect to section 1.3 (Anglesey Business Profile) as shared previously and now via the draft SCAP, Horizon is committed to working alongside IACC to support the maximisation of opportunities. This will include several initiatives such as continuing the Business Readiness programme that has been supported by Business Wales with events held on the island at Anglesey Business Centre and Msparc. As indicated in paragraph (1.7.3) the principles of the SCAP address all the matters raised and will ensure business have the best opportunity to be a part of the Wylfa Newydd Supply Chain.

4.4 Port of Holyhead

- 4.4.1 Horizon understands the IACC commitment to regenerate the Port and the desire for the Port to play a role in the supply chain (Table 6.0). However, the Wylfa Newydd DCO Project design, including the on-site Marine Off-Loading Facility, means that there is not currently a commercial role for the Port for the following reasons:
- The onsite MOLF is designed to mitigate road traffic impacts, this mitigation could not be provided if Holyhead were used
 - The timing of proposed port developments at Holyhead is not aligned with the Wylfa Newydd DCO Project's programme and would additionally provide a third-party risk to the project.
 - Horizon cannot use the port to bring in the Abnormal Indivisible Loads as they are too large to then transport from the port to the WNDA via the road network.
 - Open market procurement requirements mean that Horizon (and indeed any developer) could not commit at the development stage of the project to utilising any port. Horizon will select partners/tier 1 contractors against the most economical advantageous submission.
- 4.4.2 In addition to the above Horizon as part of its work to support suppliers maximising opportunities have been undertaking discussions with the Port of Holyhead as in addition to the MOHLF there will be a need for a civilian port to support the need to the project. This will support the transfer of mobiles/ bulk materials from sea vessels to barges. Please note similar discussion have taken place with other civil ports within the region and UK. This work will be sourced competitively in line with the commitments made within the SCAP and Horizons procurement policy.
- 4.4.3 Horizon would also confirm it has an agreement with the Port of Holyhead to collaborate on development plans for the port where it is possible and practical.

4.5 Local spend/Boom & Bust Scenario

- 4.5.1 For assessment purposes, Horizon has provided an indicative value of the spend likely to be captured locally. However, for a variety of reasons, the actual level of local spend is not something Horizon can commit to. Horizon has consistently discussed its competitive procurement requirements with IACC.
- 4.5.2 Horizon will implement a framework to facilitate local business the opportunities to be part of the supply chain, as previously stated several interventions will take place to support this position and commitment to maximisation of opportunities:

- Implement the ToR for the Supply Chain Service (secured under the draft DCO s.106 agreement)
 - Implement a supply chain portal where supplier registration and sharing of opportunities is simplified for the supply chain. This has now been implemented via Competefor and in place since early December 2018
 - Implement and collaboratively develop the SCAP with IACC. – A draft was shared with IACC on 6 December 2018.
 - Implement the Wylfa Newydd Jobs and Skills Plan, collaboratively with IACC, WG, DWP and local FE Colleges, Councils.
- 4.5.3 In respect of references to Hinkley Point C (HPC) Horizon does not believe that comparisons with HPC are useful. Geographically HPC is very different to Wylfa with better infrastructure (access to road network/ rail) and population centres meaning the supply chain of that area is not comparable in terms of sustainable access to other nuclear and energy projects to take advantage of a wider range of opportunities.
- 4.5.4 Although it should be noted that HPC's approach to utilising procurement best practice is very similar to Horizon's and as far as Horizon is aware HPC was not placed under geographical restrictions.
- 4.5.5 By way of example the Hinkley Point Supply Chain initiative (see <https://www.hinkleysupplychain.co.uk/>) provides for similar initiatives to those proposed in the SCAP, namely:
- Capturing the details of Somerset and South West businesses and mapping their core capabilities against Hinkley C project requirements.
 - Matching suppliers with EDF Energy and Tier 1 contractor work package requirements.
 - Co-chairing and enabling the Site Operations and Industrial Partner steering groups that oversee the developing supply chain response.
 - Communicating project and work package news and information to suppliers registered on this supplier portal.
 - Brokering relevant business support to help suppliers meet quality and safety standards.
- 4.5.6 In response to table 6 together with approaches previously identified within the chapter and the planned monitoring would support and negate the adverse effect surrounding 'a boom and bust' scenario. Horizon will be monitoring the supply chain to ensure sufficient resource is available and that suppliers are not over reliant on work associated with the development. Each project will consider the value of work against company's annual turnover to ensure it is sustainable. Another aspect identified within the SCAP will be the work and monitoring of other major projects within the region or neighbouring regions to support supplier's growth and utilise skills gained beyond the project.

- 4.5.7 Horizon as identified within the SCAP will work with others to help identify and promote the legacy benefits of the project and that the developed supply chain will be a sustainable one.

4.6 Contract opportunities for local & regional businesses

- 4.6.1 Horizon will openly share opportunities for the Wylfa Newydd DCO Project however it cannot allocate opportunities on a local or regional basis. It will work via the Supply Chain Service and the actions identified within the SCAP to best prepare and allow businesses in the locality and region to take advantage of the opportunities. It will also promote its supply chain for sub-tier packages where practical and possible through the procurement portal.

4.7 Flexible supply chain fund revenue/capital funding

- 4.7.1 Horizon cannot commit to any form of revenue funding or capital support for the supply chain. However, there are similar opportunities and initiatives led by local and national government.
- 4.7.2 Horizon will share with the Supply Chain Service information to allow businesses sufficient time to prepare themselves for the opportunities, including information on minimum requirements for various stages. Additionally, Horizon has committed to funding IACC for two Economic Development Officers (Schedule 4, draft DCO s.106 agreement) whose role is anticipated to:
- Represent IACC and local businesses in engaging with Horizon's supply chain in respect of the Wylfa Newydd DCO Project;
 - Work with the Horizon in engaging the STEM Gogledd Project with the Development;
 - Engage with the Jobs and Skills Group Implementation Plan Yrs 1-3, WNESS and the Supply Chain Service Working Group on behalf of IACC;
 - Liaise with potential inward investors and supply chain related businesses to identify barriers and opportunities to realising economic growth and/or benefits within IACC areas;
 - Liaise with Welsh Government economic officers to promote supply chain capacity and access at a regional level; and
 - Monitor the operation and effectiveness of the Supply Chain Portal.
- 4.7.3 As part of the two Economic Development Officer's work programme (which is to be developed), the WNF will be a key organisation for them to work with. Horizon is, and will be, engaging with the WNF as a strategic partner on supply chain engagement.

4.8 Use of local regional materials/Môn Larder

- 4.8.1 Horizon acknowledge that this there is sufficient opportunity for the local supply chain surrounding materials and food production. However Horizon can not specify or prejudice its procurement activities to favour regional provisions unless identified as a design requirement and a conservation matter. Through Horizon's tender assessment, Horizon will consider carbon footprinting of suppliers, whilst also sourcing materials from sustainable sources. This should naturally place local regional suppliers in a position to successfully secure works.
- 4.8.2 In respect of fully exploiting Môn Larder potential, Horizon cannot fund any proposed supplier for the Wylfa Newydd DCO Project however will work with suppliers to best understand and maximise opportunities. All procurement activity will be competitive process and tenders assessed against the most economically advantageous considering many aspects including socio economic and sustainable matters.
- 4.8.3 Where practical and possible, Horizon will look at utilising public procurement best practice when undertaking its procurement activities.

4.9 Amlwch & Cemaes Community fund

- 4.9.1 Horizon notes IACC's concerns in respect of Amlwch and Cemaes. Horizon does not consider these issues to be primarily related to the supply chain and other parts of the response to the LIR deal with mitigation in this respect. At this stage Horizon is securing significant improvement to the leisure facilities in the area via the draft DCO s.106 agreement. This will include improvements to indoor and outdoor facilities, including all-weather pitches. There will also be funds available to upgrade the swimming pool, the changing facilities and car parking.
- 4.9.2 As more fully set out in Horizon's response to IACC's Written Representation submitted at Deadline 3 (18 December 2018), Horizon intends to discuss ringfencing a portion of the Community Fund to Anglesey (or areas of Anglesey).

4.10 Horizon to build into its procurement strategy the need for commitment by major suppliers to establish long terms bases on Anglesey/North Wales and invest in the local labour force

- 4.10.1 The commitment to maximising local opportunities is evident in the development of the SCAP. However, as IACC are aware (and as discussed earlier in this document), commercial flexibility and procurement best practice and law require Horizon to seek the most economical advantageous solutions and major suppliers cannot be required to establish long term bases in any location or invest in the local labour force. However, Horizon sees this as a key role for the WG Trade and Invest team who have responsibility for

attracting overseas investment and trade in to Wales. Horizon can and does engage with this WG team to assist where appropriate.

5 Local Impact Report – Tourism

5.1 Introduction

5.1.1 Horizon has reviewed chapter 5: Tourism of the IACC LIR. This section responds to the key issues presented within chapter 5, with reference to the corresponding paragraph numbers in the LIR chapter where appropriate.

5.1.2 Key issues in this response are:

- Value of tourism to the economy
- Visitor behaviour and visitation
- The Wales Coastal Path, AONB and PRoW
- Displacement
- Tourism bed stock
- Visitor centre (temporary & permanent)
- DCO Obligations and Requirements

5.1.3 In respect to paragraph 1.1.6 of chapter 5, LIR, the following issues are considered and outlined as referenced below in this response:

- Traffic congestion: paragraph 1.2.5, and 1.3.15 to 1.3.18
- Visual, noise and air pollution: paragraphs 1.2.6 and 1.2.7.
- Strains on the tourism accommodation stock; its availability and quality: paragraph 1.2.6 and 1.6.1.
- Disruptions to staff and supply chain: paragraphs 1.5.1 to 1.5.4.
- Threats to Anglesey's tourism brand, reputation and visitor perceptions: Paragraphs 1.3.1 to 1.3.18
- Pressures on Anglesey's tourism offering, including the Area of Outstanding Natural Beauty ("AONB"), the Wales Coastal Path ("WCP") and the wider Public Rights of Way ("PRoW") networks and other attractions: paragraphs 1.4.1 to 1.4.16
- Adverse cumulative impacts: Section 1.8 – DCO Obligations and Requirements

5.2 Value of tourism to the economy

5.2.1 The importance of the tourism sector on Anglesey is noted and recognised. The STEAM data (IACC LIR Annex 5B) provided by IACC shows that tourism expenditure has grown in real terms (that is, disregarding the impact of inflation) from £255m in 2006 to £304m by 2017, a 19% increase over 10 years.

5.2.2 The STEAM data also shows employment of 4,102 (counted as full time equivalents (FTE)) in 2017 compared to 4,187 in 2010 highlighting the

fluctuations that the sector has experienced and that there has not been steady employment growth over the last decade. IACC does not use the STEAM employment data, preferring to use a 2013 estimate of marginal spend of £54,000 to create a job in tourism that leads to an employment figure of 5,629 FTE (chapter 5, paragraph 1.3.7). Inflation since then means that even without any increase in productivity in the sector, the £54,000 spend to create a job in 2013 will have increased to nearly £57,000 and hence the jobs supported by this measure would have declined to 5,300.

- 5.2.3 Employment is highly seasonal, as shown by the STEAM analysis, ranging from less than 2,000 FTE in December to January and rising to over 7,000 in August. This reflects the wide range in visitor days across the year from under 200,000 in the months from November to February inclusive, to nearly 900,000 in August. It is also worth noting that peak visitor days recorded on STEAM was 965,000 in August 2015 compared to 872,000 in August 2017. This peak level of visitors in August 2015 equates to an extra 31,000 people on average a day extra, not taking account of those passing through the port.
- 5.2.4 It is worth noting that most tourism activities taking place around the island do so a long way from Wylfa. The above position is strengthened with reference to Visit Wales' Visitor Attractions Report (2018) Social Research no. 9/2018 which reaffirms low levels of visitors to attractions in the north, e.g. Amlwch Copper Works attracted 5,890 visitors in 2017. In contrast to Beaumaris Castle which had 90,807 visitors and Anglesey Sea Zoo which had 72,901, both in the south of the island.
- 5.2.5 Paragraph 1.5.47 of chapter 5 states that 16% of those staying in hotels or self-catering cottages said that the increase in volume of traffic will make them less likely to visit Anglesey. The source document for this figure (Anglesey Visitor Survey 2018) has not been provided by IACC so the evidence base cannot be fully assessed. Given this, the findings of the 2015 Anglesey Visitor Survey and outcomes of the traffic assessment as reported in the Chapter C2 of the Environmental Statement [APP- 089], noting no significant effects to transport connections on and off the Island, Horizon finds no supporting evidence for IACC's assertion that the potential risk they outline could materialise with the detrimental effects of tourism revenues as IACC suggests (in tables 5 and 6, chapter 5, LIR).
- 5.2.6 Furthermore, research from the construction of Sizewell also showed the benefits to tourism accommodation providers. "The impact on the rented and especially the bed and breakfast/guest house, accommodation sectors can also be positive, if it helps to spread high occupancy levels over time. This was the case at Sizewell B where incoming workers filled up the weekday capacity, but often went home at weekends when there was compensating tourism demand. Similarly, the workforce helped to achieve high occupancy levels across the seasons. Sizewell B workers constituted up to 50% of weekday bed and breakfast lettings, and 80% of winter lettings" (Better monitoring for better impact management: the local socio-economic impacts of constructing Sizewell B nuclear power station John Glasson Impact

Assessment and Project Appraisal, volume 23, number 3, September 2005, pages 215–22656).

- 5.2.7 In response to paragraph 1.4.7 of the chapter 5, visual, noise and air effects on the Wylfa Newydd DCO Project are considered to be local to the Wylfa Newydd Development Area and sites of the Associated Developments and Off-Site Power Station Facilities. While such effect may impact the visitor enjoyment of the local areas around such developments, there is no evidence to suggest any wider effects on visitor behaviours as a result of localised impacts. Therefore, it is Horizon's position that such effect would not significantly affect the value of the tourism sector within the economy of Anglesey.
- 5.2.8 Regarding concerns about the high levels of quietness and tranquillity of the AONB and the impact on this from the Wylfa Newydd DCO Project, Horizon acknowledges that the south-west corner of the Wylfa Newydd Development Area encroaches on the AONB (as shown on Figure D10-7 [APP-237]) however this area, as outlined within the Landscape and Habitat Management Strategy ("LHMS") [REP2-039], has been designated for landscaping and vegetation planting in order to mitigate the visual impact of the Wylfa Newydd Development Area on the surrounding area. Moreover, the proposed Dark Skies Reserve from Wylfa Head to Bull Bay incorporates all of the AONB from the eastern side of Cemaes to Bull Bay which, as shown in Figure D10-7 of the WNDA Development Figure Booklet [APP-237], will not be impacted by the WNDA. Therefore, Horizon does not accept that the Wylfa Newydd DCO Project will compromise any bid for an International Dark Skies Reserve in this area given the fact that this site is only one of 60 sites on the island which currently meet the International Dark Sky Association Silver Standard (as note in para 1.5.9 of IACC's LIR response on tourism, and linked to the extensive landscape mitigation measures being put in place during the construction and operational phase while the vast majority of the area proposed for such a bid is located away from the Wylfa Newydd DCO Project area and will not be affected by the Wylfa Newydd DCO Project.

5.3 Visitor Behaviour and Visitation

- 5.3.1 The key issues presented within chapter 5 of the LIR in relation to Visitor Behaviour and Visitation are considered and addressed below:
- 5.3.2 The Tourism Chapter of the LIR cites the inadequacy of the Anglesey 2015 Visitor Behaviour Survey to inform the determination that visitor behaviour and visitation rates would not be significantly impacted by the Wylfa Newydd DCO

⁶https://www.researchgate.net/profile/John_Glasson/publication/247896930_Better_monitoring_for_better_impact_management_The_local_socio-economic_impacts_of_constructing_Sizewell_B_nuclear_power_station/links/56c4a3c608aea564e304c2d0/Better-monitoring-for-better-impact-management-The-local-socio-economic-impacts-of-constructing-Sizewell-B-nuclear-power-station.pdf?origin=publication_detail

Project. Here IACC states, that the Anglesey 2015 Visitor Behaviour Survey underestimates/underplays the impact reported (approximately 10% stated that they would be less likely to return) that the Wylfa Newydd DCO Project would have on the tourism sector. This determination is made with the information provided within the 'Tourism Topic Report' prepared for IACC by Swansea University (November 2018).

- 5.3.3 This Tourism Topic Report uses past research, literature and published reports to determine the inadequacy of that survey. Horizon notes the absence or lack of raw data from actual physical surveys/interviews, similar to those undertaken for the Anglesey 2015 Visitor Behaviour Survey, to inform the findings and conclusions within this Report.
- 5.3.4 Instead, the Tourism Topic Report attempts to undermine the Anglesey 2015 Visitor Behaviour Survey by citing sources that question the methodological approach used within the Anglesey 2015 Visitor Behaviour Survey given the perceived likelihood of respondents to answer hypothetical questions untruthfully due to a variety of emotional and cognitive factors. For example, non-local visitors to an area that is subject to a visitor behavioural survey may provide untruthful responses to survey administrators if the respondents perceived them to be from the local area and wished to report the area in a favourable light even if it is not a true reflection of the opinion of that respondent.
- 5.3.5 Furthermore, it also states that research has demonstrated that coastal tourism and recreational economies are based on the quality of the natural setting and resources and the public perception of that area, while underdeveloped coastline and beaches are perceived to be valued for their remoteness as important tourism destinations.
- 5.3.6 While Horizon appreciates the unique landscape on Anglesey, and in particular Wylfa Head, and acknowledges that the construction of the Wylfa Newydd DCO Project will lead to considerable localised disruption and changes in the landscape of Wylfa Head, it does not agree that the Wylfa Newydd DCO Project will bring lasting effects on the wider tourism sector of the economy of Anglesey. This position is informed by the comprehensive findings and evidence provided within the Anglesey 2015 Visitor Behaviour Survey, a survey informed by raw data from actual physical surveys/interviews and not from academic research, literature or historical, non-local, published reports.
- 5.3.7 The Anglesey 2015 Visitor Behaviour Survey was undertaken across Anglesey and at a number of different tourism attractions and accommodation points, namely:
- Attractions (12 locations, 182 interviews);
 - Campsites / Caravans Parks (9 locations, 216 interviews);
 - Coast Paths / Beaches (6 locations, 103 interviews); and
 - Roadside locations (5 locations, 29 interviews).

- 5.3.8 Of 530 interviews, 38% of these stated their reason for visiting Anglesey was to enjoy the scenery, 28% because of the relaxing atmosphere, while 24% of respondents stated that the purpose of their visit was specifically because they had visited Anglesey previously and wanted to do so again. Such results illustrate the unique landscape and atmosphere across Anglesey that ensures its position as a favourable tourist destination of many.
- 5.3.9 Further to this, the Anglesey 2015 Visitor Behaviour Survey also stated that 96% of respondents were either 'very likely' or 'fairly likely' to undertake a return visit to Anglesey in the future. Moreover, 89% of those who stated it was their first time visiting Anglesey said that they would revisit the island in future, while a comprehensive 99% of repeat visitors to Anglesey identified within the survey stated that they would continue returning.
- 5.3.10 The Anglesey 2015 Visitor Behaviour Survey also queried respondents about their knowledge of the existing Magnox Nuclear Power Station as well as their awareness of the plans for the Wylfa Newydd DCO Project in the area adjacent to the existing Power Station. The results of the Survey show that only 52% of respondents were aware of the existing Power Station, of those, approximately 90% stated that it had no impact upon the enjoyment of their visit to Anglesey.
- 5.3.11 In respect to the awareness of plans for the Wylfa Newydd DCO Project, only 36% of the total number of respondents responded in acknowledgement of the existence of such plans. The majority of these, 78%, stating that such awareness had been informed through the different forms of media or word of mouth from friends and family.
- 5.3.12 When asked what impact the Wylfa Newydd DCO Project would have on Anglesey, most visitors (53%) made positive comments, mostly regarding the economic benefits that the Wylfa Newydd DCO Project would bring with it, regarding its construction and operation, while 23% of respondents were of the opinion that the Wylfa Newydd DCO Project would have a negative impact on the area in which it is located, specifically in respect to impacts on the landscape. Notably however, only 6% of respondents thought that the Wylfa Newydd DCO Project would have a negative effect on tourism or possibly deter tourists from visiting Anglesey.
- 5.3.13 In relation to this perceived negative impact, paragraph 1.5.31 of the Tourism Chapter of the IACC LIR states concerns that "the Wylfa Newydd DCO Project will create significant media coverage and its size and scale and the nature of reporting mean it may convey an impression that 'Anglesey is closed for business' and one large building site". Horizon contests this assertion. As stated above, the existing Power Station has no impact on the enjoyment of the majority of visits, while the majority of those who were aware of plans for the Wylfa Newydd DCO Project still said that they would make a return visit to Anglesey while also stating that they thought the Wylfa Newydd DCO Project would be beneficial to the island as a whole.

- 5.3.14 Furthermore, according to the Anglesey 2015 Visitor Behaviour Survey approximately 88% and 90% of respondents to the survey stated that the construction and operation of the Wylfa Newydd DCO Project would 'make no difference' to the likelihood of revisiting Anglesey during these respective periods of the Wylfa Newydd DCO Project.
- 5.3.15 For those who stated that they would be less likely to return to Anglesey during construction, the main reasoning given (39%) for this was that there was perceived to be 'too much traffic and disruption to the roads' brought on by the Wylfa Newydd DCO Project, while another 20% considered themselves anti-nuclear and that it is a potentially dangerous form of energy. Contrastingly however, 11%, or approximately 1 in 10 of those who would be less likely to make a return visit stated that they would simply visit other areas of Anglesey, away from the Wylfa Newydd DCO Project, representing a redistribution of visitor numbers to other parts of the island. It is important to note however that the percentages referenced above are derived from a total of 46 respondents that stated they would be less likely to return to Anglesey out of the entire sample pool of 530 respondents surveyed. As such the 39% concerned about traffic and disruption, is representative of approximately 18 persons out of a total of 46 persons, or just over 3% of the entire sample surveyed (530 persons).

Traffic issues and impact on tourism

- 5.3.16 In respect of concerns regarding effects of traffic and disruption to roads during the construction of the Wylfa Newydd DCO Project, Horizon acknowledges that there would be significant adverse effects, namely in the form of increased traffic flows, on sections of the A5025 between Valley and Treglele as reported within Table C2-19 of Chapter C2 - Traffic and Transport of the Environmental Statement [APP-089]. Such effects are anticipated during 'peak construction' which will only be a limited period (circa. 2 years at most) of the overall construction programme, therefore such effects are not likely to have a lasting effect on the tourism sector in the long term. As outlined in paragraph 2.5.18 and 2.5.42 of Chapter C2 - Traffic and Transport of the Environmental Statement [APP-089], there is predicted to be no significant increase in traffic congestion on the key A55 Britannia Bridge because of the Proposed Scheme, or on other key tourism routes around the island.
- 5.3.17 In paragraph 1.3.18 of chapter 5, IACC states a number visitor comments from IACC Anglesey's Accommodation Bedstock Survey. Horizon cannot find any reference to any such visitor comments within that survey report. Nevertheless, Horizon notes that traffic congestion in major tourist destinations is a persistent issue however there is little evidence that it deters or indeed influences visitation. Cornwall is a valuable analogous example which enjoyed significant levels of excessive demand in summer 2018 but traffic queues and accessibility failed to dissuade visitation despite significant

national and international media coverage (BBC, 2018a; 2018b⁷). Similarly, the internationally popular Ring of Kerry route in Ireland regularly witnesses tailbacks of 2-2.5 hours and remains a major destination in spite of traffic congestion and one-way routes are being utilised to tackle congestion given the continued growth in demand (Lucey, 2018⁸).

- 5.3.18 In respect to the vulnerability of the tourism sector on Anglesey from the loss of visitor spending from the 'loyal visitor market' and traffic effects associated with Wylfa Newydd DCO Project, please see paragraph 1.3.15 and 1.3.16 respectively above.
- 5.3.19 In other aspects of leisure and visitor behaviour, such as festivals; the overwhelming majority of festival attendees recognise these events cause congestion, the vast majority use private transport to attend⁹. The ease of traffic flows is not a determinant in visitation. Similar indications can be seen in Skye where traffic congestion was widely reported over the years 2016-2017 with no impact on demand (Henderson, 2017¹⁰) which continued to escalate during 2018 according to VisitScotland data ¹¹. Whilst consumers are sensitive to traffic it clearly has no impact on destination choice or reasons to travel.

5.4 The Wales Coastal Path, AONB and PRow

- 5.4.1 IACC notes in section 1.5.3 of the LIR report on tourism at the Anglesey Coastal Path is a major contributor to the Welsh and Anglesey economy, worth £14m to the island. No source is provided for this valuation. While the Wales Coastal Path is acknowledged as an important tourist attraction and feature of the local/regional tourism offering, including the value of the path as an attractor to the island in respect to the tourism economy on Anglesey, it should be noted that the section of the Wales Coastal Path affected by the Wylfa Newydd DCO Project is sparsely used. This is evidenced in Appendix D4-1 (Public Access and Recreation Baseline Report) [APP-138] of the Environmental Statement which shows over the course of two days in August 2014 (representative of the height of the summer tourist season), there were only 83 users of the Wales Coastal Path while in November 2014, there were

⁷ BBC (2018b) Cornwall hit by tourist overcrowding amidst UK Heatwave, 12 August, BBC News on line <https://www.bbc.co.uk/news/uk-england-cornwall-45147541>

⁸ Lucey M (2018) One way systems aim to tackle congestion on Kerry tourist routes in The Irish Examiner 17 July 2018 <https://www.irishexaminer.com/ireland/one-way-systems-aim-to-tackle-congestion-on-kerry-tourist-routes-472845.html>

⁹ <http://www.agreenerfestival.com/traffic-congestion-travel/>

¹⁰ Henderson M (2017) Skye plans for influx of visitors in The Press and Journal 23 November <https://www.pressandjournal.co.uk/fp/news/inverness/1363633/isle-of-skye-takes-steps-to-deal-with-tourism-boost/>

¹¹ VisitScotland (2018) research and Insights Regions <https://www.visitscotland.org/research-insights>

only 31 users over the 2 days. In addition, it should also be pointed out that none of the short or long walks advertised on www.walescoastpath.gov.uk the Visit Anglesey website (www.visitanglesey.co.uk) or www.walkingbritain.co.uk are to Wylfa Head. Furthermore, Wylfa Head is not identified as part of the 'things to do' section, however Carmel Head and South Stack Lighthouse are. It is acknowledged, however, that the route of the 'Cemaes Bay Circular Walk' on the Weatherman Walking website does start at fisherman's car park.¹²

- 5.4.2 It is also noted that the Wales Coast Path website recognises the Wylfa Head coastline for its industrial heritage.

People often ask us: 'what are the most scenic parts of the Wales Coast Path?' There is no easy answer! For a start, beauty, as they say, is in the eye of the beholder. Many people will find the wide-open spaces of the Dee and Severn estuaries appealing, especially those with an interest in the bird life for which both are famous. Others will find urban areas attractive – the great cities of Swansea, Cardiff and Newport in the south or the north Wales resorts of Prestatyn, Rhyl, Colwyn Bay and Llandudno, for example. Not to mention the dramatic castles and other monuments liberally scattered around our coastline; or the drama and interest for some in the industrial landscapes such as Port Talbot steelworks or Wylfa nuclear power station on Anglesey¹³.

In respect to paragraph 1.5.13 of the Tourism Chapter of the LIR which raises concerns regarding the development of breakwaters and Marine Off-Loading Facility ("MOLF"), given the text above from the Wales Coastal Path website it is considered that, while representing significant additions to the local landscape in this area, the nature of such infrastructure is consistent with the 'industrial landscape' of the area around Wylfa Head.

- 5.4.3 The number of non-local residents utilising the coast near Wylfa Head is extremely small in relation to the number of visitors to Anglesey, as outlined in Chapter D4-1 for the Environmental Statement [APP-138]. So, while the localised loss of amenity which IACC raises concerns about is recognised around the site, no significant overall loss of tranquillity across the island has been identified which would affect the tourism sector across the island.
- 5.4.4 It is recognised that during construction there would be a temporary adverse effect on the visual amenity of walkers on the Wales Coast Path ("WCP") from the diversion, due to the proximity of construction activities. Such views would include the perimeter fencing, large scale earthworks and other Power Station construction activities. Some sea views would be lost where the WCP would be diverted inland. However, from some sections of the diverted route there would be new outward views, for example where the diversion skirts the western perimeter of the Wylfa Newydd Development Area. Measures are proposed to mitigate adverse effects where practicable, including construction

¹² <http://downloads.bbc.co.uk/tv/weatherman-walking/walks/Cemaes.pdf>

¹³ <http://www.walescoastpath.gov.uk/about-the-path/wales-coast-path-the-officially-beautiful-bits/?lang=en>

of a 7m high mound alongside the A5025 opposite Tregele early during construction, to limit views of construction activities. Progressively constructed areas of landscape mounding and planting would also help to mitigate views of the Power Station Construction from parts of the diverted route within the Isle of Anglesey Area of Outstanding Natural Beauty and along the western edge of Cemaes. Where possible, the diverted route would be set back from the laydown areas and building platforms to be sympathetic to walkers, as illustrated on figure 5-12b of the LHMS [APP-424].

- 5.4.5 During construction, in addition to the provision of diversion routes for the Wales Coast Path, the draft DCO s.106 agreement to be submitted at Deadline 3 (18 December 2018) provides for substantial PRoW contributions, which can be used to provide new PRoW, or maintain or enhance any public rights of way close to the WNDA, or along the A5025 corridor between Valley and Tregele. It can also be used to improve sections of the Wales Coast Path along any section of the Anglesey coastline.
- 5.4.6 During operation, new PRoWs would be provided across the Wylfa Newydd Development Area, including a new route for the WCP within the new landscape setting for the Power Station. A new carpark is also proposed to serve Wylfa Head. The permanent diversion of the WCP would be shorter than the diversion during construction and would be designed to be sympathetic to the visual amenity of walkers. Parts of the route are proposed to be diverted on higher ground to maintain visual connectivity with the sea, for instance, the route south of Tre'r Gof SSSI. Woodland planting and the completed landscape mounding and associated landscaping would help to limit views of the Power Station along much of the route, although it is recognised that the Power Station would be prominent in some views. The diversion of the WCP along the Afon Cafnan and the tributary to this watercourse, would contribute to the visual amenity of the diverted WCP, as illustrated by figure 6-11 of the LHMS [APP-424].
- 5.4.7 The Copper Trail is an important asset for recreational cyclists. It is considered that there would be an impact on the Copper Trail as a result of its diversion from Cemlyn Road to Nanner Road. However, it is important to note that advanced mitigation has been undertaken on Nanner Road to enable vehicles on this road to pass more easily. This route is considered suitable for cyclists and forms an attractive country road along which to cycle. However, it is acknowledged that there would be sections of the route which would have views of the Power Station, though landscape mounding and planting within the WNDA to the north of Nanner Road would soften these views, especially once the planting had fully established by summer year 15 of operation.
- 5.4.8 There would be a section of the Copper Trail which would be routed along the A5025, this would be mitigated through the construction of a segregated cycle path to the west of the road, which would enable cyclists to cycle this route without needing to use the A5025 road itself. While there would be a crossing over the A5025, this is already the case at two locations along its route.

- 5.4.9 The proposed diversion route avoids Tregele, this option was taken forward having undertaken consultation on the A5025 Highway Improvements, where there was no preference for one option (via Tregele) over the other option (avoiding Tregele). The preferred option reduces the length of the Copper Trail that is routed alongside the A5025 and is considered to be better for recreational cyclists. Using this diversion route the distances cycled are similar. There is allocation of financial funding (£75,000) for the Copper Trail outlined within Schedule 13 of the draft DCO s.106 agreement to be submitted at Deadline 3 (18 December 2018).
- 5.4.10 In paragraph 1.5.7, IACC also notes the 'substantial' market for bird and wildlife watching on Anglesey. Wildlife watching locations as identified via www.walescoastpath.gov.uk guide visitors to Puffin Island (between Red Wharf Bay and Conwy Bay on the east of the island), and Newborough Warren National Nature Reserve (on the south east coast). In addition, as noted within Chapter D4 - Public access and recreation of the Environmental Statement [APP-123], while wildlife watching by boat is increasingly popular in Anglesey, there are no promoted marine wildlife watching tours that make particular reference to the waters around the study area. So, while the value of the wildlife watching opportunities on Anglesey are recognised as an attractor to the island, there is no evidence to suggest that construction or operation of the Power Station, including the construction of the MOLF (paragraph 1.5.13), will significantly adversely affect this market.
- 5.4.11 Wylfa Head is also a vantage point for wildlife watching, as previously stated, access to Wylfa Head will be retained. During operation, there would be a beneficial impact on the recreational amenity of these visitors as a new wildlife watching shelter would be constructed at the site of the former coastguard lookout, which would provide protected views across the Irish Sea for those wanting to watch seabirds or for cetaceans or basking sharks. Such shelters have proved popular at other locations along the Welsh Coastline, for example at Cardigan Bay where the coastguard lookout is used by people watching dolphins and other coastal wildlife.
- 5.4.12 Cemlyn Lagoon, with its nature reserve, is an important site for watching terns. Access to Cemlyn Bay will be retained.
- 5.4.13 During operation access to the Wylfa Head and the headland between Cemaes and Wylfa Head will be significantly improved to allow those with mobility restrictions to reach the coast at the top of Porth Yr Ogof.
- 5.4.14 The AONB has been in place with the existing nuclear power plant at Wylfa and the original designation avoided the existing Power Station and Wylfa Head. The key designating features of the AONB designation have been assessed with in the Environmental Impact Assessment submitted as part of the draft DCO and mitigation (embedded or additional) has been provided where required. It is recognised that a small area of the AONB will be impacted by the site footprint (please see Figure D10-7 of Figure Booklet– Volume D of the Environmental Statement) [APP-237].

- 5.4.15 Horizon therefore disagrees with IACCs assertion that construction or operation related effects in and around Wylfa Head will result in a significant devaluation of the WCP, the Cooper Trail or the PRoW network in the area such that it would have a material effect on the tourism economy of Anglesey, especially given the fact that only small sections of such features are affected by the Wylfa Newydd DCO Project. Horizon notes EN-1¹⁴, para 5.12.7 which states: *'The IPC may conclude that limited weight is to be given to assertions of socio-economic impacts that are not supported by evidence (particularly in view of the need for energy infrastructure as set out in this NPS)'*.

5.5 Displacement

- 5.5.1 Horizon recognises IACCs concern with regards labour churn and labour displacement within the local economy and the associated risk of labour displacement within the tourism sector. A detailed discussion of labour churn is provided in Horizon response to the Local Impact Report, Local Employment (Chapter 3).
- 5.5.2 In addition to the labour market wide discussion presented in the above response, Horizon is committed to supporting the food and catering sector in north west Wales. As part of North Wales Growth Deal bid, a proposal has been submitted for a hospitality training centre as part of Grwp Llandrillo Menai. As part of Horizon's support for the Growth Deal and the local economy, it is committed to using site and campus catering facilities as catering training kitchens (or providing to agree equivalent skills development support is provided for the catering sector). This will support the sector to grow the number of people joining the sector and to provide appropriate training for those new entrants. This commitment will be outlined within the Jobs and Skills Implementation Plan which is secured via the draft DCO s.106 agreement (schedule 4).
- 5.5.3 Horizon refutes the point made in paragraph 1.5.45 of chapter 5 that there will be a minimum annual loss to the Island tourism economy of £30m from a 10% loss of visitors during the construction period, which could then result in job losses. This number is informed from the 2015 Anglesey Visitor Survey, which in fact states that one in ten of visitors would be *"less likely to return to the island during construction..."*. This illustrates that there is the potential for a loss of 10% of visitors rather than a definitive loss of 10% of visitors annually during the construction period. It also takes no account of the wide-ranging measures Horizon has proposed to support the development of the sector and also the mitigation activities specifically relating to traffic which are proposed. As such, Horizon disagrees with the £30m deficit that IACC reports.

5.6 Tourism bed stock

¹⁴ Overarching National Policy Statement for Energy (EN-1)

- 5.6.1 IACC contests that Horizon has miscalculated the availability of bed spaces in the tourism stock. Please refer to Horizon's response to the LIR Chapter 8: Housing for a response to this.

5.7 Visitor Centre (temporary & permanent)

- 5.7.1 IACC notes in chapter 5 that it is essential that high quality temporary facilities are provided to cater for construction and education tourism. Horizon is committed to providing appropriate visitor interpretation facilities during the construction phase of the Wylfa Newydd DCO Project. Horizon has confirmed its commitment to the provision of on-site temporary viewing facilities within the Main Power Station Site sub-CoCP (Revision 2.0) [REP2-032] available around 6 months from the start of the construction stage.
- 5.7.2 In addition, Horizon is keen to agree with local communities, the provision of other temporary facilities to support visitor interpretation. These could include facilities in the north of Anglesey. Horizon is also committed to the provision of archaeological interpretation materials, linked to the site (secured in the associated draft agreed site preparation and clearance s.106 agreement).
- 5.7.3 Once constructed, the proposed permanent visitor centre will provide a useful start point for walks along the Wales Coast Path and will be a location where car parking and toilet facilities are available, along with a café. This would have a beneficial effect on walkers and attract additional visitors to the area. In addition to the permanent visitor centre there will be a nature trail that visitors can follow within the Wylfa Newydd Development Area. In order to assist visitors' appreciation of the history and wildlife of the area, information on these could be provided within the visitor centre.
- 5.7.4 As noted in the draft DCO s.106 agreement, Horizon has committed to the provision of the permanent visitors centre on site by the date of operation of Unit 2, subject to planning permission being granted by IACC. Horizon continues to discuss the requirements for this centre with IACC and other stakeholders with a view to providing more detailed proposals for this facility by Deadline 4 (17 January 2019).

5.8 DCO Obligations and Requirements

- 5.8.1 Horizon does not agree with the statement that its approach to addressing tourism sector concerns is one solely based on a 'monitor, manage and mitigate' approach. IACC has overlooked the 'plan' aspect of Horizon's approach to the 'impact avoidance, mitigate and manage' hierarchy.

Tourism sector support and mitigation

- 5.8.2 The importance of the tourism sector on Anglesey is noted and recognised. Horizon has agreed to make funding available under the draft DCO s.106 agreement (see Schedule 3) for the promotion of Anglesey as a holiday and tourism destination. This funding is to support additional marketing activities. In addition and not to cover staff time of a dedicated Officer, which is provided as a separate item in the draft DCO s.106 agreement.
- 5.8.3 Direct tourism related s.106 commitments have been made to cover a range of areas of IACC concern. Horizon has committed to include annual contributions for marketing and sector support, of £100,000 per year during construction, and for two years post construction (totalling £1.1m); a tourism officer for the duration of the construction programme (totalling £360,000); annual contributions to increased tourism related monitoring during construction and for four years post construction, totalling £260,000; and a significant Tourism (contingency) Fund, totalling £740,000, available up to five years post construction. These commitments represent a change from the draft DCO s.106 agreement provided into examination as they have been made following receipt of the LIR. They will be reflected in the next turn of the draft DCO s.106 agreement.
- 5.8.4 IACC has requested within chapter 5 the creation of an Anglesey Development Fund to support the development of new products and experiences locally. Horizon does not accept that it is its responsibility to create such a separate fund, given that there is no demonstrable evidence that such activities will be adversely affected in any way by the Wylfa Newydd DCO Project. Horizon proposes to amend the draft DCO s.106 agreement to explicitly state that IACC can use the Tourism (Annual) Contribution to fund measures to enhance and develop new products, tourism routes and experiences to ensure a robust visitor economy.
- 5.8.5 In addition to this, Horizon proposes to establish the Accommodation and Tourism Services sub-group. This sub-group will be comprised of relevant stakeholders such as Horizon, IACC, Welsh Government, NRW and the Emergency Services. This sub-group will examine monitoring returns and advise on release of the tourism contingency fund.
- 5.8.6 In addition, it is proposed that the Tourism Officer, funded via s.106 contributions, will develop a tourism action plan in the first year post implementation outlining proposed activities to be supported by the Tourism (Annual) Contribution.

- 5.8.7 Funds are set out in the draft DCO s.106 agreement to enable Sustrans to update its information pamphlet on the Copper Trail, which would be available for download from their website. New pamphlets would be printed in order to replace those already in circulation across Anglesey's tourist information centres. The funds can also be used to improve signage along other sections of the Copper Trail should the IACC consider such improvements to be beneficial.
- 5.8.8 These significant contributions are being made available to support the sector to prepare for the Wylfa Newydd DCO Project and to develop resilience in the local market to ensure it thrives through the construction stage of the Proposed Scheme, along with through the operation of the Wylfa Newydd DCO Project.
- 5.8.9 In addition to the direct tourism funding via the draft DCO s.106 agreement (Schedule 3), indirect support for the sector is also provided via the measures and funding outlined within schedule 5 of the draft DCO s.106 agreement. This mitigation and funding relates to worker accommodation, specifically to avoid the overburdening of the tourism accommodation stock on and off the island. This includes the provision of capacity enhancement funding, funding for 'Accommodation Officers' throughout the construction period to monitor housing and engage with the Wylfa Newydd DCO Project, and the Workforce Accommodation Management Strategy.
- 5.8.10 Schedule 6 of the draft DCO s.106 agreement also provides indirect support to tourism issues with support for the development of catering skills locally; schedule 11 supports an environmental fund at Cemlyn Lagoon, the provision of a tern warden and an environmental officer with contributions towards improved heritage interpretation boards; schedule 13 on Public Rights of Way with support for the Copper Trail and the Public Rights of Way Network locally and throughout the island. These measures are all in addition to those outlined as embedded in the proposed scheme design and those within the Wylfa Newydd Code of Construction Practice (Revision 2.0) [REP2-032].
- 5.8.11 The table below sets out Horizon's response to the good practice principles outlined by IACC in paragraph 1.6.5 of the Tourism Chapter of the LIR:

Table 1: Response to good practice principles

IACC Principle Request for	IACC Commitment:	Horizon Response:
A. Tourism strategy and action plan to underpin the industry's development over the preparatory and construction period. This should be commissioned as soon as the draft DCO is granted.		Committed through the parameters of the Tourism (Annual) Contribution.
B. Strategic Tourism Officer to: provide strategic leadership to the implantation of the Tourism Action Plan (TAP); inform and participate in the implementation of TAP; support businesses; coordinate business training;		No evidence provided for the additional need for this role over and above the Tourism Officer and the role to be delivered by the Accommodation, Tourism and Leisure sub-group. Provision for

support SMEs in the sector to adapt to the impacts of Wylfa Newydd	similar measures made by way of the multitude of measures outlined and detailed within the Schedules (particularly Schedule 3) of the S106 Agreement.
C. Ongoing funding for two local tourism officers to: deliver activities under the TAP; support businesses; coordinate business training; Support SMEs in the sector to adapt to the impacts of Wylfa Newydd.	Schedule 3 of the draft S106 Agreement provides for a Tourism Officer.
D. An annual contribution to underpin tourism sector marketing, promotion and branding. This will encourage existing and attract new market to the island.	Committed through the parameters of the Tourism (Annual) Contribution.
E. A Discover Anglesey Development Fund, specifically designed to enhance and develop new products, tourism routes and experiences to ensure a robust visitor economy. This will run for a period of six years and at its close these will be embedded in the Anglesey product experience and marketing offer.	Horizon does not accept that it is the responsibility of the Wylfa Newydd DCO Project to provide a separate Discover Anglesey Development Fund. Provision for the Tourism (Annual) Contribution to be used to support such activities will be made in the updated draft DCO s.106 agreement.
F. An annual contribution for visitor survey work to monitor impacts on the visitor economy. The IACC propose that their surveys continue for 2 years into the operational period to monitor the impacts post-construction.	Provision is made in the draft DCO s.106 agreement for this and Horizon intends to update the draft s106 to provide these contributions to enable this funding to run for 4 years post operation.
G. The provision of a high-quality temporary and permanent Visitor and Media Centre at Wylfa Newydd DCO Project both need to be confirmed and costed.	Horizon is committed to provide a temporary viewing area/platform during the construction phase as well as a follow on Visitor and Media Centre (the detail of which is subject to ongoing negotiations with IACC)
H. The loss of PRoW will require route development elsewhere and should be compensated.	Provision made by way of the multitude of measures outlined and detailed within the Schedules (particularly Schedule 13) of the draft DCO s.106 agreement and discussed above.
I. The re-routing of the Wales Coastal Path and the investment of the IACC, WG and EU should be compensated.	Impact on the economic value of the WCP is contested. None the less, provisions are made by way of the multitude of measures outlined and detailed within the Schedules (particularly Schedule 11) of the draft DCO s.106 agreement, as discussed above.
J. Once operational, Wylfa Newydd DCO Project should continue to support the industry for a period of five years. Support should focus on reduced marketing and promotion and one tourism officer for five years.	Horizon is committed to supporting the sector. The draft DCO s.106 agreement will be updated to note that the Tourism (annual) Contribution will extend for 2 years post construction, while the Tourism (contingency) Fund will be available for 5 years post construction.

- 5.8.12 With the detail outlined within this response to the Tourism Chapter of the LIR, particularly the detail outlined within Section 1.8 – DCO Obligations and Requirements, Horizon considers the measures outlined as appropriate and adequate to mitigate the potential impacts anticipated and reported in respect to Tourism.

6 Local Impact Report – Safeguarding

6.1 Introduction

- 6.1.1 Horizon has reviewed the chapter 6: Safeguarding of the IACC LIR.
- 6.1.2 Horizon welcomes the analysis presented in this LIR Chapter and notes the points raised by IACC. Horizon confirms that it has been in dialogue with IACC on safeguarding and further meetings will take place.
- 6.1.3 Horizon has not responded in detail in this document to the points raised in this LIR chapter: many of which have been raised there for the first time. Further, it should be stated that Horizon does not accept the IACC analysis fully. Horizon considers that this topic is best served by continuing the dialogue between Horizon, IACC and other partners.
- 6.1.4 Safety is a guiding principle for Horizon's activities. Horizon has consistently stated that the overwhelming majority of the construction workforce would be diligent, hard-working professionals who would focus on doing the work for which they will be contracted. Horizon is pleased that IACC agrees with this and notes at paragraph 1.1.4 of this LIR chapter - that the workforce and the associated supply chain will be largely decent and law-abiding.
- 6.1.5 Horizon nevertheless agrees with IACC that the arrival, and the presence, of the predominantly male construction workforce can change the risks to the general public but in particular, vulnerable populations. The measures set out below will reduce these risks as well as enabling the statutory agencies to fulfil their statutory obligations and Horizon to meet its obligations as an employer.
- 6.1.6 Horizon is confident that it will deliver a project that is safe.
- 6.1.7 In this document Horizon sets out the steps that it will take to safeguard the welfare of its employees and its supply chain and, in relation to the activities of its construction workforce, the general public.

6.2 Process

- 6.2.1 Horizon does not agree with the IACC statement (paragraph 2.1.4) that safeguarding as an issue has not been addressed by Horizon in any significant way.
- 6.2.2 This section provides some context and sets out how safeguarding is looked at in the Health Impact Assessment (HIA) Report [APP-429] and the engagement that Horizon has undertaken to date on this matter.

Safeguarding in the Health Impact Assessment report and engagement with well-being partners

Health Impact Assessment

- 6.2.3 The HIA Report [APP-429] recognised that the presence and behaviour of the construction workforce could influence community or individual-level behaviour, and that this may have a direct effect on risk-taking behaviour (e.g. smoking, excessive alcohol consumption or sexual behaviour) and on mental health (e.g. stress, anxiety or depression). Section C.7 of the HIA Report considers the necessary safeguarding against these potential risks.
- 6.2.4 Issues relating to safeguarding have been a consideration throughout the HIA work. The HIA Scoping Report (reference [RD35] of the HIA Report [APP-429]) describes how the IACC HIA Tool was used by a sub group of the Wylfa HIA Steering Group (in a session on the 17th August 2011) to identify a proportionate scope to the subsequent HIA work. That exercise identified lifestyle factors, including sexual activity and other risk-taking behaviour as a topic to consider further.
- 6.2.5 Developing that scope, section C.7 of the HIA Report [APP-429] assesses the likely significant effects in relation to the Wylfa Newydd DCO Project's influence on healthy and safe communities during construction. That assessment includes a discussion of safeguarding issues. Paragraph C.7.5 recognises that *"The majority of the construction workforce would be diligent professionals who would be concerned with fulfilling their contract. There is, however, the potential for an increase in demand for sex work (direct and indirect) which, in turn, can be associated with exploitative behaviour, domestic abuse and substance misuse."*
- 6.2.6 Issues relating to safeguarding have informed Volume C of the HIA Report [APP-429] in relation to the Project-wide effects (including the Site Campus), as well as Volumes E to H of the HIA Report [APP-429] in relation to the rapid HIAs for Off-Site Power Station Facilities and Associated Developments (see Volume O of the HIA Report [APP-429], which includes lifestyle factors, including sexual activity and other risk taking behaviour within the screening criteria.
- 6.2.7 The mitigation proposed to address this risk is set out in the Mitigation Route Map [REP2-038], see item 0111. It is noted that item 0111 has been revised since the DCO application was submitted, see below. This revised item 0111 also replaces item 0140 which is also recorded in the Mitigation Route Map. Item 0111 is secured by the Wylfa Newydd CoCP [REP2-031] This mitigation is considered in more detail below.
- 6.2.8 The HIA Report [APP-429] considers safeguarding during the construction stage. Safeguarding is not considered explicitly during the operation phase but, as per health services, the outage workforce will require similar services to the non-home-based construction workforce.

Engagement

- 6.2.9 Horizon met with IACC to discuss this topic in February 2017 and to agree how to move it forward. This meeting was followed by one-to-one telephone meetings between Horizon's HIA team and the following well-being partners:
- Public Health Wales (PHW);
 - Betsi Cadwaladr University Health Board (BCUHB);
 - Welsh Government;
 - North Wales Police (NWP);
 - North Wales Fire and Rescue Service (NWFRS);
 - Welsh Ambulance Service NHS Trust (WAST).
- 6.2.10 The purpose of these initial calls was to ensure that all partners were confident that the correct organisations would be part of the discussion. The first dedicated meeting with the well-being partners listed above, on this topic, where proactive steps could be discussed was held in July 2017. A further meeting was held in February 2018. Medrwn Môn also attended these meetings to represent the voluntary sector. These meetings covered the issues that IACC raise in this LIR chapter.
- 6.2.11 The meetings comprised of wide-ranging discussions on the multifactorial roots of safeguarding: including the issues that are contained within the topic, the role of different agencies and the need, or not, for a baseline assessment. The meetings did not identify specific issues, or methodologies, for assessment. In the meetings it was generally acknowledged that:
- The construction workforce will add many positive aspects to the area.
 - It only takes a small number of incidents for real, and reputational, damage to be done.
- 6.2.12 Horizon has engaged with the well-being partners and continues to engage with key stakeholders through the SOCG process.
- 6.2.13 Both Horizon and IACC have continued to develop further detail with regards to safeguarding. The section below provides Horizon's current approach to safeguarding.

6.3 Overview of mitigation with regards to safeguarding

- 6.3.1 Requirement PW11 of the Draft DCO [REP2-020] provides that, except for Site Preparation and Clearance Works, no construction of the authorised development may commence until a Community Safety Management Strategy (CSMS) prepared in accordance with the principles set out in the Wylfa Newydd CoCP [REP2-031] has been submitted to IACC for approval.
- 6.3.2 In accordance with this requirement, Horizon will work with IACC and other relevant partners including North Wales Police and other emergency services to ensure that safeguarding matters are appropriately addressed in the CSMS.

- 6.3.3 The CSMS will set out how Horizon will work with existing public bodies, including IACC and the emergency services, and will include a framework of communication routes and ways of working to mitigate any potential impact of the construction workforce within the community.
- 6.3.4 In addition to the CSMS, the Workforce Management Strategy (WMS) [APP-413] describes the key principles that Horizon and its partners will utilise to manage and control the construction workforce. The Draft DCO requires Horizon to develop the Wylfa Newydd Code of Conduct with its partners in accordance with the principles set out in the WMS. The Code of Conduct will apply to all personnel and employers whilst working on the Wylfa Newydd DCO Project, both on-site and off-site.
- 6.3.5 The principles in the WMS and the subsequent Code of Conduct will help deliver the project safely while minimising the potential effects of large numbers of temporary construction workers on the local community. Horizon will ensure enforcement of the standards and procedures detailed in the WMS and the Code of Conduct and will provide support to the community and stakeholders to avoid unforeseeable problems and when they arise respond quickly, effectively and seek to prevent recurrence.
- 6.3.6 The principles in the WMS also set out employer requirements in terms of safeguarding impact on vulnerable groups. Compliance with the Code of Conduct will be secured through labour arrangements with the supply chain, trade unions and between contractors and its employees.
- 6.3.7 As recognised in the WMS, the Code of Conduct is intended to supplement, not replace existing law and order provisions in place to protect members of the community and which all individuals are responsible for abiding by.
- 6.3.8 The following considers the measure recorded in the Mitigation Route Map mentioned at paragraph 1.2.6. Item 0111 of the Mitigation Route Map [REP2-038] has been updated so that it now reads as follows:
- "Horizon will take reasonable steps to safeguard the welfare of its employees, its supply chain and, in relation to the activities of its construction workforce, the general public. Prior to, and throughout the construction of the Wylfa Newydd Power Station appropriate dialogue will be maintained between Horizon, the contractor, supply chain and local safeguarding agencies, including North Wales Police. Discussions will include any individual or coordinated measures appropriate to avoiding risks to vulnerable groups, for example in relation to human trafficking and direct or indirect sex work. Security protocols will be agreed by Horizon and North Wales Police, and other safeguarding agencies, and reviewed regularly. An appropriate number of Horizon and supply chain staff will be trained in safeguarding issues so that, for example, security staff who conduct site and/or vehicle inspections will be aware of signs of illegal activity such as human trafficking."*
- 6.3.9 This mitigation measure is secured by the Wylfa Newydd CoCP [REP2-031].

- 6.3.10 Horizon will implement measures that are directly related to safeguarding. These include: employment screening and management systems; liaison with external stakeholders; and Horizon policies and adaptive monitoring. These measures are presented below.
- 6.3.11 **Screening and management systems:** Horizon will take such actions as it can to guide the behaviour of its construction workforce, both on-site and off-site, through the implementation of the WMS and the principles which it outlines in respect to the development of a Code of Conduct. The principles relate to compliance with a Code of Conduct, compliance with relevant behavioural standards, procedures and legislation, training provision and completion, as well as enforcing the use of certain Project facilities and services.
- 6.3.12 All personnel working with, or for, Horizon at site and who will access offices where Sensitive Nuclear Material (SNI) is held, or who require access to SNI, Nuclear Material, Other Radioactive Material or access the Site Licence Site will require a minimum of Baseline Personnel Security Standard (BPSS) pre-employment check. This is in accordance with regulations under ONR. The checks that are carried out as part of a BPSS are:
- Name, date of birth (DOB), Nationality;
 - Translations as required using a credible company;
 - Address history;
 - Right to work;
 - Employment history;
 - Unspent criminal record check;
 - Police certificates for personnel who have resided outside the UK in the last 3 years;
 - Identity verification using visual and electronic systems;
 - Open source check (i.e. media check for anything that may be of a concern).
- 6.3.13 A BPSS is not a security clearance; it is a pre-employment check. Not all individuals will require a BPSS as it depends on their role. People who do not require a BPSS may be required to be subject to a Right to Work check and an unspent criminal conviction check. Employment can be denied if an individual is believed to be unsuitable for work at the site, or they will have caveats placed upon their activity, for example, no solo working.
- 6.3.14 Separate to BPSS checks, any Horizon staff who will work with children, such as STEM ambassadors, or with vulnerable adults will receive an enhanced DBS check. This will be co-ordinated through Human Resources.

- 6.3.15 **Horizon policies:** Horizon's Modern Slavery Act Statement (2018)¹⁵ sets out a robust response to the risk of modern slavery and maintains a clear focus on developing policies, process and internal capability to understand and manage future risks. This includes existing policies, principles and standards including whistleblowing procedure and a supply chain charter; proactive approach to risk; a robust due diligence approach and training and awareness raising.
- 6.3.16 **Liaison with external stakeholders** is of great importance. This is set out in item 0111 of the Mitigation Route Map [REP2-038] secured through the Wylfa Newydd CoCP [REP2-031]. As noted above this states that prior to, and throughout, the construction of the Wylfa Newydd Power Station appropriate dialogue will be maintained between Horizon, the contractor, supply chain and local safeguarding agencies, including North Wales Police. Discussions will include any individual or coordinated measures appropriate to avoiding risks to vulnerable groups, for example in relation to human trafficking and direct or indirect sex work.
- 6.3.17 **Adaptive monitoring:** item 0097 Mitigation Route Map [REP2-038] (Improve governance and community confidence), to be secured through the Draft DCO s.106 Agreement (submitted at Deadline 3 (18 December 2018)), states that Horizon will establish an external stakeholder group (hereafter Health and Well-being Engagement sub-group). The Health and Well-being Engagement sub-group will be established and operate in accordance with the terms of reference, which are currently sought to be agreed with IACC and the Welsh Government. The draft DCO s.106 agreement provides that where appropriate, the sub-group will discuss the need for additional mitigation or follow-up investigation on the basis of monitoring undertaken. To facilitate this process, a set of key topics and indicators will be agreed. The topics will be expected to include safeguarding with regard to vulnerable adults and children.
- 6.3.18 The Health and Well-being Engagement sub-group (see Wylfa Newydd CoCP [REP2-031]) will also be used as a forum for discussing/agreeing the content and terms of the CSMS.
- 6.3.19 Horizon also notes that measures for community cohesion and resilience are related to, and important for, safeguarding. Table 3 in Horizon's response to the Community LIR chapter sets out proposed measures to reduce the potential for adverse effects on community cohesion and covers the following issues: Welsh language; access to services; employment opportunities for local residents; business opportunities for local enterprises and community issues.

¹⁵ Horizon Nuclear Power. (2018) Modern Slavery Act Statement. [www.horizonnuclearpower.com/files/downloads/our-policies/Modern-Slavery-Act-Transparency-Statement%20\(2018\).pdf](http://www.horizonnuclearpower.com/files/downloads/our-policies/Modern-Slavery-Act-Transparency-Statement%20(2018).pdf)

7 Local Impact Report – Education and Skills

7.1 Introduction

7.1.1 Horizon has reviewed Chapter 7: Education and Skills IACC LIR. This section responds to the key issues presented within chapter 7, with reference to the corresponding paragraph numbers in the LIR chapter where appropriate.

7.1.2 Key issues in this response are:

- Increasing local labour participation
- Displacement and disruption to schools
- Physical capacity to accommodate dependents of migrant workers
- Staff capacity
- Welsh language immersion services
- Disruption to education of others
- Special needs provision
- Pre-school provision

7.2 Local impact 1 and local impact 2: Increasing local labour participation - construction and operation

7.2.1 In respect of paragraphs 4.1, 4.2, 4.3.12-23, 5.0, please refer to Horizon's response to the IACC's Local Labour Report in the response to Chapter 3: Economic Development – Local Employment of the LIR. That addresses the concerns of IACC raised in relation to local labour (and education to support a local labour force) both during construction and operation.

7.3 Local impact 3: Displacement and disruption to schools

7.3.1 In regard to paragraph 4.3.1 of chapter 7, Horizon responds IACC's concern with regards labour churn within the local economy and the associated risk of labour displacement within the various sectors in Horizon's response to chapter 3: Economic Development - Local Employment of the LIR.

7.3.2 IACC notes an expectation (at paragraph 4.3.6) that outages during operation will cause significant displacement. This is not agreed, not evidenced by recent practice at the Existing Power Station and misunderstands the nature of the outage work force. Further information on outage working is provided in the response to Chapter 3: Economic Development – Local Employment of the LIR.

7.3.3 In paragraph 4.3.7 IACC raises concerns over noise and dust effects on schools. As outlined in the DCO Environmental Statement, Volume D3 [APP-122], Ysgol Gynradd Cemaes and Ysgol Gymuned Llanfechell are located at

470m and 1.8km from the Order Limits respectively. Both are highly sensitive receptors as they provide an educational service for children. In line with chapter D5 (Air Quality) [APP-124], no significant effects from dust are expected close to the Wylfa Newydd Development Area when good practice mitigation, as set out in the Wylfa Newydd Code of Construction Practice (CoCP) [APP-414] and Main Power Station Site sub-CoCP ([APP-415], is implemented. Chapter D6 (Noise and Vibration) [APP-125] identifies potential moderate adverse noise effects (weekday daytime noise levels) at Ysgol Gynradd Cemaes during the construction period. Funding (£250,000) is provided under the draft DCO s.106 agreement for noise mitigation at this school (see schedule 10 of the draft agreement) and will be paid prior to Implementation to enable the required works to be completed in advance of effects materialising.

- 7.3.4 IACC indicates (at paragraph 4.3.10) an issue for local employment when construction worker numbers begin to decline from peak construction. It is of course inevitable that worker numbers will decline relatively sharply following peak construction, however Horizon reiterates its intention to maximise the benefits of the Project to the local population. The impact of this on local employees will depend on the capacity in which they are employed but there is not anticipated to be a disproportionate reduction in local employment as compared with non-home based workers. Many of the roles that home-based workers will take are likely to continue through to the later stages of construction so the home-based proportion (although not the absolute number) could rise again after the peak. As the operational workforce increases this is also likely to increase the number of home-based workers; reskilling the local construction workforce for operational roles will be a focus of the Jobs and Skills Implementation Plan (which is being finalised and which will be appended to DCO s.106 agreement).

7.4 Local impact 4: Physical capacity to accommodate dependents of migrant workers

- 7.4.1 IACC seeks to take a planned approach to school place development (at paragraph 7.1.8). In order to do so, IACC utilises the JLDP housing level projections to support its understanding of what is needed in terms of schools. These housing level projections include the increased demand likely to arise as a result of projects like Wylfa Newydd.
- 7.4.2 In any event, the draft DCO s.106 agreement provides for £1,000,000 upfront capacity enhancement. Horizon has acknowledged to IACC the need to agree an appropriate allocation to deliver capacity enhancement (which could include physical capacity to teaching capacity) as well as other resilience measures – the scope of this contribution is to be discussed with IACC. Additionally, a further £3,000,000 is proposed for contingency funding in the event that additional adverse effects are forecast or emerge. This could include allocation for nurse or special needs educational provision, as well as teaching resource. Horizon has expressed a desire to further discuss this

with IACC, although no specific allocation or trigger proposals have been received at this time. In addition, Horizon has agreed to fund enhancement of Welsh language immersion capacity in schools under the site preparation and clearance s.106 agreement (to ensure lead in times are recognised) and to fund two Welsh language teachers under the draft DCO s.106 agreement.

- 7.4.3 While it is anticipated that schools would meet the draft eligibility criteria for accessing the Community Fund, the criteria could be amended to specifically refer to schools should IACC consider that necessary.
- 7.4.4 Additionally, the Skills Fund secured in schedule 4 of the draft DCO s.106 agreement is also accessible to schools to apply for funding for matters such as improvement to science laboratories in secondary schools.
- 7.4.5 In paragraph 7.1.37 IACC estimate that there will be 594 dependants (aka 594 dependent children) in the DCCZ and 505 on Anglesey. The approach to calculating this estimate, as presented in the table that follows paragraph 7.1.38, is not transparent and Annex 7a as provided by IACC sheds no further light on how the final estimates of dependants have been derived. Therefore Horizon cannot agree with these figures. Horizon's estimate is of 505 dependants in total, 285 being dependent partners and 220 being dependent children. Horizon have outlined the approach to calculating the potential number of dependants in the DCO application; see ES Volume B - Introduction to the environmental assessments B2 - Socio-economics [APP-067]. Horizon notes that this methodology was discussed with IACC a number of times in recent years and no alternative method was put forward that would more appropriately estimate potential dependents. Horizon provide a technical note as part of this submission, which was submitted to IACC in 2017 (see Appendix A of this section responding to chapter 7 of the LIR), which outlines the approach taken and data used, both for the estimation of dependants who could come to Anglesey and the assessment of the effect of these children on the capacity in schools.
- 7.4.6 Horizon utilise a demographic profile of construction workers, and therefore different profiles of the types of families arriving in the area. These different families have varying probabilities of occurring; these are applied to the estimates of assumed proportions of workers that will have families. This profile was acquired using national statistics (Household composition and Occupation data from 2011 Census) and is therefore evidence based (Appendix A of this section). IACC appears to apply no such profiles in its calculations.
- 7.4.7 In paragraph 7.1.39, IACC notes other potential reasons why Horizon's estimate of dependants may be an underestimate. However, this is simply conjecture. Horizon could easily state in response that the rural nature of the area will be less attractive to those who prefer to live in cities with access to more services and job opportunities for partners.
- 7.4.8 When testing the capacity of primary and secondary schools in the area, Horizon has taken a worst case scenario by testing what could occur if all 220

dependants were of a primary school age and if all were of secondary school age, effectively testing the capacity for 440 dependants attending schools in the area. In terms of nursery capacity, IACC states that the majority of provision is private. It is Horizon's position therefore, that capacity can be increased to meet demand, creating economic activity and benefit in the area. (See Appendix A of this section for more information on the school's capacity assessment.)

- 7.4.9 In reply to 7.1.40 with regard to the capacity of secondary schools and future trends, Horizon noted in the DCO application (ES Volume C - Project-wide effects C1 [APP-088] and ES Volume C - Project-wide effects App C1-1 [APP-095]) that the IACC was undergoing a reform on school capacity. Horizon's assessment used the most recent evidence provided directly by IACC on school places and demand. This is set out further Appendix A of this section below.
- 7.4.10 Horizon also notes that workers bringing families will be paying council tax and income tax. They are therefore entitled to the provision of services as provided to all residents who pay council tax. Increased council tax provision can be used to support the provision of some services. Horizon recognises however that there can be a delay in IACC becoming in receipt of school place funding provided by Welsh Government which could create a short term deficit for IACC. For these reasons, Horizon has committed the funding referred to in paragraphs 1.4.2 and 1.4.3 above. Horizon recognises the need to mitigate effects caused by its project, but it is not appropriate or lawful for the development contributions to be sought to fill existing gaps or deficits in provision.

7.5 Local impact 5: Staff capacity

- 7.5.1 IACC's request for increased staffing levels (which request funding for 17 new teachers/teaching assistants) is based on an inaccurate premise, due to the fact that its estimate of dependants associated with the Project is overstated (see above). IACC estimates that 594 dependent children will enter the school system of the DCCZ (505 for Anglesey), compared to Horizon's estimate of 220 dependent children.
- 7.5.2 Horizon's proposed financial contributions are set out above; this is considered an appropriate offer. It is recognised additional specificity and triggers are required to be developed through detailed discussions with IACC.

7.6 Local impact 6: Welsh language immersion services

- 7.6.1 It is noted that IACC's position on the inadequacy of immersion centre teaching provision is predicated on the incorrect calculation of the potential number of dependants requiring immersion services (as discussed above). The perceived pressure on Welsh Language immersion will be alleviated by Horizon's Welsh Language Education (Annual) Contribution to fund the employment of two or more peripatetic teachers to support current Welsh immersion education capacity within the Council's boundary (and if the

monitoring indicates a need to do so, in the Gwynedd Council boundary). For clarity, and in response to paragraph 7.3.15, funding for two teachers has been provided. Discussion around the implementation of this measure are ongoing through the Statement of Common Ground (SoCG) between Horizon and IACC.

- 7.6.2 See Horizon's response to Chapter 9 Welsh Language and Culture of the LIR for further details on the mitigation measures committed to in relation to Welsh Language and Culture.

7.7 Local impact 7: Disruption to education of others

- 7.7.1 IACC provides no evidence for the assertion that the inclusion of children who have recently undergone Welsh language immersion training has any detrimental effect on the overall attainment levels in schools or other asserted effects. IACC refers the Examining Authority to Annex 4 to chapter 7 of the LIR however no specific source can be identified within that document.
- 7.7.2 The Overarching National Policy Statement for Energy (EN-1) notes that the Secretary of State may conclude that limited weight is to be given to assertions of socio-economic impacts that are not supported by evidence (particularly in view of the need for energy infrastructure as set out in that NPS).

7.8 Local impact 8: Special-needs provision

- 7.8.1 IACC states that there will be strain from the dependents arriving as a result of the Project. Horizon refers to its responses above for the issue is similar to above replies to Local Impacts 4 and 5 as regards its view of IACC's estimate of the number of dependants.
- 7.8.2 Horizon is providing upfront funding (Education Contribution) as well as continuing monitoring/funding (Education (Contingency) Fund). There will be further discussion of this matter between Horizon and IACC.

7.9 Local impact 9: Pre-school provision

- 7.9.1 Horizon proposes to discuss with IACC the potential costs of their proposed provisions and will identify the appropriate route to providing support, for example committing funds from the current contingency fund.

7.10 IACC requests

- 7.10.1 In section 9.2, IACC details requests they made and where Horizon's response fell short of their expectation. Horizon provides the following additional information to support the Examining Authority to consider this further.

IACC request	Horizon response
Detailed understanding of future skills gaps:	The Wylfa Newydd Jobs and Skills Strategy [APP-411] focuses on maximising opportunities for local people in occupations that meet the following criteria: • They are in high demand at Wylfa; • There are existing skills shortages in the construction industry; and, • There is a reasonable prospect of workers being trained locally to achieve the necessary standards Section 3.4 of the Jobs and Skills Strategy highlights those trades for which there is significant need or skills gaps. In addition, the tables also show peak levels of demand, the anticipated occurrence of that peak and the training lead times. Table 3-3 for example shows the need for labourers, carpentry, steel fixing, scaffolding and plant operatives. All of these trades feature in the Jobs and Skills Implementation Plan (secured under the draft DCO s.106 agreement, and which will be provided into examination) for years 1-3, setting out the steps required to maximise home based worker (HBW) numbers working towards the peak years of demand. The peaks for mechanical and electrical trades are anticipated later in the programme and therefore do not feature in the Jobs and Skills Implementation Plan and are also anticipated to be more challenging to secure local labour into. This does not, however, preclude that future versions of the Jobs and Skills Implementation Plan will feature these roles, although these trades also have a significant decline after peak employment and as a result we have focussed on those areas of employment where there is potential for more sustained employment. In respect of site services, the Jobs and Skills Implementation Plan, as with construction trades, highlights the necessary steps to maximise opportunities for HBW, with specific roles referenced in cleaning, administration, driving and security.
Training from higher education	As referenced in Horizon's response to paragraph 1.5.29 of LIR Chapter 3: Economic Development – Local Employment, the shortage of high level skills is an issue of national concern and is being approached as such by the UK government as part of its Industrial Strategy.

	Nevertheless, recognising Horizon has a role to play in supporting the development of these skills as a project of regional and national significance, Horizon is committed to delivering apprenticeships, graduate positions, promoting STEM skills and career pathways through its educational outreach work, and, through the Jobs and Skills Implementation Plan have agreed to explore the creation of a bursary programme to support for certain higher education and further education routes that align with the skills needs of the Project.
Details of the skills in the immediate supply chain	As part of the Supply Chain Action Plan, Horizon will work with IACC and others to identify the skills currently within the locality/ region (north Wales). This will then support further works and any mitigation/ intervention, Horizon would also remind IACC that they have identified the services available within the supply chain of Anglesey within Table 3 of Chapter 4 of the Local Impact Report.
Details of the contracts available to local business	A draft Supply Chain Action Plan has been circulated and was discussed at the Stakeholder Supply Chain workshop session on 11 December 2018. As part of the Supply Chain Business Engagement Plan, which forms part of the Supply Chain Action Plan, Horizon is committing to mapping out the contract packages and then to raise awareness of local firms what will be happening and when.
More detail on the demand and supply for skills and qualifications	As referenced in Horizon's response to paragraph 1.6.2 on IACC's LIR chapter 3: Economic Development – Local Employment, supplying ever more detailed analysis of the competencies, qualifications and skills levels for individual occupations within the Wylfa Newydd workforce profile is unlikely to substantially increase the likelihood of locals gaining employment with the project. This is due to the fact that many of the roles will be created within the supply chain companies who themselves will already have a skilled pool of labour from which to draw in order to staff the Wylfa Newydd programme. These individual companies will inevitably strive (and have a legal duty) to offer employment first to those with the requisite skills within their own workforce. Local employment opportunities are likely to be created locally by the presence of skills gaps (where a significant volume outstrips the available supply) or where part of the supply chain is unable to source someone with suitable skills from within that results in a need to recruit externally.

	As a result, Horizon's approach is to train and upskill local people so that they have the best possible prospect of securing employment in the roles that are anticipated will be in demand externally. Whilst additional detail on Horizon's labour forecasting – as it develops – will support these discussions with training providers both in terms of the phasing and likely required competencies, it cannot specify the number of new and external job roles that will be created for the reasons already outlined. It is therefore important that a balance is struck between developing individuals with the knowledge, skills, attitudes and behaviours required for in-demand occupations on the Project, and not developing an approach so targeted and focussed in specific job roles that may not materialise and therefore work against the ambition to maximise the home-based workforce on the programme.
Detail on the level and scope of support for improving facilities at schools	As above, there will be an Education Contribution made available to IACC for schools from the start of the Project in order to enhance capacity. This will be separate from the Education Contingency Fund which will provide additional funding if monitoring indicates additional demand.
Technical apprenticeship scheme	Horizon's Jobs and Skills Implementation Plan sets two main objectives on apprentices for years 1-3: • Adopt and implement an apprenticeship target for the Wylfa Newydd DCO Project during construction and link it to the onset of operational phase apprentice positions. • Establish an annual apprenticeship intake In respect of apprentices, the current proposal is to target an average of at least 2.3% of the on-site construction workforce (taken as a proportion of both manual and non-manual workforce on-site) for the Wylfa Newydd development are employed as apprentices. This would be measured against a target against the Full Time Equivalent (FTE) total workforce taken at the start of the relevant reporting year and include both existing apprentices and those new to company/project. In addition, Horizon will continue to operate and expand its Technical Apprenticeship Scheme throughout the construction period and it is anticipated that 'graduates' from the Technical Apprentice Scheme will ultimately

	comprise approximately 20% of the site-based operational workforce
Nuclear courses at University of Bangor etc	Horizon is a strategic partner of Bangor University and a member of the University's Strategic Group. Discussions are continuing with Bangor University and Horizon's Training Support Partner, along with Grŵp Llandrillo Menai to look at future potential areas of cooperation. This may involve providing training to academic and institution staff, discussion on future collaboration areas and providing assistance in developing nuclear related courses and content. In respect of school engagement, this forms an important strand of Horizon's approach to maximising home based workers and a future operational workforce for Wylfa Newydd. Horizon's Jobs and Skills Implementation Plan commits to revising its educational strategy by July 2019 with a view to confirming levels of engagement with 5 secondary schools and 47 primary schools on Anglesey as well as within the wider region. Horizon will also aim to utilise staff in the supply chain to support its existing STEM Ambassador programme. Horizon's education officers working with other national and regional stakeholders will develop careers information, advice and guidance to promote job profiles for in-demand roles, career route maps and distribute these to schools and through further education providers. Horizon will also develop its approach to work experience programme for college and university students in the region and consider the need for bursaries for local people for project related higher education courses.
Retraining of Magnox staff	Horizon already has an ongoing dialogue with the Wylfa and Trawsfynydd power stations on potential areas of collaboration with respect to potential 'skills transfer'. The Wylfa Newydd Employment and Skills Service (WNESS) is the route through which individuals looking for employment, training and upskilling will be able to access advice and support through Department of Work and Pensions (DWP) , Horizon and Grŵp Llandrillo-Menai staff who will signpost individuals to relevant training provision both and entry level and for upskilling those already working in the sector on the provision available to help them secure employment with the Wylfa Newydd DCO Project.
WNESS	The details of the role, remit, functions, responsibilities and resources committed by partners to the WNESS

	are set out in the WNESS Terms of Reference, jointly developed with stakeholders including IACC. WNESS Terms of Reference have been approved by the WNESS sub group, subject to any final comment by the 14th of December 2018. The intention is to attach these to the s.106 agreement, and this will be done in the next turn of the agreement. The WNESS is a cross section of stakeholders with an interest jobs and skills and as part of its' agenda, it looks at external funding sources, CITB Wales, DWP, European Structural Funds. The backfilling of jobs will be part of the monitoring role of this group.
Funding of training	The draft DCO s.106 agreement Skills Fund will be in place from implementation to address or mitigate appropriate (evidence based) skills issues.
Paragraph 9.2.1 and 9.2.2 of IACC Education and Skills LIR	Horizon plan to revise its education strategy (within the Jobs and Skills Implementation Plan) by July 2019. Horizon also consider this adequately sets out its position in relation to the requests made under 7.6 and 7.8 of chapter 7 in relation to training places and the role of WNESS, but Horizon is working closely with training providers, CITB and other stakeholders to understand current training provision and respond to this in the development of curricula and training cohorts as referenced within the Jobs and Skills Implementation Plan

7.11 DCO obligations and requirements

7.11.1 In respect of the specific requests for requirements made by IACC in this LIR chapter (Chapter 7: Education and Skills), either:

- These are addressed in the topic specific sections of this response above; or
- Horizon is continuing to consider the request.

7.11.2 Horizon considers that the mitigation it has put forward and described within the above response is appropriate. However as noted above there are areas which are agreed to need refinement.

[This page is intentionally blank]

Appendix A School Places Memo provided to IACC in 2017.

[This page is intentionally blank]

Contents

1.1	Executive Summary	70
1.2	Introduction	70
1.3	Current situation (Baseline).....	70
1.4	Forecast	72
1.5	IACC forecast.....	74

Appendix A. Additional Information

1.1 Executive Summary

Our research indicates that currently there is a sufficient amount of school places for new pupils arriving in Anglesey because of Wylfa Newydd DCO Project, both at primary and secondary school level. This has been achieved by observing current and near future supply of school places in Anglesey as well as conducting our own forecast of increased demand caused by the Wylfa Newydd DCO Project. We recognise that however there may be some impact in localised areas where supply in available places are low and demand is concentrated. This is only potentially a concern for primary school places, not secondary school places.

The memo presents the baseline information and the sources of the data used. It also outlines the approach to the calculation of the number of dependants and partners expected to travel with workers to the local area. It does not provide a detailed assessment of the effects of the project nor does it define mitigation measures. Rather it sets out Horizon's position to move forward into discussions with stakeholder on these aspects of the DCO.

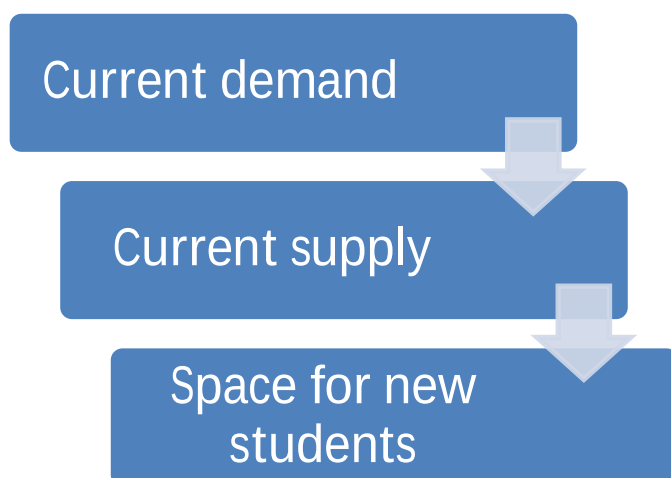
1.2 Introduction

The construction, operation, and decommissioning of the Wylfa Newydd DCO Project will introduce new people to the area, some of whom will bring children. Therefore, it is important to forecast the extent of this impact in order identify potential direct effects associated with the Project and to identify suitable mitigation where required.

Following sections will outline the process applied to:

1. Calculated current demand, supply, and available capacity.
2. Forecasted impact of the Project.

1.3 Current situation (Baseline)



In order to assess the current demand and supply of school places in Anglesey, Isle of Anglesey County Council (IACC) data from their website¹⁶ was used. The following is shown for each primary and secondary school: the capacity (supply), total pupils enrolled (demand), and from these it is possible to calculate the available capacity (space for new students). In order to present the information the individual schools were aggregated into four areas (a detailed table showing this aggregation process can be found in the appendix, Table A.1):

- Anglesey North
- Anglesey South
- Anglesey West
- Menai Mainland

Table 2.1 and 2.2 are the summary tables showing the aggregated figures for each area; for detailed figures on capacity, enrolment and difference between these please refer to table A.2 and A.3 in the appendices.

Table 2.1: Primary school capacity, enrolment and available capacity by area, 2016¹⁷ (IACC,2017)

Area	Capacity		Enrolment	Spare capacity
Anglesey North	1,124		935	189
Anglesey South	2,650		2,297	353
Anglesey West	2,653		2,504	149
Menai Mainland	5,514		4,548	966
KSA	11,941		10,284	1,657

¹⁶ We also requested for data from IACC on Ysgol Gynradd Llanfachraeth, Ysgol Ffrwd Wîn, Ysgol Gymuned Llannerch-y-medd, Ysgol Gymuned Cylch y Garn, Ysgol Gynradd Pencarnisiog, Ysgol Gymraeg Morswyn, Ysgol Gynradd Bodedern, Ysgol Gymuned Bryngwran, and Ysgol Gymuned Y Ffridd.

¹⁷ All figures in Table 2.1 and 2.2 refer to September 2016, except Menai Mainland for which we could not obtain updated figures beyond 2014.

Table 2.2: Secondary school capacity, enrolment and excess capacity by area, 2016¹⁸
(IACC,2017)

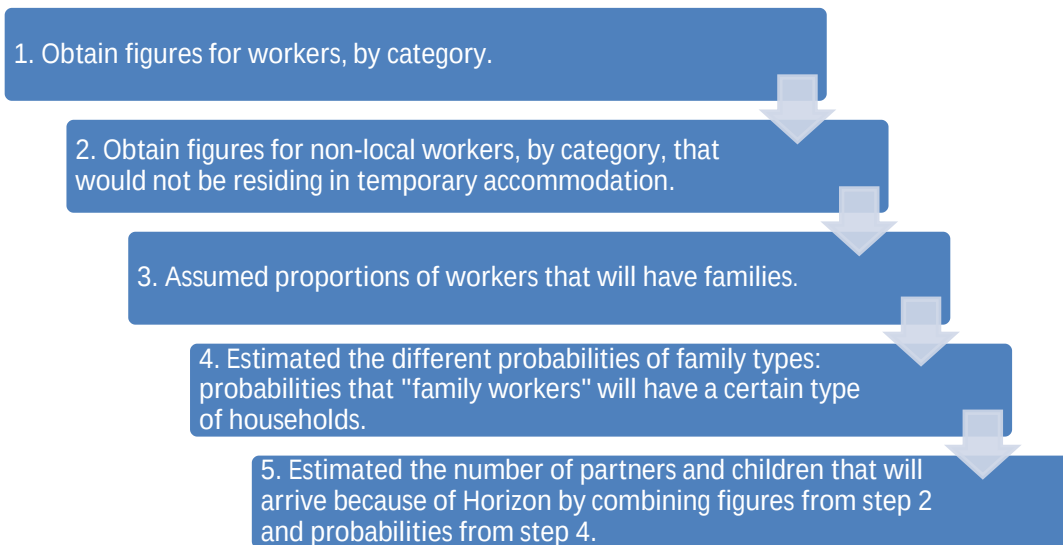
Area	Capacity	Enrolment	Spare capacity
Anglesey North	971	510	461
Anglesey South	2,179	1,842	337
Anglesey West	2,021	1,507	514
Menai Mainland	5,393	4,194	1,199
KSA	10,564	8,053	2,511

These tables present the current baseline for the availability of school places in Anglesey. It highlights that at a reasonable level of detail, there is capacity for student numbers to increase. This also assumes a worst case scenario whereupon all children that arrive in Anglesey will be the same age and therefore will attend the same level of schooling.

The next step in the process is to forecast the number of children likely to be brought to the area as a result of the Project.

1.4 Forecast

The following section sets out how we estimated the number of children that would come to Anglesey due to the Project. This estimation took 4 steps:



Step 4 is the most complex and will be broken down further here:

4. Estimated probabilities for the number of partners and children that will arrive with different worker categories:

¹⁸ See above footnote 2.

- a. Used census data to obtain the number of different household types as proportions of total within that age group.
- b. Used these proportions to establish the probability of workers having a spouse and the probability of having a dependent at each age bracket and gender.
- c. Used census data to see the proportion of different age groups and gender breakdown within the relevant worker categories.
- d. Combined the proportions from B and C to form a probability of having a spouse and probability of having a dependent for each worker category.
- e. Assumed a percentage of workers having families.

The resulting forecast of the number of workers, partners, and dependents provides a final number of people “added” to the area. This serves as the starting point for research into the subsequent increased pressure on public services. In the case of education, the focus is on the number of children arriving in the area which we predict to be 220 during the Construction phase. This phase is the peak employment scenario with a peak workforce of 9,000. Employment estimates decreases during Operational phase where approximately 30 dependents are estimated to arrive in the area with workers.

The following tables set out the figures that have been previously described. Table 3.1 sets out the figures for workers by categories and the non-home based workers that will reside outside the Temporary Workers Accommodation.

Table 3.1: Estimated number of workers by category – at peak construction

Gravity Model Worker Category	Total Workforce	Non-home based Workers
Civil engineering operatives	3,069	2,394
Mechanical and electrical engineering operatives	2,580	2,372
Off-site services, security and clerical staff	392	93
Operational Staff	451	260
Site Services, security and B clerical staff	511	121
Supervisory/ managerial	1,998	1,761
Total	9,000	7,000
Temporary Worker Accommodation	-	4,000
NHB Workers seeking bedspaces in KSA Housing Market	-	3,000

Table 3.2 presents the probabilities of different household types occurring within that workforce. Note the “relevant” tag for workers, this is due to the assumption of a

certain proportion of workers having families and therefore becoming “relevant” to the probabilities set out in Table 3.2.

Table 3.2: Probabilities of different household types for relevant workers

Construction									
Socio Economic Categories of Worker	Prob of partners / spouses	Prob of dependants	One dependent child	Two dependent children	Three + dependent children	Child aged 0 to 4	Child aged 5 to 9	Child aged 10 to 15	Child aged 16 to 18
Non-professional worker	81.8%	50.6%	19.8%	3.9%	4.7%	9.3%	5.0%	1.2%	1.2%
Professional Worker	79.3%	54.4%	19.9%	4.7%	4.9%	9.8%	6.0%	1.3%	1.2%
Operational									
Average Worker	52.5%	11.2%	22.0%	6.7%	1.8%	16.7%	3.6%	5.6%	4.6%

Table 3.3 sets out the result of the forecasts for the two main periods of work during the Horizon Power Station project: 220 children are forecasted arrive during the Construction phase of the project, the busiest phase in terms of the employment levels, and 31 children forecasted to arrive linked to the Operation of the project.

Table 3.3: Resulting estimates of partners and dependents

Period	Workers	Estimated Partners	Estimated Dependants	Total
Construction	3,000	285	220	3,504
Operational	850	40	31	921

1.5 IACC primary school forecast

1.5.1 Pre-policy change scenario

The following is a forecast by IACC on the number of full primary schools and number of places available throughout Anglesey to 2021. Table 5.1 shows an increase in the number of “full” schools and a decrease in the amount of spare capacity. It presents a scenario where there is capacity available for the 220 students that we forecast may arrive during the Construction phase of the project. Again we should emphasise that this assumes the worst case scenario, that all the children that arrive to the area are only of primary school age, it is likely there will be a range of ages. IACC note that these forecasts do not include possible closures of schools that may take place after 2018/19.

This data has not been provided for secondary schools.

Table 5.1 – Number of full primary schools and surplus of places in Anglesey, September 2016 – 2021 (IACC, 2017)

Catchment area	2016	2017	2018	2019	2020	2021
Ysgol Syr Thomas Jones, Amlwch (Ysgol Rhosybol, Ysgol Goronwy Owen)	1	2	2	1	1	2
Holyhead High School (Ysgol Rhoscolyn, Ysgol Llanfawr, Ysgol y Tywyn, Ysgol Kingsland, St Mary's School)	4	4	4	4	4	5
Ysgol Gyfun Llangefni (Ysgol Bodffordd, Ysgol Esceifiog, Ysgol y Graig, Ysgol Corn Hir, Ysgol Henblas)	3	5	5	5	5	5
Ysgol David Hughes, Menai Bridge (Ysgol Llanfairpwll, Ysgol Llandegfan, Ysgol Parc y Bont, Ysgol y Borth)	3	4	1	4	3	2
Ysgol Uwchradd Bodedern (Ysgol y Ffridd, Ysgol Llannerchymedd, Ysgol Pencarnisiog, Ysgol Morswyn)	2	4	4	4	5	4
Total no of full primary schools	13	19	16	18	18	18
% of primary schools that are full	28	40	34	38	38	38
	2016	2017	2018	2019	2020	2021
Projected no of surplus places	630	484	262	279	294	288
% surplus places	11%	8%	5%	5%	5%	5%

1.5.2 Conclusions

It is estimated that the number of school children (both primary and secondary) to be introduced at peak to be around 220 children. The peak period is expected to run for 12 to 18 months. Given the overall capacity availability, the probability of demand exceeding supply is considered to be low. Concerns have not been raised around resulting capacity issues in secondary schools so these are not discussed further.

IACC will soon close down a number primary schools whilst opening a fewer number of new schools in a bid to improve facilities. It is recognised that this will result in a reduction in capacity. It is also recognised that in certain areas there is limited capacity at primary school level and therefore there is the potential for increased demand in some of these areas to generate additional expenditure requirements for IACC in advance of any council tax contributions being realised within the Education department's budgets.

Given the uncertainty at this time and in recognition of the concerns that exist surrounding primary school demand, Horizon would propose entering into a joint-

monitoring agreement with IACC. This would entail monitoring recruitment of workers to provide IACC with information about the number partners and dependents moving to the area early. Whilst simultaneously, IACC monitors the inflow of school children and their reason for joining the school. This live monitoring of the potential issue could provide evidence of the effect the Project is having on available capacity. HNP also proposes that given this, a fund could be provided which could be accessed by IACC to address issues identified by the joint-monitoring project by HNP and IACC of primary school places.

Appendix A. Additional Information

Table A.1: Primary and secondary schools aggregated by area

Anglesey North	Anglesey South	Anglesey West	Menai Mainland
Ysgol Gynradd Amlwch	Ysgol Gynradd Beaumaris	Ysgol Gynradd Bodedern	Bangor
Ysgol Gynradd Cemaes	Ysgol Gymuned Bodorgan	Ysgol Gymuned Bodffordd	Bontenewydd
Ysgol Gymuned Carreglefn	Ysgol Gynradd Brynsiencyn	Ysgol Gymuned Bryngwran	Llanrug
Ysgol Gymuned Moelfre	Ysgol Gymuned Dwyran	Ysgol Gymuned Y Ffridd	Llanwnda
Ysgol Gynradd Llanfachraeth	Ysgol Esceifiog	Ysgol Y Parc	Deiniolen
Ysgol Ffrwd Win	Ysgol Gynradd Llanbedrgoch	Ysgol Gynradd Pencarnisiog	Bethel
Ysgol Gymuned Llanfechell	Ysgol Gynradd Llanfairpwll	Ysgol Santes Gwenfaen	Tregarth
Ysgol Gymuned Llannerch-y-medd	Ysgol Y Graig	Ysgol Gynradd Rhosneigr	Talysarn
Ysgol Gymuned Cylch y Garn	Ysgol Gynradd	Ysgol Gymuned Y Fali	Caernarfon
Ysgol Gynradd Penysarn	Ysgol Henblas	Ysgol Llanfawr	Y Felinheli
Ysgol Gymuned Rhosybol	Ysgol Gymuned Pentraeth	Ysgol Llaingoch	OOA
-	Ysgol Gynradd Talwrn	Ysgol Y Tywyn	Groeslon
-	Ysgol Goronwy Owen	Ysgol Kingsland	Arlechwedd
-	Ysgol Gynradd Niwbwrch	Ysgol Gymraeg Morswyn	Clynnog Llanllyfni
-	Ysgol Gynradd Llandegfan	Ysgol Y Parch Thomas Ellis	Penisarwaen
-	Ysgol Y Borth	Ysgol Santes Fair/ St Mary's School	Waunfawr

-	Ysgol Corn Hir	Ysgol Caergeiliog Foundation School	Bethesda
-	Ysgol Parc y Bont	-	Llandygai
-	Ysgol Gynradd Llangaffo	-	-
Secondary schools			
Syr Thomas Jones	David Hughes	Uwchradd Bodedern	Bangor
-	Gyfun Llangefni	Uwchradd Caergybi	Bethesda
-	-	-	Caernarfon
-	-	-	Llanrug
-	-	-	Talysarn

Table A.2: Primary school capacity, enrolment, and excess capacity in Anglesey and Menai Mainland, 2016* (IACC,2017)

Primary School	Location	KSA	Number on Register	Capacity	Difference to capacity
Ysgol Gynradd Amlwch	Amlwch	Anglesey No	276	287	11
Ysgol Gynradd Cemaes	Cemaes	Anglesey No	90	89	-1
Ysgol Gymuned Carreglefn	Carreglefn	Anglesey No	40	52	12
Ysgol Gymuned Moelfre	Moelfre	Anglesey No	71	96	25
Ysgol Gynradd Llanfachrae	Llanfachraeth	Anglesey No	43	73	30
Ysgol Ffrwd Win	Llanfaethlu	Anglesey No	34	60	26
Ysgol Gymuned Llanfechell	Llanfechell	Anglesey No	72	119	47
Ysgol Gymuned Llannerch-y-medd	Llannerch-y-medd	Anglesey No	108	111	3
Ysgol Gymuned Cylch y Garn	Llanrhuddlad	Anglesey No	35	60	25
Ysgol Gynradd Penysarn	Penysarn	Anglesey No	95	104	9

Ysgol	Gymuned Rhosybol	Rhosybol	Anglesey No	71	73	2
Ysgol	Gynradd Beaumaris	Beaumaris	Anglesey So	51	163	112
Ysgol	Gymuned Bodorgan	Bodorgan	Anglesey So	21	50	29
Ysgol	Gynradd Brynsiencyn	Brynsiencyn	Anglesey So	42	79	37
Ysgol	Gymuned Dwyran	Dwyran	Anglesey So	41	89	48
Ysgol Esceifiog		Gaewen	Anglesey So	143	141	-2
Ysgol	Gynradd Llanbedro	Llanbedro	Anglesey So	37	60	23
Ysgol	Gynradd Llanfairpwll	Llanfairpwll	Anglesey So	367	322	-45
Ysgol Y Graig		Llangefni	Anglesey So	326	354	28
Ysgol Gynradd		Llangoed	Anglesey So	91	112	21
Ysgol Henblas		Bodorgan	Anglesey So	81	105	24
Ysgol	Gymuned Pentraeth	Pentraeth	Anglesey So	101	135	34
Ysgol Gynradd Talwrn		Talwrn	Anglesey So	47	49	2
Ysgol Goronwy Owen		Benllech	Anglesey So	133	153	20
Ysgol	Gynradd Niwbwrch	Niwbwrch	Anglesey So	61	118	57
Ysgol	Gynradd Llandegfan	Llandegfan	Anglesey So	144	145	1
Ysgol Y Borth		Porthaethwy	Anglesey So	239	218	-21
Ysgol Corn Hir		Llangefni	Anglesey So	221	204	-17
Ysgol Parc y Bont		Llanddaniel	Anglesey So	110	105	-5
Ysgol	Gynradd Llangaffo	Llangaffo	Anglesey So	41	48	7
Ysgol	Gynradd Bodedern	Bodedern	Anglesey W	97	103	6
Ysgol	Gymuned Bodffordd	Bodffordd	Anglesey W	78	74	-4
Ysgol	Gymuned Bryngwran	Bryngwran	Anglesey W	43	59	16
Ysgol	Gymuned Y Ffridd	Gwalchmai	Anglesey W	81	84	3
Ysgol Y Parc		Holyhead	Anglesey W	177	201	24
Ysgol	Gynradd Pencarnisio	Ty Croes	Anglesey W	56	50	-6

Ysgol Santes Gwenfaen	Rhoscolyn/ Holyhe	Anglesey W	117	112	-5
Ysgol Gynradd Rhosneigr	Rhosneigr	Anglesey W	68	76	8
Ysgol Gymuned Y Fali	Valley	Anglesey W	95	176	81
Ysgol Llanfawr	Holyhead	Anglesey W	292	285	-7
Ysgol Llaingoch	Holyhead	Anglesey W	208	194	-14
Ysgol Y Tywyn	Caergeiliog	Anglesey W	153	153	0
Ysgol Kingsland	Holyhead	Anglesey W	182	173	-9
Ysgol Gymraeg Morswyn	Holyhead	Anglesey W	132	126	-6
Ysgol Y Parch Thomas Ellis	Holyhead	Anglesey W	116	162	46
Ysgol Santes Fair/ St Mary's	Holyhead	Anglesey W	198	160	-38
Ysgol Caergeiliog Foundation	Caergeiliog	Anglesey W	411	465	54
-	Bangor	Menai M	1120	1287	167
-	Bontenewydd	Menai M	168	161	-7
-	Llanrug	Menai M	275	273	-2
-	Llanwnda	Menai M	132	177	45
-	Deiniolen	Menai M	140	148	8
-	Bethel	Menai M	133	168	35
-	Tregarth	Menai M	186	252	66
-	Talysarn	Menai M	133	210	77
-	Caernarfon	Menai M	840	962	122
-	Y Felinheli	Menai M	258	342	84
-	OOA	Menai M	137	202	65
-	Groeslon	Menai M	121	193	72
-	Arlechwedd	Menai M	208	213	5
-	Clynnog Llanllyfni	Menai M	130	209	79
-	Penisarwaen	Menai M	79	109	30

-	Waunfawr	Menai M	116	144	28
-	Bethesda	Menai M	78	169	91
-	Llandygai	Menai M	140	157	17
Note: Figures refer to September 2016 apart from Menai Mainland figures which refer to a different period.					

Table A.3: Secondary school capacity, enrolment, and excess capacity in Anglesey and Menai Mainland, 2016* (IACC,2017)

Secondary School	Location	KSA	Number on Register	Capacity	Difference to capacity
David Hughes	Porthaethwy	Anglesey South	1,120	1,283	163
Gyfun Llangefni	Llangefni	Anglesey South	722	896	174
Syr Thomas Jones	Amlwch	Anglesey North	510	971	461
Uwchradd Bodedern	Bodedern	Anglesey West	641	851	210
Uwchradd Caergybi	Holyhead	Anglesey West	866	1,170	304
-	Bangor	Menai Mainland	1,777	1,989	212
-	Bethesda	Menai Mainland	358	551	193
-	Caernarfon	Menai Mainland	827	1,345	518
-	Llanrug	Menai Mainland	739	845	106
-	Talysarn	Menai Mainland	493	663	170
Note: Figures refer to September 2016 apart from Menai Mainland figures which refer to a different period					

8 Local Impact Report – Housing

8.1 Introduction

- 8.1.1 Horizon has reviewed chapter 8: Housing of the IACC LIR. This document responds to the key issues presented within chapter 8, with reference to the corresponding paragraph numbers in the LIR chapter where appropriate.
- 8.1.2 Key issues in this response are:
- New build housing, owner occupied, and Private Rented Sector
 - Latent Accommodation
 - Caravans and tourist accommodation
 - Campus phasing
 - Evidence from Hinkley Point C
 - Workers and their Dependants
 - DCO Obligations and Requirements
- 8.1.3 Noting the points raised in the LIR chapter on housing, Horizon would like to present its position in respect to the issues raised by IACC, the considerable effort made to address those issues and how Horizon's understanding of the situation does not align with that presented by IACC. In short, it has always been, and continues to be, Horizon's strategy to address issues raised by IACC and other stakeholders whenever it is reasonably practical to do so.
- 8.1.4 Horizon has sought clarity from IACC on the amount and type of spare capacity in existing accommodation that IACC thought was available for use by workers. The only clear guidance IACC has given to Horizon was the "Preferred Scenario" in the Amec Foster Wheeler (AFW) reports referred to by IACC in paragraph 2.5 of chapter 8, LIR and appended as Annexes 8A to 8C. Horizon has followed that guidance and, despite regular meetings and requests for greater understanding of IACC's ongoing concerns and any changes to IACC's assessment of capacity, has received limited further guidance on how much capacity can be used by workers therefore how much mitigation is required for 3,000 workers.
- 8.1.5 Horizon has sought to work with IACC both before and after the submission of the application. Horizon acknowledged in the WAS that IACC had not confirmed its view of available capacity at that point and that Horizon intended working with IACC to seek common ground. Horizon is disappointed that IACC did not provide this information until the LIR was submitted.
- 8.1.6 Understanding IACC's view of existing capacity is critical to reaching agreement on the amount of mitigation needed to avoid likely significant impacts. This is in line with the approach required in "Preferred Scenario" in the AFW reports (hereafter referred to as the "AFW Preferred Scenario").
- 8.1.7 Even now, IACC's estimate of capacity (set out in paragraph 5.1.21, chapter 8) is acknowledged by the Council to be, "a matter of judgment" at 10% and

- offers no evidence to support that number. At a meeting with IACC on 18 October 2018, IACC's adviser stated that it was a guess and that the figure could be 7.5% or 15%. Nevertheless, the 10% is now used repeatedly through the document (paragraphs 5.2.9; 5.6.2; 5.6.4 of chapter 8).
- 8.1.8 Work commissioned from Arc 4 by the Welsh Government and Gwynedd Council (and included as Appendix 5 of Gwynedd Council's Written Representation [REP2-303]) also suggested 10%, but said it was a worst-case scenario and that 50% might also be achievable. Again, this was unsupported by evidence but gives an indication of the wide range of estimates of spare capacity.
- 8.1.9 Paragraph 5.12.7 of the Overarching National Policy Statement for Energy (EN-1) is clear that such claims need to be supported by evidence. It states:
- "The IPC may conclude that limited weight is to be given to assertions of socio-economic impacts that are not supported by evidence (particularly in view of the need for energy infrastructure as set out in this NPS)."*
- 8.1.10 Horizon has at all times identified the best evidence available, acknowledged its shortcomings and sought to overcome these with additional data and with an approach to monitor and manage the uncertainty that arises as a result. Horizon's methodology for estimating capacity is clearly set out in both the Environmental Statement [APP-088] and the WAS [APP-412]. The methodology starts with an estimate of total vacancy rates and then deducts from that the capacity that is either needed for the market to operate or that would be unaffordable for workers, or risks displacing tourists.
- 8.1.11 It is unclear why IACC has held back its assessment to present to Horizon through the DCO examination process rather than engage through the Statement of Common Ground process that has been underway since early 2017, just after IACC provided the AFW Preferred Scenario, which Horizon has sought to deliver.
- 8.1.12 This is referenced by IACC in chapter 8, LIR. Paragraph 2.9 states that the work being done by IACC, "would then be discussed and documented through the statement of common ground." In paragraph 2.10 IACC goes on to discuss the work commissioned from Cambridge Centre for Housing & Planning Research ('Cambridge University'). Unfortunately, the work referenced in paragraph 2.10 was not shared with Horizon until 20 September 2018 and then discussed at a meeting on 18 October 2018. Following that meeting, Horizon submitted a number of additional questions to clarify where there was and was not common ground but it did not receive a response.
- 8.1.13 Chapter 8 of the LIR downplays the AFW Preferred Scenario and states that Horizon's position is unclear, reactive and insufficient to mitigate impacts. Horizon took the AFW Preferred Scenario seriously and sought to deliver a pro-active approach in the Workforce Accommodation Strategy [APP-412] that was aligned with the Preferred Scenario as closely as possible.

- 8.1.14 The AFW Preferred Scenario was presented after Pre-Application Consultation Stage 2 (PAC2) and prior to changes made by Horizon before Pre-Application consultation Stage 3. The changes made by Horizon between those two stages of consultation brought its central case closer to the AFW Preferred Scenario. The AFW Preferred Scenario was based on a peak workforce of 9,200 workers (of whom 2,300 were home-based (HB) and 6,900 non-home-based (NHB)), and, as set out in paragraph 2.5 of chapter 8:

“concluded that (at peak) 4,000 - 4,500 workers should be accommodated in purpose built temporary workers accommodation, 500 - 550 workers accommodated in tourism accommodation, 550 – 600 in latent accommodation, 500 - 550 in owner occupation and 800 – 900 in the Private Rented Sector (PRS).”

- 8.1.15 Following PAC2 Horizon undertook a construction optimisation review that allowed it to make more efficient use of its workforce so the peak was reduced from 10,700 at PAC2 to 8,500 for PAC3 with 9,000 being assessed in the Environmental Statement. As well as reducing the peak workforce demand, the composition of the workforce changed which had implications for the split between home-based and non-home based workers and within that, for the likely accommodation choices (fewer management workers meant lower estimated demand for owner-occupied and PRS housing). Horizon also reduced the scale of its Temporary Workers' Accommodation (from up to 5,700 to 4,000).
- 8.1.16 As is shown in the right-hand column of Table 1 below, Horizon's central case submitted as part of the DCO is not very different, and such differences as there are could be resolved through the proposed mitigation package.

Table 1 Comparison of AFW Preferred Scenario and Horizon's Central Case

	AFW Preferred Scenario	Horizon's central case
TWA	4,485	4,000
PRS & owner-occupied	1,380	1,500
Tourist	500-550	1,100
Latent	550-600	400
TOTAL	6,900	7,000
Home-based	2,300	2,000
TOTAL	9,200	9,000

- 8.1.17 The IACC AFW Preferred Scenario included a range of additional mitigation measures including funding for increased provision of housing. These are summarised in paragraph 2.6 of chapter 8:

"This includes earlier delivery of the Temporary Workers Accommodation (and for longer), increasing supply of housing (particularly 1 bed social rented and intermediate housing to meet local demand), bringing empty properties back into active use and encourage/incentivise latent accommodation. The mitigated scenario requires that Horizon should act proactively not reactively. A reactive approach will see serious harm to the islands economy and wellbeing."

- 8.1.18 Horizon has engaged with IACC on the delivery of the Site Campus (see below) and has proposed a Housing Fund that can fulfil IACC's other requirements.
- 8.1.19 Horizon therefore believes its WAS [APP-412] complies with the AFW Preferred Scenario and challenges the reasoning of the conclusion reached in paragraph 6.1 of chapter 8 that, "the IACC objects to Horizon's Workforce Accommodation Strategy." Horizon considers that IACC is objecting to a strategy that is very close to the one it presented to Horizon as its AFW Preferred Scenario in January 2017.
- 8.1.20 Paragraph 6.1 also states that IACC would be in a position to agree Horizon's breakdown of accommodation by sector provided that suitable mitigation is available. Horizon believes that its mitigation package is suitable and continues to work with IACC to reach agreement on that.
- 8.1.21 This response addresses the summary of the IACC position in sequence and then some general points made in chapter 8, LIR:

- New build housing, owner occupied & Private Rented Sectors
- Latent accommodation
- Tourist accommodation
- Campus Phasing
- Evidence from Hinkley Point C
- Workers & their dependents

8.2 New build housing, owner occupied, & Private Rented Sector

- 8.2.1 The IACC LIR introduces a new set of calculations which purport to show that an additional 520 new dwellings would be needed over two years in order to accommodate demand for owner-occupied and private rented accommodation from workers at Wylfa Newydd (paragraph 5.2.10).
- 8.2.2 This evidence was not introduced during the dialogue prior to submission of the DCO, and because it was not available for discussion during that process, the modelling assumptions behind the LIR paper have not been subjected to proper scrutiny. However, from the limited explanation in the LIR, it appears that there are substantial gaps in this proposed alternative approach.
- 8.2.3 For this reason, no weight can be placed on the figure of 520 new dwellings.
- 8.2.4 Important omissions or errors in the analysis are set out below.

New housing supply

- 8.2.5 The LIR notes in paragraph 3.1 (I), that average growth in the number of households in Anglesey from 2014-2023 is forecast to be 51 dwellings per annum (dpa), but that the Joint Local Development Plan (JLDP) has set a higher target for delivery, in part to account for the additional employment at Wylfa.
- 8.2.6 Paragraph 5.4.1 identifies that there is provision identified in the plan for approximately 320 dpa, which is around 270 dpa more than the demographic need. Indeed paragraph 5.4.5 of the LIR notes that this would lead to an increase in out-commuting from Anglesey, as more housing is provided than is required to fill jobs on the island.
- 8.2.7 The JLDP targets an increase in future housing delivery, however even recent historical rates - 151 dpa average from 2011 to 2017 according to paragraph 5.4.10 - already greatly exceed demographic need.
- 8.2.8 Paragraph 5.4.6 acknowledges that an increase in housing supply could potentially balance demand from workers at Wylfa Newydd. However the rest of the document takes no account of the planned "excess" of housing supply over need, both before and during construction.
- 8.2.9 In addition to the above, and since the issue of the draft DCO s.106 agreement Horizon has reconsidered its position on direct delivery of residential units and

is now willing to commit to early delivery of the Madyn Farm Site in Amlwch. This is a site allocated for housing with planning permission, which Horizon has control of. If IACC are supportive of such an option, this could be secured as part of the capacity enhancement proposals (i.e. direct delivery of Madyn Farm and a corresponding reduction in the capacity enhancement contribution proposed in Schedule 5 of the DCO s.106 legal agreement).

Absorption capacity of the housing market

- 8.2.10 The claim that an additional 520 homes are needed depends in part on an assumption about the capacity for the existing market to absorb new demand. IACC assumes this amounts to only 10% of the turnover in stock (sales and renting), but provide no evidence for this crucial assumption.
- 8.2.11 Paragraph 5.1.21 says it is "a matter of judgement", and that IACC "takes the view that" 10% could be absorbed. Paragraph 5.2.9 states that "it might be reasonable to assume" 10%. Paragraph 5.6.2 says "if" the housing market can absorb 10%. The 10% figures is, therefore, a supposition not evidence.
- 8.2.12 Research undertaken for the Welsh Government by Arc4 confirms that "there is no evidence to support assumptions about the factors to apply" and describes 10% as a "worst case" scenario, while also considering 50% as an alternative scenario.
- 8.2.13 Note that the Arc4 report [REP2-303] describes this factor as being "to take account of continuing lettings to local people", however in the LIR IACC appears to have already discounted such lettings before applying the 10%, with the effect of double-counting the discount. Section 5.15 of the LIR [REP2-068] reduces the 1,056 PRS lettings to around 400 by limiting the numbers only to those homes let to people who moved into Anglesey, not those moving within Anglesey.
- 8.2.14 The calculation of the need for 520 units set out in Table 20 is very sensitive to the assumption that 10% of capacity could be used. If the figure were 20%, the need would fall to 300 units and at 50% it would be less than 100.

Void rates

- 8.2.15 The IACC LIR chapter 8 suggests that void rates between lettings in the PRS sector in Anglesey are likely to be high in a sparsely-populated rural market such as Anglesey (Section 5.14). However the chapter 8 appears to make no allowance for the fact that void rates are likely to be reduced because of additional demand from workers, and better market co-ordination through the Workforce Accommodation Management System.
- 8.2.16 Void rates are another way of considering the residual vacancy rate that is part of Horizon's analysis, i.e. where void rates are longer there is the potential to reduce them and so use houses that are not otherwise being used. If 52 properties reduce their void period by one week, that is the equivalent of an additional property being available for 52 weeks.

- 8.2.17 Horizon agrees with IACC that the island has high void rates and that these are likely to reduce with additional demand, and Horizon is committed to the WAMS which will actively reduce voids further. The effect of that is to increase the effective supply of housing by reducing periods of vacancy.

Empty Homes

- 8.2.18 Paragraph 7.2.4.1 of chapter 8 suggests that empty homes brought back into use should not count towards the claimed additional need of 520 new homes. This is explained as being because any empty homes brought back into use are balanced out by other homes falling into disuse.
- 8.2.19 This would be the case in a steady-state market, but in this case Horizon must consider a situation where there is both increased demand (from workers), and increased funding (from Horizon's Housing Fund) to accelerate re-use of empty homes. The purpose of this intervention is to increase the rate of re-use of empty homes and therefore it must be considered as part of the additional supply.

Effects of withdrawal of demand

- 8.2.20 Paragraph 5.6.6 of chapter 8 suggests that departure of workers after construction may depress prices in the housing market. Given IACC's general concerns about housing affordability it is not clear whether it regards this as a problem or benefit. Nor is there any explanation as to why, given the temporary nature of the construction workforce, it believes that a permanent addition of 520 homes is appropriate.

Summary

- 8.2.21 Horizon's WAS [APP-412] is based on a robust evidence base that identifies some spare capacity in the PRS and owner occupied sectors. It acknowledges that there are areas where the balance of supply and forecast demand is tight (such as North Anglesey) and has therefore proposed a package of mitigation measures which both manage access to accommodation (i.e. the Worker Accommodation Management Service) and provide for capacity enhancement (via the Housing Fund). A significant part of the Housing Fund (£10 million) is designed to be used to deliver new build houses, to return empty homes to use, to stimulate the supply of latent accommodation.
- 8.2.22 The element of the Housing Fund that is to stimulate new supply is proposed to be front-loaded across the first three years of the Project so that it can deliver mitigation in advance of the peak construction workforce.
- 8.2.23 The WAS [APP-412] is therefore similar in both regards to the AFW Preferred Scenario.
- 8.2.24 The allocation of the Housing Fund referred to in section 9.3 of Workforce Accommodation Strategy [APP-412] is proposed to be secured through the DCO s.106 Agreement. Allocation of the funds is set out in Schedule 5 – Worker Accommodation of the draft DCO s.106 agreement as follows:

- A Worker Accommodation (Capacity Enhancement) Contribution payable by the Developer to IACC, GCC and Conwy Council, in proportions which reflect the anticipated percentage of non-home based workers living in those areas. This payment is anticipated as an upfront payment early in the development to enable the Councils to use these funds to build capacity in advance of peak workforce years. The contribution is proposed to be directed towards the Councils achieving a minimum of 600 bed spaces by:
 - undertaking interventions to stimulate supply of latent accommodation;
 - providing new build permanent housing, including Affordable Housing;
 - supporting the social-rented sector through the provision of assistance to existing tenants (including rehousing support); and
 - bringing empty homes back into use in the period in the lead up to year three in the Construction Period; .
- A Worker Accommodation (Annual) Contribution payable by the Applicant to IACC annually for 6 years (in the lead up to and covering peak construction). The Council would be required to allocate this money to:
 - monitoring homelessness and housing displacement, and working with Gwynedd Council and Conwy Council on the same
 - establishing and operating community programmes that assist with managing housing and accommodation demands and prevention of homelessness including help with downsizing
 - monitoring accommodation enforcement issues, and working with Gwynedd Council and Conwy Council on the same
- Accommodation Officers Contributions, payable by the Applicant to IACC for the construction period to fund between 2 and 3 IACC officers (increasing and decreasing as construction worker numbers peak then fall) to monitor housing and engage with the development and WAMS .
- An Accommodation Contingency Fund which would be available throughout the construction period. The fund would be released either at the direction of the WNMPOP at the recommendation of the Accommodation, Tourism and Leisure Sub-Group, where a significant adverse effect on the accommodation sector within the Key Socio-economic Area (KSA) may be shown by evidence demonstrating:
 - An increase in homelessness within the KSA caused by the Wylfa Newydd DCO Project.
 - A lack of access to the private rented sector within the KSA caused by the Wylfa Newydd DCO Project.

- A need for additional officer time to manage and/or monitor the impact of the Wylfa Newydd DCO Project on the accommodation sector within the KSA.

8.3 Latent Accommodation

- 8.3.1 IACC points to the fact that more Hinkley Point C (HPC) workers are using more latent accommodation than forecast. This is helpful to the overall accommodation strategy and managing its impacts. Latent accommodation is effectively new supply and the more latent accommodation that is used, the less demand there is for existing PRS, owner occupied and tourist accommodation.
- 8.3.2 Horizon has estimated around 400 workers would want to use latent accommodation and IACC has estimated that potential supply is higher. If more workers choose to use latent accommodation that would have a beneficial effect on the overall workforce accommodation strategy.
- 8.3.3 Paragraph 7.17 of the Arc4 submission from Gwynedd Council (Appendix 5) [REP2-303] Potential Impact of the Wylfa Newydd Development on Homelessness Services in Gwynedd, Arc4 for Gwynedd Council, November 2018) confirms this, stating:

"The experience from Sedgemoor and West Somerset Council found that the demand for additional accommodation for temporary workers led to local households renting out spare rooms. This has created additional provision, which is being targeted at workers."

8.4 Caravans and Tourist Accommodation

- 8.4.1 In paragraph 5.17 of chapter 8, IACC includes a number of factual errors and arguments with which Horizon disagrees. Having reviewed the documents referenced in the footnotes, Horizon considers that IACC has not provided adequate evidence of the claimed impacts. However, given that IACC acknowledges at paragraph 6.10.1 that Horizon's assumed total use of tourist accommodation would be acceptable (providing it is split between the self-catering and serviced sectors and Horizon anticipates both would be sought by workers), Horizon has limited its substantive response to the section on the use of caravans. The response to LIR chapter 5: Tourism also deals with potential impacts on the quality of accommodation.
- 8.4.2 Horizon does challenge the assumptions stated in 5.17.16-17 that the Menai Mainland will not provide significant accommodation. IACC's position is based on a misunderstanding of the data from HPC as set out below – the concentration of workers within 15km seen at HPC is a function of the distance to Bridgwater and is unlikely to be replicated on Anglesey. Furthermore, if a worker wants to stay in a caravan and there is not one available on Anglesey, they are likely to go to the next nearest place where they can find one.
- 8.4.3 At paragraph 5.18.5 IACC states that caravans are not suitable for year round occupation. It then seeks to demonstrate that use of caravans would have an

unacceptable impact on tourism and that there is insufficient supply to meet the forecast demand for workers in the winter and therefore Horizon needs to identify additional supply.

- 8.4.4 Horizon acknowledges that Policy TAI14 would apply to “A proposal involving occupation of existing holiday caravans or other forms of non-permanent accommodation outside the usual occupancy season or the extension of existing sites for the purpose of temporary residential use.” However, Horizon is not making any such proposal. Its assessment is based on the use of existing sites so the policy does not apply to the WAS [APP-412]. At paragraph 5.18.10 IACC concludes that the use of caravan accommodation by 650 workers would have “a significant and detriment [sic] impact on the tourism sector, which is wholly unacceptable.”
- 8.4.5 In reaching its conclusions IACC relies on its June 2018 Bedstock survey (Annex 8P) which was obviously not available to Horizon in advance of its DCO submission. IACC concludes that only 740 bed spaces are available to workers. In doing so IACC makes a number of errors.
- 8.4.6 It makes an allowance for private ownership of caravans and then a further one for operators who said they were not interested in accommodating workers. This is incorrect for a number of reasons.
- 8.4.7 Firstly, private owners may choose to make their accommodation available.
- 8.4.8 Secondly, the Bedstock survey is clear (question 19) that one of the reasons why providers said they did not want to accommodate workers was because their property is privately owned. Applying a discount for both is therefore double counting and incorrectly uses the data.
- 8.4.9 Thirdly, it excludes seasonal pitches. No reason is given for this, but it is inconsistent with doing an assessment in the summer peak.
- 8.4.10 Finally, IACC misinterprets its own results. It states that 740 bed spaces would be available to workers, but that significant use of this would have an adverse impact on tourism. However, this is the wrong baseline. The remaining 23,122 bed spaces would remain available for tourists – by definition because IACC is assuming they cannot be used by workers. Even if all the workers concentrated on Anglesey, they would take only 2.7% of the total capacity in caravan accommodation identified in Table 16 of the LIR (650 of 23,862). By IACC's measure, there is more capacity on Anglesey alone than estimated to be needed by Wylfa workers. There is then additional capacity available within the DCCZ on the mainland. There is therefore no evidence that there would be an adverse effect on tourism.
- 8.4.11 Horizon's assessment is based on the summer peak as this is the time when there is least spare capacity. In addition, IACC raises the issue of year-round capacity. In doing so, it makes the same errors as for the summer peak - it excludes private owners (who might want to rent to workers) and then double-counts that with those not interested in renting to workers and it continues to exclude provision on the mainland. For some reason, having relied on the Bedstock survey for occupancy levels it then reverts to using Welsh

Government data and reports a vacancy level of only 41%. The Bedstock survey reports that the winter vacancy rate for caravans is over 60% (i.e. 50% higher).

8.4.12 This analysis should therefore be disregarded.

8.4.13 Horizon is confident its plan, monitor and manage approach is capable of dealing with demand in the winter. The peak of demand is several years into the project so it can be monitored and if any issues arise, the Housing Fund can be used to address them. There is explicit policy support in IACC's JLDP for both the removal of licensing restrictions and for the expansion of existing sites and the provision of new sites to provide temporary workers' accommodation. Whilst there are a number of tests within the policy, there is no requirement that such provision is identified or any application made by Horizon, that would be a matter for the site owners and operators. The Housing Fund would be able to support such applications if necessary.

8.4.14 At 5.17.8 chapter 8 states:

"The Accommodation Bedstock Survey 2018 suggests that there will be a transference of accommodation out of the tourism sector, which will have negative consequences for the overall visitor economy, leading to job losses."

8.4.15 Again, this is an assertion that is not supported by evidence. There remains spare tourism capacity even in the summer peak. If that is used by workers it would not represent a transfer out of the tourism sector, it would simply be a benefit to providers as they increase their business.

8.5 Campus Phasing

8.5.1 Horizon acknowledges IACC's concerns and intends to update the Phasing Strategy to provide more detailed triggers for the provision of key mitigation. Horizon considers that the key mitigation should be delivered before significant effects take place for which this mitigation is provided.

8.5.2 Therefore it has been working to tighten up the triggers for delivery, focusing on when in the Environmental Statement or Construction programme the key mitigation is required.

8.5.3 An updated Phasing Strategy will be submitted at Deadline 4 (17 January 2019).

8.5.4 In terms of the Site Campus, Horizon has proposed the following phasing:

- *Phase 1 to deliver first 1,000 beds on or before Q8 post DCO grant (Yr4Q4 in the ES);*
- *Phase 2 to deliver 1,500 beds on or before Q15 (so that the total count of beds will be 2,500) and*
- *Phase 3 to deliver final 1,500 beds on or before Q18 (so that the total count of beds will be 4,000)*

- 8.5.5 This will ensure that the Site Campus is operational well before peak construction as all three phases will be delivered by Q2 Year 5 (at the latest). Peak construction (in terms of workforce numbers reaching 9,000) is anticipated to occur in Q4 Year 7 (refer to Figure C1-4 in Chapter C1 Socio-economics [APP-088]. It will also ease the pressure identified in paragraph 5.1.19(c).

8.6 Evidence from Hinkley Point C

- 8.6.1 Chapter 8 of the LIR makes a number of comparisons with experience at Hinkley Point C (HPC), where construction has already begun. The data used is selective and not informative.

Spatial Distribution of Workers

- 8.6.2 IACC states that 90% of workers are within 15km of the HPC site. This is true, but is not particularly significant or surprising. The proximity is largely driven by the distance from site of Bridgwater, the nearest settlement of any scale. If Bridgwater were 10km or 20km away, the majority of workers would be within those distances. It is therefore wrong to draw the conclusion that workers will concentrate within 15km on Anglesey.

Sectoral Distribution of Workers

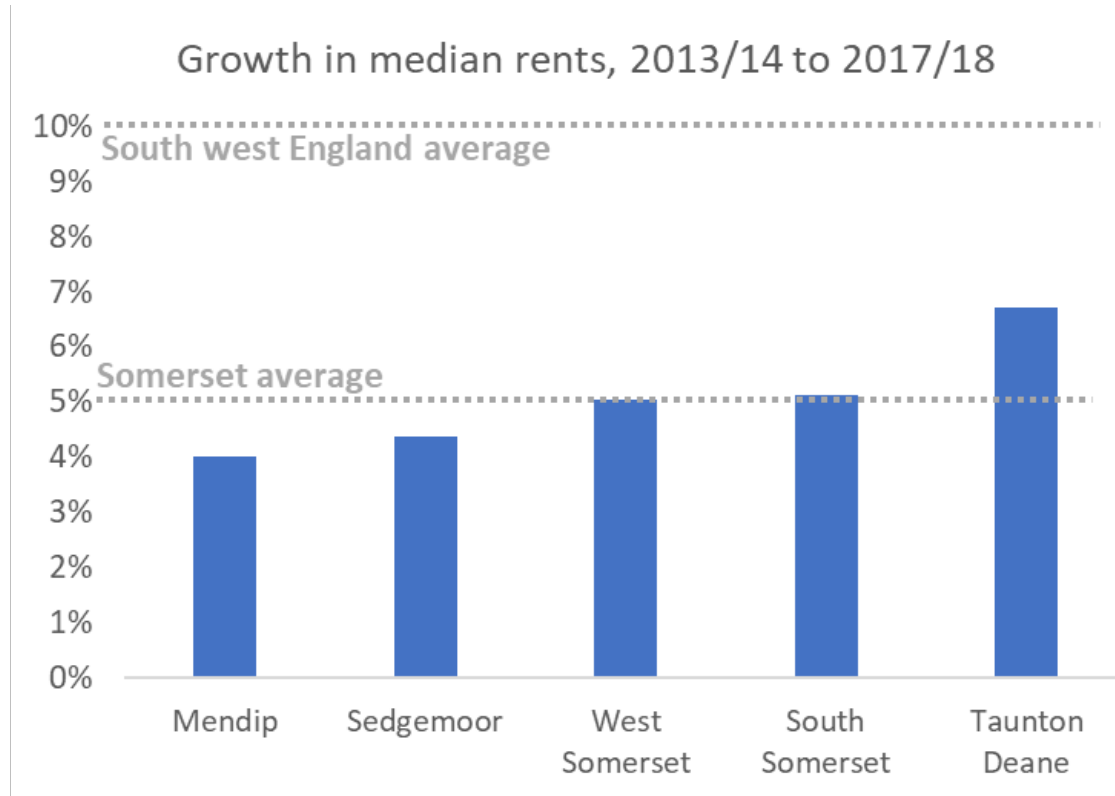
- 8.6.3 The monitoring data from HPC is compared with the forecast for the peak. At the time of the latest reporting, the data did not include EDF Energy's purpose built accommodation. The figures are therefore not directly comparable to projections for the peak.
- 8.6.4 HPC has seen greater demand for the PRS and lower demand for owner-occupation, there are likely to be project-specific reasons for that and it does not appear to have caused significant effects.
- 8.6.5 The evidence presented by IACC on the potential effects caused by HPC is selective and misleading.

Housing Costs and Homelessness

- 8.6.6 Sections 5.9 to 5.11 of chapter 8 seek to demonstrate that there is a risk of homelessness increasing as a result of rising rents. It states that rent rises are more dramatic than those shown by the ONS and that homelessness has "increased sharply".
- 8.6.7 The evidence for rent rises is in Annex 8I which shows increases in rents for a "Hinkley Hot Spot". This area is not defined and no methodological information is provided. There is therefore no ability to understand how large the area is and how likely it is to have led to significant increases in homelessness.
- 8.6.8 The ONS data referenced in paragraph 5.9.2 of chapter 8 is clear. There is no evidence of rents in Sedgemoor or West Somerset running significantly ahead of other Somerset districts. Figure 2-1, below, shows that median West

Somerset rents increased in line with the average for the County (5%), in the four years to 2017/18, whereas median Sedgemoor rents rose more slowly (at 4.4%). All were well below the 10.2% average growth for the South West England region.

Figure 8-1 Median rental growth in Somerset

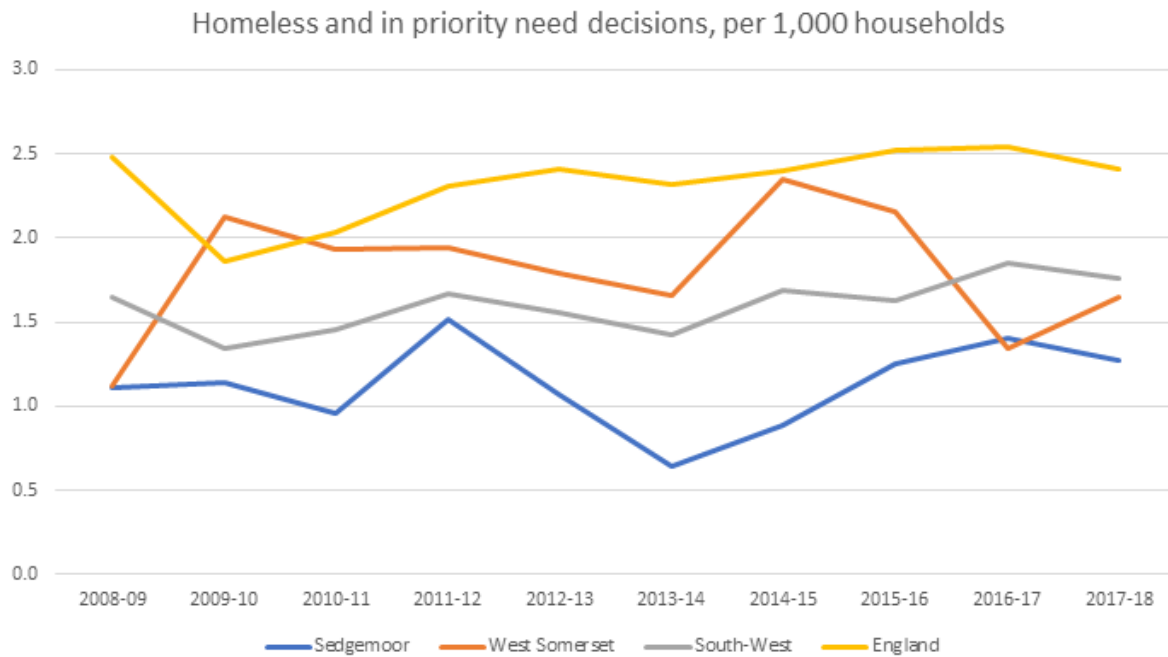


8.6.9 The evidence on homelessness is also flawed.

8.6.10 Section 4 of the Arc4 submission from Gwynedd Council notes that any increases in demand for Council homelessness services may be attributable to changes in national policy, particularly Universal Credit.

8.6.11 Figure 3 in chapter 8, LIR is described in paragraph 5.11.1 as showing a 128% increase in priority homeless numbers in Sedgemoor. However this is a selective comparison of two data points on a data series this is naturally erratic at a local level such as this. A longer time series, as in Figure 3-2 below, shows that the rate has remained low, with no clear upwards trend since the start of the main construction programme in 2016.

Figure 8-2 Homelessness in Sedgemoor¹⁹

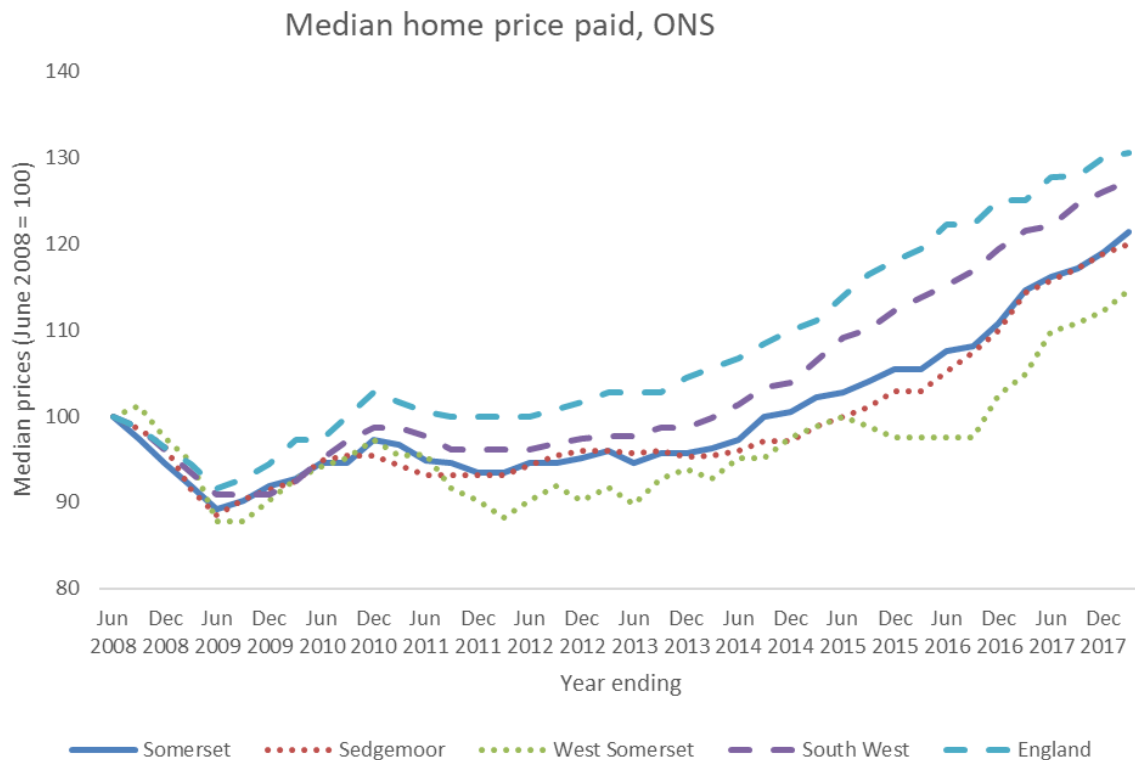


8.6.12 Similarly, paragraph 5.22.2 of chapter 8, referring to Figure 9, states that house prices in Sedgemoor have increased faster than the average for Somerset. There are a variety of official or commercially produced house price indices, and the LIR provides no source reference for the data presented, nor is it clear whether it refers to mean or median averages.

8.6.13 Median prices are generally considered a better measure of house prices, because they avoid distortion by small numbers of sales at either extreme of the price range. Figure 2-3 below shows the official ONS median price paid for homes, rebased to the peak of the market in June 2008 to show relative changes over this house price cycle.

¹⁹ Data from MHCLG (June 2018), "Live Table 784: Local authorities' action under the homelessness provisions of the 1985 and 1996 Housing Acts, 2004/05-2017/18".

Figure 8-3 House prices in Somerset



8.6.14 While data for smaller areas is naturally more erratic, it shows that Sedgemoor prices have broadly tracked the average for Somerset County while West Somerset prices have continued to lag the rest of the County. In both cases house prices have risen more slowly than the regional or national average, with no clear divergence in prices during the Hinkley Point C construction period.

8.6.15 This is confirmed by the Arc4 report for Gwynedd Council which states in Section 4, in relation to Sedgemoor, “to date the house prices do not appear to have increased”.

8.7 Use of the Housing Fund

8.7.1 Annex 8I includes data on the outputs achieved by the HPC Housing Fund. These show that 394 bedspaces were delivered to Q2 2017, and following completion of enabling scheme Doniford Road, this was expected to rise to 570 bedspaces. The 570 bedspaces were achieved from a spend of £725,719, representing an average of £1,273 per bedspaces.

8.7.2 Looking only at empty homes (13 bedspaces achieved up to Q2 2017), the average cost per bedspace was £5,462. For new build (420 bedspaces), the average cost per bedspace was £1,138.

8.7.3 Further new build enabling schemes were planned to provide a further 989 bedspaces at a cost of £3,663 per bedspace.

- 8.7.4 Horizon therefore believes that its Housing Fund is sufficient to deliver appropriate and proportionate increases in the supply of housing.

8.8 Workers and their Dependants

- 8.8.1 This is addressed in the response to Chapter 7 of the LIR.

8.9 DCO Obligations & Requirements

- 8.9.1 As set out above, Horizon will bring forward further details on the delivery of Site Campus at Deadline 4.
- 8.9.2 As also set out above, Horizon does not believe there is any evidence or justification for Horizon to identify additional caravan sites or for it to bring forward the number of units identified by IACC.
- 8.9.3 Horizon agrees that latent accommodation and Empty Homes should be part of the mitigation package paid for from the Housing Fund but disagrees that these need to be in addition to any other increase in supply. They have the advantage that they can be delivered quickly and cost effectively.
- 8.9.4 Horizon agrees with IACC's points in paragraph 4.2.5.4 that mitigation should be tied to the WAMS and that funding for housing could be linked with an initial offer to Wylfa Newydd workers.
- 8.9.5 The draft DCO s.106 also includes mitigation for the issues raised in paragraph 4.2.9.2 and 4.2.11.3.

9 Local Impact Report – Welsh Language and Culture

9.1 Introduction

9.1.1 Horizon has reviewed chapter 9: Welsh Language and Culture of the IACC LIR. This section responds to the key issues presented within that chapter, with reference to the corresponding paragraph numbers in the LIR chapter where appropriate.

9.1.2 Key issues in this response are:

- Issue 1 – Welsh language and culture as a golden thread;
- Issue 2 – WLIA methodology;
- Issue 3 – Planning policy tests;
- Issue 4 – Accommodation;
- Issue 5 – Welsh traditions and culture;
- Issue 6 – Welsh language in the workplace;
- Issue 7 – Infrastructure, education and linguistic character of schools;
- Issue 8 – Children, young people, families, community groups and local services;
- Issue 9 – DCO obligations and Requirements.

9.2 Issue 1 - Welsh language and culture as a golden thread

9.2.1 Paragraph 6.8.1 of the chapter 9 LIR raises that the DCO does not adequately reflect Horizon's current engagement and commitment in advocating the Welsh language as a 'Golden Thread' throughout all aspects of the Wylfa Newydd DCO Project.

9.2.2 Horizon is committed to protecting and promoting the Welsh language and culture as part of the Wylfa Newydd DCO Project, ensuring compliance with relevant legislation, national and local policy and guidance.

9.2.3 Horizon has prepared a note 'Welsh language and culture golden thread note', shared with the Welsh Language Impact Assessment (WLIA) Steering Group in August 2017 and with the IACC. This is reflected in the Statement of Common Ground between Horizon and the IACC [REP2-041], which provides an overview of Horizon's approach to treating Welsh language and culture as an all-encompassing theme and golden thread across all relevant aspects of the Wylfa Newydd DCO Project throughout its duration.

9.2.4 Horizon fully embraces the importance of Welsh language and culture to the communities of Anglesey and North Wales. Horizon is committed to supporting and enhancing Welsh language and culture across all aspects of the Wylfa Newydd DCO Project throughout its duration, including through the

development of measures to mitigate adverse effects and enhance beneficial ones. Schedule 1 of the draft DCO s.106 agreement secures mitigation with regard to the Welsh language and culture.

- 9.2.5 IACC raises specific concern regarding the contribution of the Worker Accommodation Management Service (WAMS) and Workforce Management Strategy [APP-413] to demonstrating Welsh language and culture as a golden thread. Horizon notes that Schedule 1 of the Draft DCO s.106 agreement includes a commitment for Horizon to collect aggregate and anonymised data on the workforce dependants who move to the KSA through the WAMS, including the Welsh language skills of partners and children, the number of children and their ages. Schedule 5 of the Draft DCO s106 secures the WAMS.
- 9.2.6 It is acknowledged that IACC has yet to provide detailed comments on these obligations set out in the draft DCO s.106 agreement.

9.3 Issue 2 - WLIA methodology

- 9.3.1 The SoCG between Horizon and the IACC [REP2-041] confirms that IACC agrees with the methodology used in the WLIA [APP-432], except in relation to the number of dependants associated with non-home-based workers.
- 9.3.2 IACC raises concern that the methodology and study areas used in the WLIA minimise the effects of the Wylfa Newydd DCO Project on specific communities on Anglesey. The WLIA presents an assessment of the effect of the distribution of construction workers on Welsh language and culture at different geographic levels to include the KSA, sub-area level, town/ward level and Wylfa Newydd Development Area (WNDA) level.
- 9.3.3 The assessment of effects on population characteristics within the WLIA is presented at DCCZ, KSA, sub-area level and town/ward level. When assessing effects on quality of life, the WLIA also presents an assessment at WNDA and Local area of influence (approximately 5km from the centre of the WNDA) to consider more localised effects for communities of closest proximity to the WNDA on the physical environment. This includes the communities referenced in paragraph 4.2.4 of chapter 9 of the LIR.
- 9.3.4 Horizon remains of the view that the WLIA [APP-432] and the mitigation which flows from that is appropriate and robust.

9.4 Issue 3 - planning policy tests

- 9.4.1 Horizon acknowledges the contribution the Wylfa Newydd DCO Project can make to well-being of Welsh language and culture on Anglesey via the planning system.
- 9.4.2 IACC identifies criteria from policies of the adopted Anglesey and Gwynedd Joint Local Development Plan (JLDP) (2017) and the adopted Wylfa Newydd Supplementary Planning Guidance (SPG), which are of particular relevance to Welsh language and culture considerations when assessing the Wylfa

Newydd DCO Project. These are set out below together with sign-posting towards how the Wylfa Newydd DCO Project complies with these:

- Criterion 5 of Policy PS 9 Wylfa Newydd and related development, which sets out the expectation that the accommodation requirements of construction workers (a projected 75% of which will come from outside the area (i.e. 7,000 workers)), will not result in unacceptable adverse economic, social, linguistic impacts. See Horizon's response to Issues 4 and 9 of this chapter.
- Criterion 10 of Policy PS 9 Wylfa Newydd and related development, which sets out the expectation that consideration is given by Horizon to the capacity of local community facilities. Although not included as an example in the Policy wording, these facilities include the capacity of local schools, Welsh language immersion centres and local facilities that provide Welsh language courses for adults to accommodate additional demands arising from Wylfa Newydd. See Horizon's response to Issues 7, 8 and 9 of this chapter.
- Criterion 11 of Policy PS 9 Wylfa Newydd and related development, which sets out the expectation that the Project will include appropriate measures for promoting social cohesion. See Horizon's response to Issues 8 and 9 of this chapter.
- GP 14 of the adopted (May 2018) Wylfa Newydd Supplementary Planning Guidance, which sets out expectations in terms of measures considered suitable to mitigate adverse impacts and strengthen positive impacts. See Horizon's response to Issue 9 of this chapter.
- Criterion 16 of Policy PS 9 Wylfa Newydd and related development of particular relevance from a Welsh language and culture perspective as the IACC would expect robust thresholds for reporting and monitoring the spatial distribution of workers in order to minimise the potential effects of a large temporary workforce on the use of the Welsh language within local communities on the Island. The requirements of criterion 3 of Policy PS10 Wylfa Newydd: campus style temporary accommodation for construction workers, is also of particular relevance within the context of monitoring and proactively tackling additional impacts or variances from the assumptions that underpin Horizon's case. See Horizon's response to Issues 4 and 9 of this chapter

9.5 Issue 4 - Accommodation

- 9.5.1 IACC's response to Horizon's WLIA [APP-432], specifically in relation to population characteristics, requests clarification as to the likely geographic distribution of non-home-based workers' families (505 partners and dependents) during the construction phase. The assessment in relation to population characteristics presented in the WLIA, takes account of the

distribution of non-home-based workers and their families. The assessment is presented at KSA and sub-area level as well as town/ward level.

- 9.5.2 Paragraph 4.3.12 of the LIR requests for Horizon to provide clearer and more robust assumptions as to where non-home-based workers' families are likely to reside. The SoCG between Horizon and IACC [REP2-041] confirms that there is general agreement that the gravity model presents a best fit approach to inform assessment of distribution of construction workers and their families. The assessment of effect of the distribution of construction workers and their families on Welsh language and culture presented in the WLIA is based on the gravity model.
- 9.5.3 IACC notes that it is particularly concerned about the effects of the distribution of non-home-based workers and their families on the wards mentioned in paragraphs 4.3.8-4.3.9 of Chapter 9, LIR (to include Llanbadrig, Mechell, Tregele, Cemaes, Amlwch, Llanfachraeth, Llanfaethlu, Moelfre and Llanbedrgoch). Horizon's response to IACC's comments in the LIR on the number of dependents is set out in its response to Chapter: Education and Skills, LIR.
- 9.5.4 Horizon notes that IACC expects every effort to be made to avoid causing any ward to fall below the 70% or 50% threshold of Welsh speakers, as well as to avoid causing any ward on Anglesey to fall below their 2011 census proportions of Welsh speakers (paragraph 4.3.10 of Chapter 9, LIR).
- 9.5.5 Horizon expects this to be a consideration as part of the monitoring of the measure secured via Schedule 1 of the draft DCO s.106 agreement, which includes a commitment for Horizon to collect aggregate and anonymised data on the workforce dependants who move to the KSA through the WAMS (secured via Schedule 5 of the draft DCO s.106 agreement), including the Welsh language skills of partners and children, the number of children and their ages. Horizon proposes that it will report to the Welsh Language and Culture Sub-Group on a quarterly basis with regards to this obligation.
- 9.5.6 Paragraph 4.3.12 of the LIR requests for Horizon to provide appropriate resilience funding to respond to unknown impacts.
- 9.5.7 Contingency funds for topic areas which could be affected are provided for in the draft DCO s.106 agreement. There are commitments to an Accommodation (Contingency) Fund (schedule 5) and to an Education (Contingency) Fund (schedule 6). In the event that the Accommodation, Tourism and Leisure Sub-Group determines (as a result of monitoring returns) that the monitoring data indicates a significant adverse effect on the accommodation sector or education sector within the KSA or forecasts trends that are likely to lead to a significant adverse effect on the accommodation sector or education sector within the KSA as a result of the Wylfa Newydd DCO Project, then it will make a recommendation report to the Wylfa Newydd Major Permissions Oversight Panel (WNMPOP) and the WNMPOP may make a mitigation direction as per Schedule 16 of the draft DCO s.106 agreement i.e. to release contingency funds.

- 9.5.8 Schedule 5 and 6 contain requirements for monitoring which will inform the above process.
- 9.5.9 IACC states that there is a gap in information in relation to the decommissioning workforce and their dependants (paragraph 6.1.2 of Chapter 9, LIR). The assessment of effects during decommissioning is based on assumptions and information presented in section B.3 of the WLIA [APP-432]. This notes that decommissioning of the first Unit is due to take place in year 69, based upon an operational period beginning around late year 9. Firm predictions of workforce and associated implications cannot be made by Horizon at this stage due to the likelihood that technological change over a 60-year period may radically change the amount/timing and type of labour needed.
- 9.5.10 The WLIA [APP-432] sets out how the assessment has addressed the decommissioning stage. Due to the limited information available at present regarding decommissioning, the assessment is presented against the five key aspects of community life, taking into account the matters assessed as part of the 18 checklist questions, without setting the assessment out against the 18 checklist questions. The level of detail available about decommissioning is not considered sufficient in order to undertake an assessment of effects on Welsh language and culture set out against the 18 checklist questions.
- 9.5.11 Before decommissioning starts, Horizon will need to obtain consent from the Office for Nuclear Regulation (ONR) under the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999. This would require a period of consultation relating to the submission of a decommissioning proposal and supporting environmental statement.
- 9.5.12 In line with current planning policy on the Welsh language, it is anticipated that a review of the potential effects on Welsh language and culture would be undertaken as part of a WLIA alongside the environmental impact assessment (which would in turn, if necessary, identify enhancement and mitigation measures).
- 9.5.13 The assessment of effects in the WLIA [APP-432] is therefore presented qualitatively (i.e. not scored).

9.6 Issue 5 - Welsh traditions and culture

- 9.6.1 Horizon acknowledges that the Welsh language and culture are intrinsically linked and that the Welsh language is an essential part of the cultural identity and character of Wales, which defines the Welsh as a nation – within communities and as individuals. Consideration of Welsh culture and heritage therefore goes hand-in-hand with consideration of Welsh language.
- 9.6.2 Measures presented in the Welsh Language and Culture Mitigation and Enhancement Strategy (WLCMES) (WLIA appendix B4-1) [APP-432] focus on addressing the effects identified in the WLIA on Welsh language and culture as a result of the influx of non-Welsh-speaking construction workers and their families. These are secured via Schedule 1 of the draft DCO s.106 agreement and include measures focussed on:

- Developer led Welsh language management and policy;
- Recruitment and careers;
- Engagement with contractors;
- Welsh Language Education (Annual) Contribution;
- Welsh Language Officer Contribution;
- Community Engagement Obligations;
- Collection of data on the workforce dependents via the WAMS; and
- Community Translation Service Contribution.
- In addition, funding for community involvement officers, who have an important community cohesion role, is secured in Schedule 14 of the draft DCO s.106 agreement.

9.6.3 As part of its commitment to monitoring the effectiveness of the measures set out in the WLCMES, Schedule 1 of the draft DCO s.106 agreement provides a commitment that Horizon will report to the Welsh Language and Culture Sub-Group:

- Every six months on its implementation and performance of its obligations in relation to Developer-led Welsh language management and policy, recruitment and careers, engagement with contractors and Welsh Language Officer Contribution;
- Quarterly in respect of the collection of data on the workforce dependents via the WAMS; and
- Following completions of the evaluations of the impact of the Wylfa Newydd DCO Project on the Welsh language in the KSA.

9.7 Issue 6 - Welsh language in the workplace

- 9.7.1 The IACC notes its eagerness that the Wylfa Newydd DCO Project operates in accordance with the aims and objectives of current Welsh language legislation in line with best practice adopted by organisations of similar size and status (paragraph 4.8.1 of chapter 9, LIR).
- 9.7.2 Horizon is not statutorily subject to the Welsh Language (Wales) Measure 2011, however, Schedule 1 of the Draft DCO s.106 provides a commitment that Horizon will maintain its Polisi Iaith Gymraeg/Welsh Language Policy during the construction and operational period.
- 9.7.3 Horizon's Welsh language policy notes that Horizon "*acknowledge that under the Welsh Language (Wales) Measure 2011 the Welsh language has official status, and should be treated no less favourably than the English language.*"
- 9.7.4 Paragraph 4.8.2 of the chapter 9, LIR notes that IACC expects Horizon to ensure that the development has a positive effect, rather than an adverse effect, on opportunities for persons to use the Welsh language. The WLIA [APP-432] identifies potential positive effects on the Welsh language in terms of reducing out-migration among people of working age and through providing

employment opportunities, both during the construction and operational period. IN addition, Schedule 1 of the Draft DCO s.106 agreement confirms that the policy will contain and require:

- Details on what types of internal communications will be made available bilingually.
- Public-facing permanent and temporary signage on the Sites relating to the Wylfa Newydd DCO Project are bilingual (save where safety or other material considerations require that signage is in English only).
- Provision of language and culture awareness training to the workforce.
- Staff members to demonstrate linguistic courtesy and awareness of the Welsh Language Policy.
- Development of a programme of Welsh language training for the Workforce operational staff where this is a relevant requirement within a job-role (as determined by the Welsh language skills competency framework secured via Schedule 1 of the draft DCO s.106 agreement);
- Establishment of a Welsh language mentoring scheme for learners.
- Maintenance of the Developer's Welsh speaker badge scheme and using reasonable endeavours to ensure that its contractors operate an equivalent scheme.
- Ensure a Welsh-speaking member of staff is included on interview panels for jobs where candidates are required to have Welsh language skills.

9.7.5 Schedule 1 of the Draft DCO s.106 also provides a commitment that the Polisi Iaith Gymraeg/Welsh Language Policy will be updated annually by Horizon to respond to the demands of the Wylfa Newydd DCO Project and where updates will continue to reflect Horizon's commitment to promoting and enhancing the Welsh language.

9.7.6 Internal oversight of Horizon's Welsh language commitments and performance include its Polisi Iaith Gymraeg/Welsh Language Policy will be provided by Horizon's Welsh Language Management Group. Horizon will also report to the Welsh Language and Culture Sub-Group every six months on the implementation and performance of its obligations in relation to Horizon's Polisi Iaith Gymraeg/Welsh Language Policy.

9.7.7 Schedule 1 of the draft DCO s.106 agreement also include a number of commitments to promote Welsh language skills in the workforce. These include:

- Appointing a Welsh Language and Culture Coordinator (note, this person has now been appointed), who will (among other things) establish a Welsh language skills competency framework and assessment tool.
- Through the Welsh language skills competency framework and assessment tool, Horizon will:

- assess the Welsh language skills requirements for job roles when developing construction and operational job profiles at Wylfa Newydd,
 - provide relevant recruitment managers with training to use the Welsh language skills competency framework and assessment tool to determine the language requirements of construction and operational roles; and
 - record the level of Welsh language skills required for each post as part of the recruitment process and will include this information within the advertised job profile.
- Ensure a Welsh-speaking member of staff is included on interview panels for jobs where candidates are required to have Welsh language skills, and where practicable, include a Welsh speaker on interview panels for job applicants whose preferred language is Welsh (provided that where the job role demands English language skills, those skills will also be considered in such interview process);
 - Provision of language and culture awareness training to the Workforce including providing Welsh language material to contractors in order to raise awareness of and respect for the Welsh language and culture, and Welsh speaking among the contractors and the workforce;
 - Require staff members to demonstrate linguistic courtesy and awareness of the Welsh Language Policy;
 - Development of a programme of Welsh language training for the Workforce operational staff where this is a relevant requirement within a job-role (as determined by the Welsh language skills competency framework secured via Schedule 1 of the draft DCO s.106 agreement);
 - Establishment of a Welsh language mentoring scheme for learners; and
 - Maintenance of the Developer's Welsh speaker badge scheme and using reasonable endeavours to ensure that its contractors operate an equivalent scheme.

9.7.8 IACC note in paragraph 4.8.8 of chapter 9: LIR that the Workforce Management Strategy [APP-413] should include comprehensive details of the principles in relation to managing and controlling the workforce, in order to minimise potential effects of a large temporary workforce on local communities. Horizon note IACC's comment and discussions on the management of the workforce via the Code of Conduct is an on-going point of discussion between Horizon and IACC. The Workforce Management Strategy is a certified document under the draft DCO [REP1-005] and represents one of the ways in which Horizon will secure the effective management and control of its construction workforce to ensure that any effects on communities are minimised as far as possible. Horizon will be required to develop the Code of Conduct with its partners in accordance with the principles set out in the WMS. The Code of Conduct will apply to all

personnel and employers whilst working on the Wylfa Newydd DCO Project, both on-site and off-site. The development and implementation of the Code of Conduct is secured through Requirement PW8 in the draft DCO.

9.8 Issue 7 - infrastructure, education and linguistic character of schools

- 9.8.1 The WLIA assesses the demand for school places as a result of families moving into the KSA with non-home-based workers based on the assumptions from the socio-economic assessment presented in chapter C1 of the Environmental Statement [APP-088]. This includes an assessment on schools at KSA and sub-areas of the KSA. An assessment of effects on language immersion centres is also provided. Projections of the number of workforce dependents are not available at individual school level to enable the type of assessments requested in paragraph 6.2.2 of chapter 9: LIR. However, there are ongoing discussions on this issue through the SoCG between Horizon and the IACC [REP2-041].
- 9.8.2 Horizon welcomes IACC's Anglesey Language Profiling Report (dated 26 November 2018, submitted as Annex 9A to chapter 9 of the LIR) as a contribution towards strengthening the evidence base to support the ongoing monitoring of the impact and effectiveness of mitigation strategies. Data contained in the report could be used to monitor impact and effectiveness of the measures set out in the Draft DCO s106.
- 9.8.3 The suite of mitigation and enhancement measures is a framework that is designed to be adaptive, e.g. to the emergence of more information over time, to ensure that mitigation can adapt and is capable of targeting specific mitigation into the right areas based on evidence.
- 9.8.4 As set out in the introduction of the Anglesey Language Profiling Report, the document serves to provide additional community language profiling data and outlines ways of strengthening the evidence base for assessing the effects of the Wylfa Newydd DCO Project and on-going monitoring of effects and the effectiveness of mitigation strategies.
- 9.8.5 As stated in paragraph 2.6.1 of the Anglesey Language Profiling Report, without knowing the number and age of dependents of construction workers, it is impossible to predict the precise impact on the linguistic character of individual primary and secondary schools in the KSA. The assessment presented in the WLIA is set out at a sub-area level, which is considered appropriate for the level of detail available in relation to construction worker dependents.
- 9.8.6 Evidence presented in the Anglesey Language Profiling Report does not change the conclusions of the assessments contained in the WLIA [APP-432] and the mitigation and enhancement measures contained in the WLCMES, secured via Schedule 1 of the draft DCO s.106 agreement.
- 9.8.7 The draft DCO s.106 agreement states that the Welsh Language and Culture Coordinator will monitor, measure and evaluate language and culture related

community benefit activities and associated mitigation measures and will sit on and report to the Welsh Language and Culture Sub-Group. The draft DCO s.106 agreement sets out the approach to monitoring and evaluating the impact of the Wylfa Newydd DCO Project on the Welsh language in the KSA, with evaluation parameters to be agreed with the Welsh Language and Culture Sub-Group.

Education and employment linked to the Welsh language

- 9.8.8 During the construction phase, the potential out-migration as a result of the Wylfa Newydd DCO Project changing the population make-up of existing communities and the Wylfa Newydd DCO Project affecting the emotional attachment that Anglesey residents have to where they live, must be balanced against the beneficial effect that the employment opportunities offered during construction (jobs for 2,000 home-based workers at peak construction) have on reducing previous trends of out-migration from Anglesey and the KSA, especially among young and working-age people. These home-based workers would remain in the KSA, many raising bilingual families which would be beneficial for the well-being of the Welsh language. This would contribute towards helping reduce out-migration of young people in the short-term.
- 9.8.9 The WLIA [APP432] identifies an overall moderate beneficial effect on employment during construction.
- 9.8.10 Horizon notes that the reference to 6% increase in employment on Anglesey as a result of the Wylfa Newydd DCO Project (paragraph B.4.101) in the WLIA is inconsistent with that presented in paragraph B.4.257, which makes reference to 4% increase in employment in Anglesey. The correct figure is 4%. The assumption derives from the socio-economic assessment presented in the Environmental Statement [APP-088].
- 9.8.11 The long-term, high quality employment opportunities offered during operation, especially as 85% of the operational workforce are expected to be local workers from the DCCZ, is expected to help retain the existing working age population of Anglesey, the KSA and the DCCZ, potentially reducing out-migration, amongst young people and the working age population. This is considered to be important in light of the continuous net out-migration that Anglesey has experienced from 2001 to 2014 amongst people aged 15-29 and the projection that Anglesey's population will decline up to 2036.
- 9.8.12 IACC questions the assessment of the opportunities provided by the Wylfa Newydd DCO Project on reducing out-migration of Welsh speakers due to lack of employment opportunities.
- 9.8.13 As set out in the WLIA (Q9 of volume B) [APP-432], while it is recognised that not all jobs created by the Wylfa Newydd DCO Project would be in the construction sector, the majority are likely to be. Data from the 2011 Census show that there were approximately 14,400 residents employed in the construction sector in the DCCZ. The employment demand of at least 2,000 workers from the DCCZ would result in a temporary increase of 14% in construction employment in the DCCZ. Given that 64.8% and 48.1% of the population of Anglesey and the DCCZ who work in the construction industry

speaking Welsh, the employment opportunities offered to home-based workers during construction are considered to have a major beneficial effect for Welsh language and culture.

- 9.8.14 Furthermore, socio-economic analysis estimates that a further 1,800 indirect and induced jobs would be created in the DCCZ. Given that 58.3% of the usual resident population of Anglesey aged 16 and over in employment speak Welsh, this presents additional beneficial effects in terms of employment for the Welsh-speaking population of Anglesey and the DCCZ. Past trends show continuous out-migration of young people aged 15-29 from Anglesey since 2001, partly as a result of lack of employment opportunities and lack of affordable housing. Analysis of the baseline presented in the WLIA identifies out-migration as one of the biggest challenges facing the communities of the KSA.

9.9 Issue 8 - children, young people, families, community groups and local services

- 9.9.1 Schedule 1 of the draft DCO s.106 agreement includes a Welsh Language Officer Contribution to be paid to the IACC, who will be responsible for developing measures to ensure continued Welsh speaking characteristics of organisations and activities in the local communities.
- 9.9.2 Schedule 1 of the draft DCO s.106 agreement also provides funding for two Welsh immersion teachers.
- 9.9.3 Commitment is also provided in Schedule 1 of the draft DCO s.106 agreement to community engagement obligations to include circulating welcome packs to workforce dependents and a Community Translation Service Contribution to serve local community groups to enable better engagement with the Wylfa Newydd DCO Project.
- 9.9.4 Schedule 1 of the Draft DCO s.106 also requires the Welsh Language and Culture Coordinator to work closely with the Community Involvement Officers to deliver the Community Impact Joint Work Plan (which is set out in Schedule 14 of the draft DCO s.106 agreement), and which will include:
- Supporting the integration of the workforce and their dependents;
 - Liaise with communities in respect of workforce conduct issues;
 - Promote education, upskilling, training and local employment opportunities including support for young people from disadvantaged backgrounds;
 - Promote community cohesion;
 - Support the integration of incomers into host communities;
 - Report regularly to the Welsh Language and Culture Sub-Group; and
 - Provide support to groups wishing to access the Community Fund.

- 9.9.5 The draft DCO s.106 agreement states that Horizon and the IACC will use reasonable endeavours to finalise the Community Impact Joint Work Plan prior to implementation.

9.10 Issue 9 – DCO obligations and Requirements

Workforce

- 9.10.1 Paragraph 6.9.1.4 of chapter 9: LIR welcomes Horizon's appointment of a Welsh Language and Culture Coordinator (WLCC), as secured in Schedule 1 of the draft DCO s.106 agreement. The WLCC will report to the overseen by the Head of Strategic Development Wales and report to both the Welsh Language and Culture Sub-Group as well as the internal Horizon Welsh Language Management Group. Horizon welcomes IACC's comments in relation to the status and remit of the WLCC and will consider these during the next phase of implementing the draft DCO s.106 agreement.
- 9.10.2 IACC's LIR (paragraphs 6.9.1.6 and 6.9.1.7) proposes that the WLCC and its Head of Strategic Development Wales attend Welsh language awareness training. One of the WLCC's responsibilities (overseen by the Head of Strategic Development Wales) will be coordinating the design and delivery of Horizon's Welsh language awareness training, taking into account advice and good practice from external organisations. Both the WLCC and Head of Strategic Development Wales, will therefore be highly familiar with the content and delivery of the training.
- 9.10.3 There is provision in Schedule 1 of the draft DCO s.106 agreement that addresses IACC's comments (paragraph 6.9.2.4) in relation to the level of Welsh language skills required for various job roles. The draft DCO s.106 agreement notes that Horizon's Welsh language policy will require staff members to demonstrate linguistic courtesy and that Horizon will assess the Welsh language skills requirements for job roles when developing construction and operational job profiles.
- 9.10.4 Chapter 9: LIR (paragraph 6.9.2.6) includes proposals for involving external organisations in the implementation of the proposed Welsh language awareness training. The WLCC will liaise with external organisations in developing the Welsh language awareness training and will consider these comments further during the next phase of implementing the draft DCO s.106 agreement.
- 9.10.5 Horizon notes IACC's proposal (in paragraph 6.9.2.7 of Chapter 9, LIR) that it should establish a Welsh Language Skills Strategy. Horizon considers this to be an important part of the next phase of implementing a DCO. The draft DCO s.106 agreement includes provision for establishing or maintaining a programme of Welsh language training for the workforce, a Welsh language mentoring scheme for learners and Welsh speaker badge scheme.
- 9.10.6 The IACC LIR (paragraph 6.9.3.4) notes that IACC is uncertain that the majority of Horizon Wylfa Newydd staff are Welsh speakers. Horizon can confirm that the

majority of permanent staff currently based at the Wylfa Newydd site office are Welsh speakers (based on situation in December 2018).

- 9.10.7 The draft DCO s.106 agreement includes provision that addresses the comments in IACC LIR (paragraph 6.9.3.5) relating to candidates being offered a language choice for interviews. The draft DCO s.106 agreement notes that (where practicable) Horizon will include a Welsh speaker on interview panels for job applicants for roles whose preferred language is Welsh. This is in addition to a provision to ensure a Welsh-speaking member of staff is included on interview panels for jobs where candidates are required to have Welsh language skills.
- 9.10.8 IACC LIR (paragraphs 6.9.4.7 and 6.9.4.8) requests an improved jobs and skills scheme and increased reference to the Welsh language in materials aimed at increasing awareness of job opportunities among young people. While Horizon's jobs and skills commitments are responded to more fully in its response to chapters 3 and 7, Horizon notes that additionally Schedule 1 of the draft DCO s.106 agreement includes provisions for promoting career opportunities at the Wylfa Newydd DCO Project by:
- Distributing bilingual information on career opportunities at Wylfa Newydd to local communities and young people on a regular basis.
 - Developing role model activities and resources to encourage awareness of career opportunities within the community where:
 - o Welsh-speaking Horizon staff (including Welsh learners) and local suppliers will be involved in such activities; and
 - o staff and contractors will take part in various 'role model' activities and resources such as case study video clips, written materials, presentations in schools.
- 9.10.9 Horizon notes that paragraph 6.9.4.9 of Chapter 9, LIR includes a proposal from IACC that Horizon fund and implement a Student Sponsorship Programme for undergraduate and postgraduate students in specialised, nuclear industry related, fields of study. The Jobs and Skills Strategy refers to Horizon's Graduate Development Scheme. This scheme was launched in 2016 and also recruited graduates for specific areas in the preceding years. The current Graduate Development Scheme provides an opportunity to attract high calibre recruits from North Wales and the wider area. The scheme offers graduates practical placements and the ability to work across Horizon's sites at Wylfa Newydd Power Station in Wales and the Sunrise House location in Gloucester. Horizon have recently reviewed the Graduate Development Scheme in preparation for the 2019 intake. The Skills Fund (a £10 million fund) is intended to be available including to support the education strategy within the Jobs and Skills Implementation Plan and could fund a range of activities including development of school resources, support for careers advice and student sponsorship for under- and post- graduate courses, all of which have been requested by IACC and Welsh Government. Gyrfa Cymru/Careers Wales will also be a key educational partner acting as the conduit for business in to local schools. As such further funding is not considered necessary.

9.10.10 The Chapter 9 of the LIR includes several comments relating to the recruitment and monitoring of staff with Welsh language skills (paragraphs 6.9.5.6 - 6.9.5.10). The Draft DCO s.106 agreement includes provisions relating to many of these issues including:

- Establishing a Welsh language skills competency framework and assessment tool;
- Recording the level of Welsh language skills required for each post as part of the recruitment process.

9.10.11 However, Horizon welcomes IACC's comments in relation to the recruitment and monitoring of staff with Welsh language skills and consider these an important part of the next phase of implementing the Draft DCO s.106.

9.10.12 Paragraph 6.9.5.7 of chapter 9, LIR notes that IACC consider that Horizon can help increase the number and proportion of Welsh speakers on Anglesey if it puts robust plans in place to recruit Welsh speaking workers. The development of the existing population via the jobs and skills measures secured in Schedule 4 of the draft DCO s.106 agreement will be a critical means in achieving this. In addition, the draft DCO s.106 agreement provides that all external vacancies will be advertised through the Wylfa Newydd Employment and Skills Service (WNESS) which will publicise them in Welsh and English. Furthermore, where jobs are advertised outside of the WNESS, Horizon will ensure that they are advertised in Welsh and English through recruitment channels including local and national partners that engage with a Welsh-speaking audience. Additionally, Schedule 1 of the draft DCO s.106 agreement includes provisions for promoting career opportunities at the Wylfa Newydd DCO Project by:

- Distributing bilingual information on career opportunities at Wylfa Newydd to local communities and young people on a regular basis.
- Developing role model activities and resources to encourage awareness of career opportunities within the community where:
 - o Welsh-speaking Horizon staff (including Welsh learners) and local suppliers will be involved in such activities; and
 - o staff and contractors will take part in various 'role model' activities and resources such as case study video clips, written materials, presentations in schools.

9.10.13 Paragraph 6.9.5.7 of the LIR also notes that IACC consider that Horizon can help increase the number and proportion of Welsh speakers on Anglesey if it develops the Welsh language skills of all of its workforce so that by the operational stage, the majority of Wylfa Newydd site staff will be able to use Welsh in the workplace. (as above, Horizon can confirm that the majority of permanent staff currently based at the Wylfa Newydd site office are Welsh speakers (based on situation in December 2018)). The draft DCO s.106 agreement also secures mitigation measures that will help maximise the use of Welsh in the workplace, including:

- Provision of language and culture awareness training to the workforce.
- Staff members to demonstrate linguistic courtesy and awareness of the Welsh Language Policy.
- Development of a programme of Welsh language training for the Workforce operational staff where this is a relevant requirement within a job-role (as determined by the Welsh language skills competency framework secured via Schedule 1 of the draft DCO s.106 agreement);
- Establishment of a Welsh language mentoring scheme for learners.
- Maintenance of the Developer's Welsh speaker badge scheme and using reasonable endeavours to ensure that its contractors operate an equivalent scheme.
- Ensure a Welsh-speaking member of staff is included on interview panels for jobs where candidates are required to have Welsh language skills.

9.10.14 IACC propose in paragraph 6.9.5.9 of chapter 9, LIR that there is independent involvement and evaluation of the proposed competency framework and process for both interview and testing of Welsh language skills. Horizon's WLCC will liaise with external organisations in developing the Welsh language skills competency framework and assessment tool.

9.10.15 IACC propose in paragraph 6.9.5.9 of chapter 9, LIR that the individuals recruited to senior management and middle management roles as well as across the operational spectrum should be Welsh speakers or trained over time to have Welsh language skills they can use in the workplace. Schedule 1 of the draft DCO s.106 agreement includes a commitment to establish a programme of Welsh language training for workforce operational staff where this is a relevant requirement within a job-role as well as a mentoring scheme and to maintain its badge scheme for Welsh speakers. Horizon considers IACC's comments to be important considerations for the next phase of implementing the DCO.

9.10.16 Paragraph 6.9.7.3 welcomes Horizon's that all permanent and temporary public signs relating to the Project will be bilingual.

9.10.17 Paragraph 6.9.8.4 of chapter 9, LIR includes proposals relating to the implementation of Horizon's proposed Welsh language skills competency framework and assessment tool (as secured through the draft DCO s.106 agreement). As above, Horizon's WLCC will liaise with external organisations in developing the Welsh language skills competency framework and assessment tool.

9.10.18 Paragraph 6.9.6.4 of chapter 9 welcomes Horizon's commitment to annually review its Welsh language policy, as secured in the draft DCO s.106 agreement.

9.10.19 Horizon welcomes IACC's agreement (paragraphs 6.9.9.4, 6.9.10.4, 6.9.11.4) with the mitigation and enhancement measures relating to:

- Distribute information on the Welsh language and culture to contractors and personnel;
- Providing contractors with information relating to the Welsh language;
- Encouraging use of local suppliers.

These measures are secured within the draft DCO s.106 agreement. In relation to IACC's proposal that Horizon seek the advice of the Welsh Language Commissioner, the draft DCO s.106 agreement includes provision to liaise with external partners on matters relating to the Welsh language. Horizon anticipates liaising with the Welsh Language Commissioner on the implementation of specific measures secured in the draft DCO s.106 agreement. Additionally, it is anticipated that the membership of the Welsh Language Sub-Group (who will be involved in delivery) to be based initially on the WLIA Steering Group, which includes the Welsh Language Commissioner as an observer.

9.10.20 Horizon welcomes IACC's agreement with the mitigation and enhancement measures relating to Welsh language and culture language awareness training, Welsh language skills training, mentoring and badge scheme as well as proposals for collecting data on the Welsh language skills of the workforce. These measures, alongside provisions for monitoring their implementation, are secured through provisions in the draft DCO s.106.

9.10.21 Horizon welcomes IACC's agreement (paragraph 6.9.13.6) with its proposals to collect aggregate and anonymised data during the construction period on the Workforce Dependents who move to the KSA through the WAMS and the Welsh Language skills of such partners and children, and the number of children and their ages (where such data is available and subject to compliance with Data Protection Legislation). This measure is secured through Schedule 1 of the draft DCO s.106. Further to this, Schedule 6 (Education) of the draft DCO s.106 agreement, includes obligations relating to the Monitoring of the Local Schools. Horizon undertakes that it will monitor the numbers of Workforce Children as part of the operation of the Workforce Accommodation Management Strategy Workforce Management Portal and provide such data to the Jobs and Skills Sub-Group on a quarterly basis or such other period agreed by the Jobs and Skills Sub-Group. The Draft DCO s.106 agreement also sets out provision for IACC to:

- Undertake monitoring of the number of Workforce Children enrolling in Local Schools on Anglesey by monitoring the available supply of primary and secondary school places within Anglesey and provide a capacity report to the Jobs and Skills Sub-Group.
- Use reasonable endeavours to work with Gwynedd Council and Conwy Council to enable those councils to monitor the number of Workforce Children enrolling in Local Schools by monitoring the available supply of primary and secondary school places within Gwynedd and Conwy respectively, and to provide a capacity report to the Jobs and Skills Sub-Group.

- Within 10 Working Days of the end of each school term provide a capacity report for Local Schools for the Jobs and Skills Sub-Group using the data collected which sets out the statistics on the numbers of filled and unfilled school places at the Local Schools as well as pupil number forecasts for the following school term.

Children, young people and families

- 9.10.22 Paragraph 6.9.14.7 of Chapter 9, LIR notes that IACC agrees with the scope of Horizon's commitment to continue to develop and provide bilingual educational support for primary and secondary pupils as well as Further Education students. This measure is secured through Schedule 1 of the draft DCO s.106 agreement.
- 9.10.23 IACC requests that Horizon places an emphasis on the value in pursuing careers in STEM subjects either wholly or in part through the medium of Welsh (paragraphs 6.9.15.5 – 6.9.15.6). Horizon's technical apprenticeship scheme and 'Work Insight Week', deliver this and both secured in Schedule 1 of the draft DCO s.106 agreement, as well as the significant commitments to education including STEM, in Schedule 4 (Employment and Skills Service and Supply Chain) of the draft DCO s.106 agreement. Horizon considers the issue raised by IACC to an important part of the next phase of implementing a DCO. Horizon staff who coordinate the technical apprenticeship scheme and 'Work Insight Week' and the majority of current Wylfa Newydd technical apprentices are Welsh speakers. In addition, bilingual materials on career opportunities at Wylfa Newydd are provided to participants in both schemes. Outside of the Draft DCO s.106 agreement, Horizon has already committed £1m to the new Engineering Centre at Coleg Menai and Hitachi has donated heavy plant equipment and power tools to be used to train students.
- 9.10.24 Comments on Horizon's proposed mitigation measures relating to Welsh language immersion education provision are made in paragraphs 6.9.16.5 – 6.9.16.10 of chapter 9, LIR. IACC consider that the proposed measure, secured through the draft DCO s.106 agreement, is unlikely to be adequate.
- 9.10.25 IACC LIR (Chapter 9, Annex 9A, paragraph 2.7.7) confirms that Welsh language immersion provision is currently delivered by 5 FTE specialist immersion teachers. Table 3 of Annex 9A of the LIR notes that 73 pupils attended the primary sector immersion centres in 2016/17 and 65 in 2017/18. This data indicates an annual pupil to teacher ratio of 14.6 in 2016/17 and 13.0 in 2017/18. This is consistent with IACC's previously stated view in SoCG discussions that the pupil teacher ratio should not exceed 1 to 16. The WLIA anticipates an inflow of 220 workforce children during the construction phase and 31 during the operational phase.
- 9.10.26 IACC has identified a need (paragraph 6.9.16.8 of IACC LIR) for Horizon to fund the employment of 5 Welsh primary immersion teachers to meet anticipated primary school pupil needs. Horizon does not believe there is a clear evidence base upon which this need is based.

- 9.10.27 The LIR (Annex 9A, paragraph 2.9.1) notes that there is currently no permanent immersion provision for secondary aged children due to lack of funding. Horizon notes that IACC has identified a need for Horizon to fund the employment of 5 specialist secondary Welsh immersion teachers as well as 5 Welsh immersion classroom assistants. Horizon does not believe there is a clear evidence base upon which the need for Horizon to bear this funding is based.
- 9.10.28 Horizon considers that the commitment (secured in the draft DCO s.106 agreement) to fund the employment of two language immersion teachers, to be in place prior to implementation, alongside ongoing monitoring of the number of Workforce Children, will enable the impacts on the language immersion service to be mitigated. This is supported by a £1,000,000 education contribution and availability of a £3,000,000 education contingency fund. Discussions around the implementation of this measure are ongoing between Horizon and IACC.
- 9.10.29 Horizon welcomes IACC view that its commitment to provide welcome packs to workers and their families are appropriate (chapter 9, LIR paragraph 6.9.17.3). Horizon notes IACC's comments relating to the implementation of this measure and agrees that the approach to circulating the materials and their availability in languages other than Welsh and English are important issues for the next phase of implementing a DCO.
- 9.10.30 Horizon notes IACC's views on maintaining the linguistic character of schools (paragraphs 6.9.18.2 – 6.9.18.6 of chapter 9, LIR). Horizon's commitments to fund the employment of language immersion teachers and ongoing monitoring of workforce children through the WAMS are secured in the education contribution. Projections of the number of workforce dependents are not available at individual school level to enable the type of assessments proposed in the IACC LIR. However, there are ongoing discussions on this issue through the SoCG between Horizon and IACC.

Community and local services

- 9.10.31 IACC agrees (paragraph 6.9.19.7) with Horizon's approach to fund provision of community language services, as secured in Schedule 1 of the education contribution. Several proposals relating to the implementation of this measure are made in IACC LIR (paragraphs 6.9.19.7 – 6.9.19.22).
- 9.10.32 Schedule 14 of the draft DCO s.106 agreement details the commitment to secure two Community Involvement Officers (one employed by Horizon and one by IACC), whose remit will include managing community language services (including the development of appropriate training materials). Further to this, Schedule 1 of the draft DCO s.106 agreement secures funding for IACC for a Welsh Language Officer responsible for developing measures to ensure continued Welsh speaking characteristics of organisations and activities in the local communities. Schedule 1 of the draft DCO s.106 agreement also requires the Welsh Language and Culture Coordinator to work closely with the Community Involvement Officers to deliver the Community

Impact Joint Work Plan (which is set out in Schedule 14 of the Draft DCO s.106), but will include:

- Supporting the integration of the workforce and their dependents;
- Liaise with communities in respect of workforce conduct issues;
- Promote education, upskilling, training and local employment opportunities including support for young people from disadvantaged backgrounds;
- Promote community cohesion;
- Support the integration of incomers into host communities;
- Report regularly to the Welsh Language and Culture Sub-Group; and
- Provide support to groups wishing to access the Community Fund.

9.10.33 The Draft DCO s.106 states that Horizon and the IACC will use reasonable endeavours to finalise the Community Impact Joint Work Plan prior to implementation.

9.10.34 The CIOs and Welsh language officer will therefore play a key role in implementing Horizon's commitment to fund provision of community language services, including developing appropriate training materials as appropriate. Horizon notes IACC's view that five Community Involvement Officers (CIO) are required, however Horizon does not agree that this number of CIOs are required.

9.10.35 Horizon notes IACC's comments (paragraphs 6.9.19.9 to 6.9.19.13, chapter 9, LIR) relating to the potential role of CIOs in micro-level community language planning, community leadership training, language and culture awareness training, opportunities to learn Welsh and Integrating the spouses/partners of Horizon workforce. Horizon considers these important matters for the next phase of implementing a DCO.

9.10.36 Horizon notes that a new proposal relating to the creation of community hubs is included in the IACC LIR (paragraph 6.9.19.14). Horizon notes that this proposal has not yet been raised during discussions on the SoCG between Horizon and the IACC and that there does not appear to be a strong evidence base for this proposal.

9.10.37 Paragraphs 6.9.19.26 - 6.9.19.28 set out IACC's view on Horizon's proposals to mitigate impacts on pre-school provision and provides new data on local capacity in terms of pre-school provision. Horizon welcomes ongoing discussion relating to this issue through the SoCG between Horizon and IACC. Furthermore, Horizon is currently pursuing a Statement of Common Ground with Fforwm Iaith Môn, which includes key early years stakeholders Mudiad Meithrin and Menter Môn. Horizon refers to the availability of education contingency funding which may be able to be accessed here – subject to further discussion with IACC.

9.10.38 IACC welcomes the commitment, to fund a Community Translation Service (paragraphs 6.9.19.32 – 6.9.19.33) which will serve local community groups to enable better engagement with the Wylfa Newydd workforce. This

commitment (secured through the draft DCO s.106 agreement) provides for a Community Translation Service Contribution of £250,000. Horizon notes IACC's view that the measure currently adopts an overly narrow definition and welcomes ongoing discussion on this issue through the SoCG between Horizon and IACC.

Accountability

- 9.10.39 IACC agrees with Horizon's commitment to establish a senior management group that will have oversight of and be accountable for the delivery of WLCMES and Horizon's Corporate Welsh Language Policy (paragraph 6.9.19.38 of IACC LIR). Horizon notes IACC's comments on oversight and accountability across Horizon and considers these important matters for the next steps of implementing the DCO.
- 9.10.40 Horizon welcomes IACC's agreement with the commitment to establish an external stakeholder group (paragraphs 6.9.19.44 – 6.9.19.48 of). This measure is secured in Schedule 1 of the draft DCO s.106 agreement through the commitment to establish a Welsh Language Sub-Group. Horizon notes IACC's comments that the group should be independently chaired and welcomes ongoing discussion through the SoCG between Horizon and IACC. Horizon expects the membership of the Welsh Language Sub-Group to be based initially on the WLIA Steering Group, which is independently chaired.
- 9.10.41 Horizon notes IACC views (paragraphs 6.9.19.52 – 6.9.19.55 of chapter 9, LIR) that the proposed arrangements for evaluation are completely inadequate. Horizon disagrees with that statement and notes that this measure is secured in Schedule 1 of the draft DCO s.106 agreement which notes that the evaluation's parameters will be agreed with the Welsh Language and Culture Sub-Group.
- 9.10.42 Horizon notes IACC's view (paragraphs 6.9.19.59 – 6.9.19.60 of chapter 9, LIR) that the WLCMES should be implemented throughout the construction, operation and decommissioning periods. The WLIA [APP-432] sets out how the assessment has addressed the decommissioning stage. Due to the limited information available at present regarding decommissioning, the assessment is presented against the five key aspects of community life, taking into account the matters assessed as part of the 18 checklist questions, without setting the assessment out against the 18 checklist questions. The level of detail available about decommissioning is not considered sufficient in order to undertake an assessment of effects on Welsh language and culture set out against the 18 checklist questions. Before decommissioning starts, Horizon will need to obtain consent from the ONR under the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999. This would require a period of consultation relating to the submission of a decommissioning proposal and supporting environmental statement. In line with current planning policy on the Welsh language, it is anticipated that a review of the potential effects on Welsh language and culture would be undertaken as part of a WLIA alongside the environmental impact assessment

(which would in turn, if necessary, identify enhancement and mitigation measures).

- 9.10.43 Horizon notes IACC's comments relating to wider mitigation measures (paragraphs 6.9.19.62 – 6.9.19.66). Horizon considers that the commitments secured through the draft DCO s.106 agreement enable the delivery of its commitments to mitigate and enhance the impacts of Wylfa Newydd on the Welsh language and culture.

10 Local Impact Report – Traffic and Transport

10.1 Introduction

10.1.1 Horizon has reviewed chapter 10: Traffic and Transport of the IACC LIR. This section responds to the key traffic and transport issues presented within that chapter, with reference to the corresponding paragraph numbers in the LIR chapter where appropriate.

10.1.2 Key issues in this response are:

- Peak hour traffic flows
- Effect on tourism
- Early Years Strategy
- Worker travel strategy
- Network resilience
- Road network improvements
- Cumulative impact
- Planning policy adherence
- Use of clearways
- A55 junction 3 cycle link
- Vehicle tracking
- Further corrections

10.2 Peak hour traffic flow

10.2.1 Refers to paragraphs 3.3.1, 3.5.3.2 and 5.2.1 of Chapter 10.

10.2.2 The timing of worker patterns has been chosen to reduce car travel on the local road network during the busiest periods for general traffic flows. This is to reduce traffic impacts related to the Wylfa Newydd DCO Project. This means that the peak hour of development traffic is not assessed as the traffic impacts will be lower compared to the impact during the AM and PM peak hours for traffic on the road network. This is confirmed in the second paragraph on page 2 of ES Volume C – Road traffic-related effects (project-wide) App C2-4 – DCO TA Appendix H – Junctions Assessment states [APP-109]:

“The busiest hour in each morning and evening peak period has been assessed to provide a robust and conservative assessment of junction performance. This busiest hour varies from junction to junction and hence different hours are modelled at different junctions.”

10.2.3 This effect can also be seen in Figure 11-3 and Figure 11-4 of the ES Volume C – Road traffic-related effects (project-wide) App C2-3 - DCO Transport Assessment [APP-101] which shows the additional traffic related to the Wylfa

Newydd DCO Project occurring at times away from the peaks of general traffic on the Britannia Bridge.

- 10.2.4 The traffic impact of the Wylfa Newydd DCO Project in the peak holiday season has been considered in the DCO Transport Assessment [APP-101]. Paragraph 11.4.7 states that although total daily traffic flows are higher in August than in March, AM and PM peak hour flows are lower. This reflects a lower number of commuter trips in the holiday periods but a higher number of recreational trips which occur away from typical commuter peaks. Junction analysis results for the area around Britannia Bridge during peak traffic conditions in March are therefore considered applicable to peak traffic conditions in August.
- 10.2.5 The Wylfa Newydd Code of Construction Practice (CoCP) [REP2-031] at paragraph 5.8.3 contains a commitment to limit HGVs to the numbers assessed in the Transport Assessment which is a maximum of 40 HGVs per hour or 160 per day, per direction. These limits are to be refined further for the early years as set out below.

10.3 Effect on tourism

- 10.3.1 Refers to paragraphs 3.5.3.3, 3.5.3.4 and 3.5.3.5 of Chapter 10.
- 10.3.2 The quote provided by IACC at paragraph 3.5.3.3 relates to the effect of the change of traffic flows on cyclists and pedestrians, not the effect on vehicles. This is important given that ease of access by tourists is associated with access by car, rather than access by cycle or on foot. Chapter C3 – Public access and recreation effects of traffic of the Environmental Statement [APP-090] summarises residual traffic impacts in Table C2-19.
- 10.3.3 The Environmental Statement (which includes the Transport Assessment) is a technical study which uses baseline data and numerical analysis to provide an objective view of potential transport impacts.
- 10.3.4 The draft DCO s.106 agreement makes provision for a transport contingency fund (schedule 7) which can be accessed where monitoring indicates a significant adverse effect on the operation of the transport network and infrastructure within the DCCZ as a result of the project. This is also supported by the funding of an IACC Transport Officer. It should be noted that the traffic impacts associated with the construction of the Wylfa Newydd DCO Project are temporary and need to be balanced against the long-term effect of the Wylfa Newydd DCO Project on the economy of Anglesey.
- 10.3.5 The Wylfa Newydd CoCP [REP2-031] contains a wide range of restrictions concerning the management of traffic for the Wylfa Newydd DCO Project (see Chapter 5). These continue to be refined in discussions with stakeholders.

10.4 Early Years Strategy

- 10.4.1 Refers to sections 3.6.1, 5.3.1.1, 5.3.1.2, 5.3.1.3, 5.3.1.4 and 6.3.11.1 of Chapter 10.

- 10.4.2 The Wylfa Newydd CoCP and sub CoCPs are control documents and set out the following:
- Construction worker shift start and end times (See Section 4.3 of the Main Power Station Site sub-CoCP [REP2-032]);
 - HGV delivery window (See paragraph 5.2.3 of the Wylfa Newydd-CoCP [REP2-031]); and
 - Limits proposed on the number of HGV movements allowed in any given hour or day (See paragraph 5.8.3 of the Wylfa Newydd-CoCP [REP2-031]).
- 10.4.3 The CoCPs will take effect from the outset of the Wylfa Newydd DCO Project and will therefore apply during the early years of the construction period.
- 10.4.4 Since the submission of the DCO application Horizon has developed an early years strategy for Heavy Goods Vehicles (HGV) movements. This includes the following caps on HGVs on the A5025 at Valley:
- Monthly Max movements – 2,500 HGV movements each way;
 - Hourly Max movements – 22 HGV movements each way; and
 - Daily Max movements – 160 HGV movements each way.
- 10.4.5 These limits will be incorporated into the next version of the Wylfa Newydd CoCP to be submitted at Deadline 4 (17 January 2019).
- 10.4.6 In addition, the Wylfa Newydd CoCP [REP2-031] at paragraph 5.8.2 contains a commitment that the MOLF will cater for at least 60% of the total construction material required for the Wylfa Newydd DCO Project.
- 10.4.7 The traffic impact of the Wylfa Newydd DCO Project in the early years of construction is assessed in the ES Volume C – Road traffic-related effects (project-wide) App C2-3 - DCO Transport Assessment [APP-101]. Paragraph 10.1.2 states that an assessment has been made in 2020 (Year 2) for a scenario with and without the opening of the A5025 Off-line Highway Improvements. Results of this analysis are provided in Chapter 11 of the ES Volume C – Road traffic-related effects (project-wide) App C2-3 - DCO Transport Assessment and this includes an analysis of the traffic impact of the Wylfa Newydd DCO Project on the A5025 (see Tables 11-1 to 11-5). The ES Volume C – Road traffic-related effects (project-wide) App C2-3 - DCO Transport Assessment has considered the potential impact of any overlap with other projects including the North Wales Connection and this is described in paragraphs 5.3.2 to 5.3.4 and paragraph 11.4.8.
- 10.4.8 The construction vehicle profile presented in Table 7-6 of the ES Volume C – Road traffic-related effects (project-wide) App C2-3 - DCO Transport Assessment is based on forecasts of HGV movements to and from the Wylfa Newydd DCO Project. The numbers used to generate the profile are provided in Appendix A of this section responding to chapter 10 of the LIR.

10.5 Dalar Hir Park & Ride

- 10.5.1 Refers to sections 3.6.2 and 5.3.3.1 of Chapter 10.
- 10.5.2 The potential impact of flood risk at the Dalar Hir facility is considered in the responses to question FWQ11.1.23 and FWQ8.0.23, which is repeated below.
- 10.5.3 The flood risk to the proposed Park and Ride at Dalar Hir is identified in ES Volume F – Park and Ride App F8-1 - Dalar Hir - Flood Consequences Assessment (FCA) [APP-281]. Hydraulic modelling results presented and discussed in the FCA indicates that the floodplain of Nant Dalar Hir extends across part of the Park and Ride and reaches depths greater than 2m at the 0.1% Annual Exceedance Probability event. The surface water flood risk is broadly similar in both extent and flood depth to that from fluvial flooding. The FCA concluded that there was a high risk of flooding from both fluvial and pluvial sources to the Park and Ride site as well as to the A5 and A55 to the south of the site and to agricultural land to the north.
- 10.5.4 The conclusion in the FCA was reached on the basis of conservative hydrological analysis and hydraulic modelling of both sources of flooding, without presentation of how the flood risk could be avoided, mitigated or managed. As only the baseline risk was assessed, no indication of any increase or decrease in risk elsewhere was presented.
- 10.5.5 The risk from other sources of flooding was considered low. Whilst not explicitly stated in the FCA, because of the fluvial and pluvial risk to the Park and Ride site, the development would be considered non-compliant with TAN15 Development and Flood Risk. Additional assessment has since been undertaken to review and update the conservative approach presented in the Dalar Hir Park and Ride.
- 10.5.6 Further details of the flood attenuation design for Dalar Hir have been developed in order to mitigate potential flooding effects. This detailed design is shown in WN0902-HZDCO-ADV-DRG-00038 [REP2-019] and is described in the updated Design and Access Statement – Volume 3 – Associated Developments and Off-Site Power Station Facilities (Part 2 of 2), Appendix 1-3 for the Park and Ride [REP2-030]. These were submitted at Deadline 2 (4 December 2018).
- 10.5.7 The proposed design mitigation includes:
- Two north eastern fields lowered to a level of 15.03m above Ordnance Datum (AOD).
 - Construction levels of car park 1, car park 5 as defined in the CAD model supplied (ref to: 60PO8081-JACCIV-MOD-00024.dwg) [REP2-019].
 - The spine road refined to be set at a level of 16.3m AOD.
 - Stream crossing under the spine road defined as a culvert with an appropriate capacity and a cover of 0.5m above the soffit.
- 10.5.8 Further flood modelling has been undertaken by Horizon based on this more detailed design. The results of this are presented in the Park and Ride -

Addendum to Flood Consequence Assessment, which has also been submitted at Deadline 2 (4 December 2018) Overall, the proposed design mitigation, by introducing lower ground levels to act as storage, raising car park levels to avoid impacts and incorporating structural changes at the crossing of the Nant Dalar Hir on the Park and Ride site reduces the flood risk to the development and to the A5 downstream. This has a beneficial effect on flood risk as there is a high flood risk in the baseline scenario.

10.5.9 The proposed design mitigation is compliant with TAN 15 and Planning Policy Wales, as it meets the key objectives of not causing flooding on the site or increasing the risk of flooding elsewhere.

10.5.10 As no car parking spaces will be flooded with the detailed design, no alternative car parking arrangements are required.

10.6 Construction Worker Car Sharing Strategy

10.6.1 Refers to sections 3.7.1, 5.4.1 and 6.3.2 of Chapter 10.

10.6.2 Horizon has identified an average car occupancy of 2.0 workers per vehicle across the whole project. This includes a car share ratio of 1.5 persons per car travelling to the Dalar Hir Park & Ride facility.

10.6.3 Horizon is confident that this figure can be achieved with appropriate incentivisation. Further, the location of the Wylfa Newydd DCO Project on the north-western edge of Anglesey means that workers are travelling from a limited number of surrounding areas, with trips focused along a few routes (e.g. A55 and A5025). Further, almost all construction workers are travelling to the same site every day on fixed shift times for an extended period.

10.6.4 Full details of the proposed car sharing strategy are set out in ES Volume C – Road traffic-related effects (project-wide) App C2-4 - DCO Transport Assessment [APP-101] section 6.3.7.

10.6.5 The Wylfa Newydd CoCP was updated at Deadline 2 [REP2-031] with the following amended text to strengthen commitment to monitoring worker vehicle movements:

- “During the majority of the construction programme, most of the construction workers wishing to drive to the Wylfa Newydd Development Area or Park and Ride facility will be required to car share. Horizon will target an average car share ratio of 2.0 people per car in the peak construction year.
- Horizon will implement a car-sharing database which will likely utilise internet and mobile phone based applications to match workers who wish to drive to the WNDA or Park and Ride facility. The Construction Workers Accommodation Management Portal could be used as a basis to form the database
- The level of car sharing required will vary depending on the number of construction workers, the availability of parking spaces, and the number

of construction workers travelling to site by non-car modes such as shuttle buses, amongst other factors. Vehicle occupancy requirements, and changes to them, will be advertised clearly to all construction workers well in advance.

- The existence of such a database and matching system will be communicated to all employees, including that non-adherence to the car-share policy could result in refusal of entry to the Wylfa Newydd Development Area or Park and Ride car parks.”

10.7 Shuttle Bus Service

10.7.1 Refers to sections 3.7.2, 5.4.2, 6.3.17 of Chapter 10.

10.7.2 Section 5.10 of the Wylfa Newydd CoCP [REP2-031] includes provision to monitor transport issues including fly-parking at shuttle bus stops. A phone number and email address will be provided for members of the public to report incidences of suspected illegal ‘fly-parking’ associated with the Wylfa Newydd DCO Project (see Section 3.3 of the Wylfa Newydd CoCP). Horizon will then investigate each report and will discipline workers caught parking in this way (see Section 4.10 of the Wylfa Newydd CoCP, which obliges compliance with the Workforce Management Strategy [APP-413]). This is considered a sufficient disincentive for workers to comply with the policy. In addition, parking restrictions around shuttle bus stops could be considered through the Transport Sub-Group which has access to funding for this type of mitigation measure.

10.7.3 Horizon has agreed with IACC that there is a need to identify bus stops and bus routes which would be used by shuttle buses to and from the WNDA.

10.7.4 Parking at bus stop locations is not proposed. Only workers living within 600m of a bus stop will be allocated bus as a mode of transport to travel to/from the WNDA, this will negate the need for any worker to drive and park at a bus stop which avoids any nuisance parking around bus stops caused by Wylfa Newydd construction workers.

10.7.5 As set out in the Transport Assessment [APP-101], the Integrated Traffic and Transport Strategy (Appendix F to the Transport Assessment [APP-107]), and secured in section 5.3 of the Wylfa Newydd CoCP, shuttle buses will be demand dependent to ensure that buses go where demand exists from construction workers to maximise take-up and to ensure as far as possible that buses are not using the highway network without passengers and potentially causing unnecessary additional traffic. An indicative bus route map is shown at Figure 5-5 of the Transport Assessment.

10.8 Use of unsuitable roads

10.8.1 Refers to sections 3.8.1 and 5.1.1 of Chapter 10.

10.8.2 Construction workers will be required to sign up to a Code of Conduct which requires the workforce to adhere to measures which include ensuring adherence to the Highway Code, speed limits, and other measures to ensure

drivers associated with the Project drive safely and considerately. The Code of Conduct is secured through the Workforce Management Strategy [APP-413]. Local residents will be able to report any incidents of suspected breach of the Code of Conduct via a telephone hotline or email and it will be investigated.

- 10.8.3 Regarding rat-running concerns, a change is to be made to the Worker Management Strategy stating that the Code of Conduct will include a clause requiring construction workers to stick to 'A' class roads and avoid 'B' class roads wherever practicable to avoid causing unnecessary nuisance and disturbance to local communities. This update to the Workforce Management Strategy will be submitted into examination at Deadline 4 (17 January 2019)

10.9 Damage to the Highway Network

- 10.9.1 Refers to sections 3.9.1, 5.6, and 6.3.6 of Chapter 10.
- 10.9.2 In respect of the volume of traffic and loads to be using the road, capacity of the local roads has been assessed using the Congestion Reference Flow (CRF) methodology outlined in TA46/97 "Traffic flow ranges for the use of assessment of New Rural Roads" from the Design Manual for Roads and Bridges. The CRF is an estimate of the total AADT (Average Annual Daily Traffic) flow, takes into account the width of the roads, numbers of lanes, percentages of HGV in peak flow, proportion of daily traffic occurring at peak, directional splits etc. Based on the CRF, the local road network has been assessed as having an estimated capacity of 19,768 vehicles.
- 10.9.3 In ES Volume C – Road traffic-related effects (project-wide) App C2-3 - Traffic Flows [APP-100], Horizon has calculated volumes of traffic associated with background traffic flows and the Wylfa Newydd DCO Project in 2033 at approximately 11,480 vehicles AADT. Therefore, the local road network is capable of accommodating construction traffic associated with the Wylfa Newydd DCO Project.
- 10.9.4 In respect to any damage to the road network during construction, section 5.2 of the A5025 Off-Line Highway Improvements sub-CoCP [REP2-036] provides that Horizon will undertake joint surveys with IACC Highways to assess the condition of the highway. Horizon will carry out periodic joint inspection throughout the lifecycle of the works. If repair works are required then the assumption is that IACC highways maintenance team would carry out this work, financed by Horizon. Compliance with the sub-CoCP is required under Requirement OH1 of the Draft DCO [REP2-020].
- 10.9.5 Horizon considers that this is sufficient to ensure that any damage to the road network as a result of construction traffic use is dealt with appropriately.

10.10 Resilience to Britannia Bridge

- 10.10.1 Refers to sections 3.9.3, 5.6 and 6.3.7 of Chapter 10.
- 10.10.2 Horizon has identified the Menai Bridge as unsuitable for HGV traffic due to its restricted clearance. Therefore, construction traffic cannot be directed over

the Menai Bridge in the event of a closure on Britannia Bridge (see ES Volume C – Road traffic-related effects (project-wide) App C2-3 - DCO Transport Assessment [APP-101] paragraph 4.3.9).

10.10.3 The temporary closure of the Menai Bridge and/or Britannia Bridge is a rare occurrence and the traffic modelling of the Wylfa Newydd DCO Project has not considered this eventuality.

10.10.4 The temporary closure of one or both bridges would be expected to be classified as a traffic incident. Section 5.5 entitled 'Traffic Incident Management' of the Wylfa Newydd CoCP [REP2-031] states the role of Horizon in managing Wylfa Newydd DCO Project traffic during an incident (such as the closure of a bridge). This includes providing key points of contact in the instance of an incident and relaying incident related information to construction traffic operators.

10.10.5 Horizon recognises that the Menai and Britannia Bridges can, on occasion, be closed temporarily due to bad weather but stockpiling construction materials on-site is expected to mitigate contingency requirements.

10.10.6 Following discussions with stakeholders, Section 5.5 of the Wylfa Newydd CoCP, as updated and submitted at Deadline 2 [REP2-031] (4 December 2018), has been replaced with the following text in relation to Horizon's involvement in a traffic incident:

"Horizon and its supply chain have no statutory authority in the event of a traffic incident on the road network. However, Horizon and its supply chain will assist with incident management planning through the following measures:

- Maintaining a site-based delivery management team as a contact point for contractors, emergency services and the highway authorities. This team will help manage and coordinate Horizon and its supply chain's response to an incident.
- Controlling the number and frequency of HGVs on the designated HGV routes.
- Establishing an appropriate communications protocol for workers, bus drivers transporting construction workers and HGV drivers.
- Communicating incident management information to all workers, contractors making a delivery and bus operators transporting workers.
- Holding HGVs and buses at appropriate locations, including the Logistics Centre, during an incident."

10.11 A5025 between Camaes and Amlwch

10.11.1 Refers to section 3.10.1 of Chapter 10.

10.11.2 Extensive traffic modelling has been conducted in relation to the traffic generated by the Wylfa Newydd DCO Project. Detailed traffic counts can be found in the ES Volume C – Road traffic-related effects (project-wide) App C2-3 - DCO Transport Assessment [APP-101], Table 11-2.

- 10.11.3 The model forecasts only a modest increase in the number of vehicles using the A5025 west of Amlwch as a result of the Wylfa Newydd DCO Project.
- 10.11.4 Section 2.19 of ES Volume C – Road traffic-related effects (project-wide) App C2-4 – DCO TA Appendix E - Accident Analysis [APP-106] provides an analysis of accidents on the A5025 between Treglele and Amlwch. The analysis concludes there were no accident clusters on this section of road.
- 10.11.5 Using this evidence base, it is not proposed that the A5025 be improved between Cemaes and Amlwch as part of the Wylfa Newydd DCO Project.

10.12 Accident Analysis

- 10.12.1 Refers to section 3.10.2 of Chapter 10.
- 10.12.2 The impact of the Wylfa Newydd DCO Project on accidents is assessed in ES Volume C – Road traffic-related effects (project-wide) App C2-4 – DCO TA Appendix E - Accident Analysis [APP-106]. The DCO application includes mitigation measures that will enhance road safety including the A5025 On-Line and Off-Line Highway Improvement Works, and the Code of Conduct which requires the workforce to sign up to measures which include ensuring adherence to the Highway Code, speed limits, and other measures to ensure drivers associated with the Wylfa Newydd DCO Project drive safely and considerately. See the Workforce Management Strategy [APP-413] for further details of the Code of Conduct.

10.13 Cumulative Impact (North Wales Connection Project)

- 10.13.1 Refers to sections 3.10.3 and 5.7.1 of Chapter 10.
- 10.13.2 Construction traffic associated with the proposed North Wales Grid Connection Project (NWGCP) has not been excluded from the traffic modelling undertaken as part of the ES Volume C – Road traffic-related effects (project-wide) App C2-3 - DCO Transport Assessment [APP-101].
- 10.13.3 At the time of the preparation of the ES Volume C – Road traffic-related effects (project-wide) App C2-3 - DCO Transport Assessment there was only limited information available about the traffic associated with the NWGCP. Sufficient traffic information was provided near the finalisation of the ES Volume C – Road traffic-related effects (project-wide) App C2-3 - DCO Transport Assessment to enable a sensitivity test to be undertaken to examine the traffic impacts of the NWGCP and Wylfa Newydd DCO Project on the operation of the Britannia Bridge. This traffic modelling assessment of the operation of Britannia Bridge was undertaken using the VISSIM traffic modelling software. The results are presented in Table 2.2 of the ES Volume C – Road traffic-related effects (project-wide) App C2-3 - DCO Transport Assessment, ES Volume C – Road traffic-related effects (project-wide) App C2-4 – DCO TA Appendix L – Supplementary Information [APP-113]. Further details about the North Wales Grid Connection Project and its impact on the Wylfa Newydd DCO Project can be found in Chapter 2 of ES Volume C – Road traffic-related effects (project-wide) App C2-4 – DCO TA Appendix L – Supplementary Information [APP-113].

10.14 Joint Local Development Plan

10.14.1 Refers to section 4.1.1 of Chapter 10.

10.14.2 The Wylfa Newydd DCO Project includes an Integrated Traffic and Transport Strategy which is presented in Appendix F [APP-107]. This strategy contains the following goals and approach (paragraph 4.1.1):

- “Through our integrated approach to traffic and transport, we are committed to improving the transport system while reducing adverse effects on communities and the environment.
- Our approach sets out how we intend to transport construction workers and materials to the Power Station Site by road, rail and sea. It shows our commitment to road safety; promoting sustainable travel by making fewer journeys; and leaving a lasting transport legacy after the construction phase of the Project.”

10.14.3 The rural location of the Wylfa Newydd DCO Project means that it is not expected that many workers will wish to walk or cycle to work and this is considered in paragraphs 5.4.13 to 5.4.16 and 11.7.13 and 11.7.14 of the ES Volume C – Road traffic-related effects (project-wide) App C2-3 - DCO Transport Assessment [APP-101].

10.14.4 The proposed method for delivery of the shuttle bus service and car sharing is provided in sections 5.3 and 5.7 respectively of the Wylfa Newydd CoCP [REP2-031].).

10.14.5 Issues associated with the location and impact of the Park and Ride facility at Dalar Hir are examined in the response to Chapter 19 of the IACC’s LIR.

10.14.6 The potential use of Park and Share sites has been further considered by Horizon since the submission of the DCO application. Horizon’s DCO application contains all of the necessary parking (onsite and at Dalar Hir) to meet the requirements of the Wylfa Newydd DCO Project and minimise the traffic and transport impacts of the Wylfa Newydd DCO Project. Nevertheless, IACC’s proposed Park and Share facility at Four Crosses, could provide extra flexibility, for example as park and share facilities which could be available for workers car sharing. The same view is taken of the proposed Park and Share sites promoted by the Welsh Government in Bangor and Caernarfon.

10.15 Wylfa Newydd Supplementary Planning Guidance

10.15.1 Refers to section 4.1.2.

10.15.2 The ES Volume C – Road traffic-related effects (project-wide) App C2-3 - DCO Transport Assessment [APP-101] and its appendices present the proposed approach for travel management at the Wylfa Newydd DCO Project. These documents present the proposed transport strategy and associated mitigation together with the resulting traffic and transport impacts on local transport networks. In Horizon’s view this information together with the responses provided in this document provide sufficient information to demonstrate that

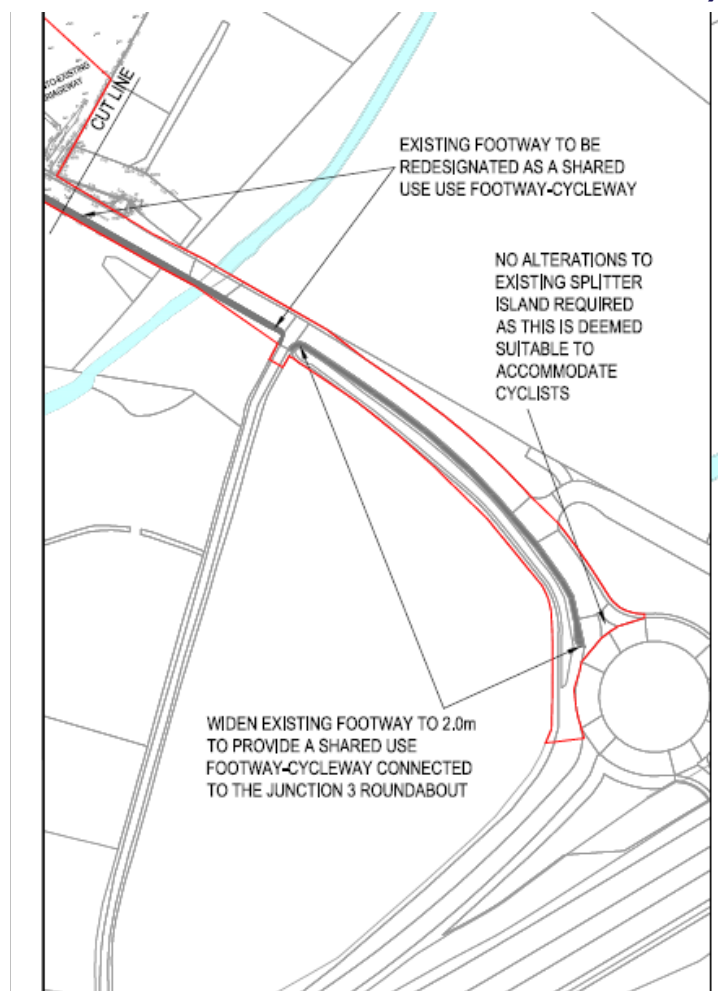
the 'Guiding Principles' are being following as part of the delivery of the Wylfa Newydd DCO Project.

10.16 Cycle link at Valley

10.16.1 Refers to section 6.3.3.

10.16.2 Horizon's latest iteration of the scheme design includes a shared footway / cycleway between the new roundabout and junction 3 of the A55. Horizon notes that IACC Highways have been part of the design team and development of this scheme.

Figure 10-1 Horizon A55 Junction 3 scheme development showing proposed shared footway / cycleway (extract from drawing number WN0902-HZDCO-OHW-DRG-00002 Rev 1.0)



10.17 Vehicle tracking

10.17.1 Refers to section 6.3.12.

10.17.2 Automatic Number Plate Readers and associated technology are not proposed as part of the Wylfa Newydd DCO Project as more sophisticated

and advanced technology is now available which allows for more detailed tracking and monitoring of vehicles. Details of the proposed Distribution Management Asset Tracking System (DMATS) are provided in Section 5.2 of the Logistics Centre sub-Code of Construction Practice (as submitted at Deadline 2) [REP2-373].

10.18 Use of clearways

10.18.1 Refers to section 6.3.16.

10.18.2 The potential implementation of “Clearways” i.e. parking restrictions, can be considered through the Transport Sub-Group which has access to funding under the draft DCO s.106 agreement for this type of mitigation measure.

10.19 Mode-share targets

10.19.1 Refers to paragraph 6.3.18.4.

10.19.2 These have not been explicitly stated in the Draft DCO. Horizon is developing mode share targets and these will be submitted at Deadline 4.

10.20 Further corrections

10.20.1 In paragraph 1.1.4, IACC’s reference to the Marine Off-Loading Facility (MOLF) being operational by the date of ‘peak construction’. However, as per the Phasing Strategy [APP-447] the MOLF will be operational by the end of construction year 2 – earlier than the date of peak construction.

[This page is intentionally blank]

Appendix A Source Data for Figure 7-6 of DCO Transport Assessment

[This page is intentionally blank]

NOT PROTECTIVELY MARKED

CONSTRUCTION VEHICLES MOVEMENTS - A5025 - (SOURCE OF NUMBERS IN FIGURE 7-6 OF TRANSPORT ASSESSMENT [APP-101])

	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
Site Mobilisation and Access	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MOLF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Blocks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ancillary Buildings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Consumables & Waste (WMDA)	11	11	11	11	11	12	12	12	12	12	12	17	17	17	36	48	48	64	64	66	113
Off-Site Facilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Temporary Worker Accommodation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	255
A5025 Highway Improvements	0	0	0	0	0	0	265	265	265	318	318	318	269	269	269	269	269	140	140	140	140
Plant Requirements	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	83	65	65	101	101	65
TOTAL	11	11	11	11	11	12	277	277	277	330	330	335	285	285	1141	1684	1667	1657	1547	1549	1817
Hourly Flow	0	0	0	0	0	0	3	3	3	3	3	3	3	3	10	15	15	15	14	14	17

NOT PROTECTIVELY MARKED

CONSTRUCTION VEHICLES MOVEMENTS - A5025 - (SOURCE OF NUMBERS IN FIGURE 7-6 OF TRANSPORT ASSESSMENT [APP-101])

	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22
1240	1240	448	0	0	0	0	0	0	0	0	775	775	775	775	775	775	0	0	0	0	0	0	0	0	0	0	0
0	66	546	546	546	546	570	745	745	745	666	99	24	24	12	12	0	0	0	0	0	0	0	0	0	0	0	0
4	4	6	8	8	7	6	4	8	7	6	14	237	256	284	339	363	1198	1398	1421	1481	1492	1520	1560	1613	1607	1628	1687
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	494	494	494	494	494
115	131	128	120	125	137	137	137	137	146	140	228	302	369	413	391	393	413	427	405	407	411	397	459	468	457	438	437
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	258	258	258	258
255	255	255	255	255	389	389	389	389	389	389	389	196	196	196	196	196	196	196	196	255	255	255	255	255	255	389	389
223	223	223	1065	1065	924	924	924	924	924	924	842	842	842	842	17	17	0	0	0	0	0	0	0	0	0	0	0
5	5	5	29	5	5	5	5	4	4	100	115	19	19	17	17	17	1	1	1	1	1	31	30	6	6	6	6
1842	1924	1610	2022	2001	2171	2204	2206	2214	2224	2463	2395	2481	2481	1696	1730	1743	1808	2022	2023	2144	2158	2203	2797	3093	3076	3213	3271

17 17 15 18 18 18 20 20 20 20 20 22 22 23 19 20 20 21 23 23 24 25 25 32 35 35 37 37

NOT PROTECTIVELY MARKED

CONSTRUCTION VEHICLES MOVEMENTS - A5025 - (SOURCE OF NUMBERS IN FIGURE 7-6 OF TRANSPORT ASSESSMENT [APP-101])

	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1663	1720	1786	1847	1959	1964	1938	1962	1978	1982	1980	1968	1934	1891	1892	1922	1892	1922	1892	1822	1830	1837	1854	1795	1807	576	488	404
494	494	494	494	494	494	494	494	494	494	494	494	494	494	494	494	494	494	494	494	0	0	0	0	0	0	0	0
434	455	450	460	493	501	503	522	527	538	537	543	557	574	581	590	599	599	588	596	591	585	609	575	455	457	439	424
258	258	258	258	258	258	258	258	258	258	258	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
389	389	389	389	196	196	196	196	196	196	196	196	196	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	6	6	6	5	5	5	5	5	20	20	18	18	18	18	2	2	2	2	2	2	2	2	2	2	18	2	2
3259	3322	3384	3453	3404	3417	3393	3437	3473	3488	3482	3037	3020	2969	2979	3017	2977	2914	2423	2424	2465	2373	2265	1051	930	830		
37	38	38	39	39	39	39	39	39	40	40	37	35	34	34	34	34	34	34	33	28	28	28	27	26	12	11	9

NOT PROTECTIVELY MARKED

CONSTRUCTION VEHICLES MOVEMENTS - A5025 - (SOURCE OF NUMBERS IN FIGURE 7-6 OF TRANSPORT ASSESSMENT [APP-101])

	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
340	278	230	218	216	221	221	233	203	221	209	165	119	89	47	11	11	11	11	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
421	396	377	358	330	339	324	325	325	319	305	294	266	265	253	241	229	214	157	137	122	103	102	101	88	84	77	66
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	610	610	610	610	610	610	996	996	996	895
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2	2	2	2	2	2	17	1	1	1	1	1	1	1	17	17	1	1	1	17	1	1	17	17	121	121	121
764	676	610	579	549	563	573	573	530	541	515	460	386	355	302	269	257	226	779	748	749	714	713	727	1101	1201	1194	1083
9	8	7	7	6	6	6	7	6	6	6	5	4	4	3	3	3	3	9	8	9	8	8	8	13	14	14	12

NOT PROTECTIVELY MARKED

CONSTRUCTION VEHICLES MOVEMENTS - A5025 - (SOURCE OF NUMBERS IN FIGURE 7-6 OF TRANSPORT ASSESSMENT [APP-101])

	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26	Jan-27	Feb-27	Mar-27	Apr-27	May-27	Jun-27	Jul-27	Aug-27	Sep-27	Oct-27
0	0	0	0	0	0	0	879	879	879	775	775	775	775	747	747
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	59	52	52	52	52	53	61	61	61	61	61	61	61	61	61
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
895	895	509	509	509	509	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
121	121	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1075	1075	561	561	561	561	53	940	940	940	836	836	836	836	808	808
12	12	6	6	6	6	1	11	11	11	9	9	9	9	9	9

11 Local Impact Report – Waste Management

11.1 Introduction

11.1.1 Horizon has reviewed chapter 11: Waste Management of the IACC LIR. This section responds to the key issues in respect of waste management presented within that chapter, with reference to the corresponding paragraph numbers in the LIR chapter where appropriate.

11.1.2 Key issues in this response are:

- **Assessment of existing waste management capacity** (paragraphs 1.2.13, 1.3.5, 1.4.3 – 1.4.6 and 1.6.3) - IACC considers that Horizon has relied on out of date/inaccurate information, and queries the methodology including the size of the study area adopted.
- **Impact on waste management infrastructure** (paragraphs 1.2.11, 1.2.14 and 1.6.4 – 1.6.7) - IACC does not agree with the assessment conclusions relating to the impact on waste management infrastructure, because of the issues IACC raises in relation to the assessment.
- **Transportation of waste** (paragraphs 1.2.12, 1.2.15-16 and 1.3.2) - IACC encourages opportunities to minimise long distance transportation of waste and increase more sustainable modes of transport.
- **Economic benefit from waste management** (paragraphs 1.2.12 – 14) - IACC query whether opportunities to dispose of waste as close to site as possible have been met in accordance with policy.
- **Monitoring and Mitigation** (paragraphs 1.3.3 and 1.5.2) - IACC requests a DCO requirement for Horizon to develop and implement a monitoring and mitigation strategy prior to commencement of the Wylfa Newydd DCO Project, including a trigger point for mitigation if a material burden is placed on existing waste management infrastructure in North Wales.
- **Funding of monitoring and additional waste management mitigation** (paragraph 1.5.2) - IACC requests a contribution secured by the draft DCO s.106 agreement to support monitoring and any resulting mitigation or compensation measures.

11.1.3 Horizon has prepared waste management practices for determining how construction and operational waste will be managed, informed by the waste and materials management assessment set out in the Environmental Statement,. These waste management practices are set out in the waste management strategy at section 9.3 of the Wylfa Newydd Code of Construction Practice (CoCP) [REP2-031], the various site-specific sub-CoCPs [REP2-032] to [REP2-036], [REP2-373]) and the Wylfa Newydd Code of Operational Code (CoOP) [REP2-037]. Horizon is confident that sufficient controls regarding the management of waste and materials relating to the Wylfa Newydd DCO Project are provided for in the Wylfa Newydd CoCP, site-

specific sub-CoCPs and the Wylfa Newydd CoOP given the information that is reasonably available at this stage of the Wylfa Newydd DCO Project. However, Horizon will amend the Wylfa Newydd CoCP at Deadline 4 (17 January 2019) to include an updated Waste and Materials Management Strategy (WMMS) and a commitment to produce a Site Waste Management Plan (SWMP).

- 11.1.4 Conventional waste at the decommissioning stage is addressed in Chapter C6 - Waste and materials management of the Environmental Statement [APP-093] (section 6.4.27). Before decommissioning starts, Horizon will need to obtain consent from the Office for Nuclear Regulation (ONR) under the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999. This would require a period of consultation relating to the submission of a decommissioning proposal and supporting environmental statement, which would involve an assessment relating to conventional waste arisings and management.

11.2 Assessment of existing waste management capacity

- 11.2.1 Chapter B16 - Waste and materials management of the Environmental Statement [APP-081] introduces the assumptions and technical basis for the waste and materials management assessment for the Wylfa Newydd DCO Project.
- 11.2.2 Paragraph 16.4.26 of Chapter B16 - Waste and materials management of the Environmental Statement [APP-081] recognises that the assessment is based on a worst-case scenario using preliminary design and incorporating waste from operational facilities to support construction. In addition, a contingency of 20% was added to the waste estimates to allow for the evolving designs.
- 11.2.3 Horizon has indicated how the types and volumes of waste would be managed in accordance with the Horizon Waste Hierarchy and taking account of the availability and capacity of local and regional waste management infrastructure. With reference to paragraph 1.4.2 of chapter 11, LIR, this includes in relation to silts captured during construction and incorporated into the materials mass balance in accordance with CL:AIRE definition of waste: Development Industry Code of Practice. The proposed waste recovery and disposal routes and an assessment of the impact of waste arisings on the local and regional capacities were described in Chapter C6 - Waste and materials management of the Environmental Statement [APP-093]; and Appendix C6-1 (local and regional waste management facilities) [APP-117].
- 11.2.4 The assessment in Chapter C6 - Waste and materials management of the Environmental Statement [APP-093] has considered the availability of waste management infrastructure capacity at a regional level, because local facilities would rarely be able to service a major infrastructure project of this scale. Local availability is also a consideration, for instance, where there are no operational hazardous waste landfills in Wales. Further explanation relating to scope of the assessment of waste management capacity and the potential impact on waste management capacity is set out below in the *Impact of waste management infrastructure* section.

- 11.2.5 In addition to following established assessment methodologies, Horizon sought advice from Natural Resources Wales (NRW) and other stakeholders of the Waste and Materials Oversight Group (WaMOG) on 18 November 2016 regarding data sources to inform the assessment. Subsequently, Horizon used the data provided by NRW in 2017 and other published data by NRW or the Environment Agency for the assessment (see Appendix C6-1 [APP-117]). Waste capacity and throughput information on waste management facilities will continue to change over time in response to operational and/or regulatory activities. This is acknowledged in Section 6.3.15 of Chapter C6 - Waste and materials management of the Environmental Statement [APP-093]. NRW also recognises that the available waste management capacity will need to be updated prior to and throughout the construction phase (Draft SoCG between NRW and Horizon, submitted at Deadline 2 [REP2-049]).
- 11.2.6 Horizon will continue to work with IACC, NRW and other stakeholders to develop and implement the approach to conventional waste management. Horizon will report to IACC via the WaMOG in relation to the evolving WMMS. This will ensure that the forecast of waste in the SWMP can be compared with locally available capacity, including potential capacity from unimplemented permissions.

11.3 Impact on waste management infrastructure

- 11.3.1 The Wylfa Newydd DCO Project is a major infrastructure project of national importance and not too dissimilar to other nationally significant infrastructure projects (NSIPs), where the solution to effective management of waste needs to be considered on a regional as well as a local basis. This is acknowledged in Section 6.3.3 of Chapter C6 - Waste and materials management of the Environmental Statement [APP-093].
- 11.3.2 The assessment detailed in Chapter C6 - Waste and materials management of the Environmental Statement [APP-093] includes northwest England in the study area for the location of construction waste management facilities due to the proximity to north Wales, the trunk road network, and the availability of waste management infrastructure. The policy criteria as set out in Welsh Government's Technical Advice Note 21: Waste (TAN21) is for 'nearest appropriate installation' taking into consideration several factors and not only proximity. This is also true for sustainable waste management, which should consider social and economic considerations as well as environmental.
- 11.3.3 As detailed in Chapter C6 - Waste and materials management of the Environmental Statement [APP-093], the information available at the time of assessment indicated there were no non-hazardous waste landfill capacity considered to be available to the Wylfa Newydd DCO Project in north Wales. This means that, unless new capacity becomes available in the region, any non-hazardous waste produced by the Wylfa Newydd DCO Project would need to be disposed of in non-hazardous waste landfills outside of north Wales. The information available also indicated there were also no hazardous waste landfills in north Wales. Therefore, any hazardous waste produced by

the Wylfa Newydd DCO Project requiring off-site disposal to landfill would also need to be disposed of outside of north Wales.

- 11.3.4 The assessment considers composting and recycling facilities in north Wales. The source data sets used, as provided by NRW, did not include the anaerobic digestion facility in Denbighshire. Therefore this facility was not included in the assessment presented in Chapter C6 - Waste and materials management of the Environmental Statement [APP-093]. However, it is acknowledged that this could potentially provide additional capacity for use by the Wylfa Newydd DCO Project as the nearest appropriate installation, thus reducing transport distance for some of the waste.
- 11.3.5 Due to the lack of evidence of their capacity at the time of the assessment, the Bryn Posteg (Powys), Hafod (Wrexham) and Llanddulas (Conwy) sites were removed from the evaluation, in the event they could be used this would only enhance the outcome of the assessment presented in Chapter C6 - Waste and materials management [APP-093]. Given that a conservative approach has been taken to determining whether potential capacity is available, this would not necessarily change the outcome of the assessment.
- 11.3.6 Implementation of the WMMS would need to consider local waste management opportunities where these are suitably prepared, compliant and auditable. The WMMS would also identify sufficient provision of essential waste infrastructure is available on-site or to service the site.
- 11.3.7 The SWMP would involve a review of the waste management facilities available to the Wylfa Newydd DCO Project and a request will be made to IACC and NRW at that time for the most up to date information and data available. Horizon will throughout construction prepare reports for each construction site detailing the waste management processes for the site.

11.4 Transportation of waste

- 11.4.1 Chapter B16 - Waste and materials management of the Environmental Statement [APP-081] introduces the assumptions for waste transportation for the Wylfa Newydd DCO Project. Horizon's responses to the Examining Authority's first written questions [REP2-002] also considered aspects of waste transportation from the main site, in particular the on-site concrete batching plant [Response FWQ 8.0.5], use of the marine offloading facility (MOLF) for transporting waste [Response to FWQ 11.1.8] and the number of heavy goods vehicle (HGV) movements associated with conventional waste transported from the Wylfa Newydd Development Area (WNDA). Transportation of waste is only a small proportion of the overall number of construction vehicles leaving the WNDA and more details are provided in the Strategic Traffic Model [Response to FWQ 11.1.8].

11.5 Economic benefit from waste management

- 11.5.1 As set out above in relation to 'impact on waste management infrastructure', the criteria in TAN21 specifies 'nearest appropriate installation' taking into consideration several factors and not only proximity. The assessment detailed

in Chapter C6 – Waste and materials management of the Environmental Statement [APP-093] includes northwest England in the study area for the location of waste management facilities due to the proximity to north Wales, the trunk road network, and the availability of waste management infrastructure.

11.5.2 Nonetheless, to support the economic opportunity for the sector in the local area, Horizon is developing the Supply Chain Action Plan (SCAP) in consultation with the Welsh Government and IACC. Chapter C1 – Socio-economics of the Environmental Statement [APP-088] includes principles for engagement with the Supply Chain, which will provide some assurance on how Horizon intends to ensure that local companies, including waste management services, can actively compete for supply chain opportunities. It is intended that the SCAP will be appended to the next draft DCO s.106 agreement to be submitted to the Examining Authority. The SCAP would be amended and updated from time to time, as secured by the draft DCO s.106 agreement. The SCAP aims to:

- Maximise opportunities within the local area;
- Identify local capability;
- Support a sustainable supply chain;
- Provide sufficient notice of when opportunities arise;
- Work collaboratively with statutory authorities;
- Support business readiness;
- Map supply chain (matchmaking);
- Share minimum requirements for undertaking works at Wylfa Newydd;
- Monitor supplier performance (promote good performance); and
- Focus on long term development opportunities that are sustainable post construction.

11.5.3 Horizon will support local waste management facilities, carriers and suppliers where there is a known supply and demand need and where those facilities and/or services can meet Horizon's quality, compliance and auditing expectations. It is not necessary for Horizon to provide any funding for such capacity increase and a more effective way of achieving the desired outcome is to engage with the supply chain and to collaborate with organisations that would support the sector in engaging with the opportunity. A collaborative approach to engaging with local waste management facilities for instance with WRAP Cymru, would help encourage local waste management facilities to realise the opportunities.

11.5.4 By supporting the local supply chain to understand the opportunity, there is potential for Horizon to adopt a more sustainable approach to managing select waste types and volumes that is pragmatic, scalable and achievable with proximity and suitability in mind. In turn this holds potential for significant opportunities to reduce the number and distance of waste movements.

11.6 Monitoring and Mitigation

- 11.6.1 Horizon is confident that sufficient controls regarding the management of waste relating to the Wylfa Newydd DCO Project are provided for in the Wylfa Newydd CoCP [REP2-031], site-specific sub-CoCPs [REP2-032 to REP2-036, REP2-373] and the Wylfa Newydd CoOP [REP2-037], given the information that is reasonably available at this stage of the project.
- 11.6.2 Horizon has committed to developing a WMMS prior to commencement of the Wylfa Newydd DCO Project. The WMMS is a commitment in the Wylfa Newydd CoCP [REP2-031]. It will consider local waste management opportunities where these are suitably prepared, compliant and auditable. Similarly, the WMMS will identify sufficient provision of essential waste infrastructure is available on-site or to service the site. This information will be captured in the SWMP and reported during construction activities.
- 11.6.3 Horizon will amend the Wylfa Newydd CoCP [REP2-031] at Deadline 4 (17 January 2019) to include a commitment to produce a SWMP. The SWMP will be supported throughout construction with reports for each construction site detailing the waste management processes for the site, waste types produced, and waste management facilities used (paragraph 9.3 of the Wylfa Newydd CoCP).

11.7 Funding of monitoring and additional waste management mitigation

- 11.7.1 Horizon is confident that sufficient controls relating to the management of waste are provided for through the Wylfa Newydd CoCP, sub-CoCPs and the SWMP. The SCAP will complement this approach by engaging with local suppliers.
- 11.7.2 Given these controls and management commitments, including reporting commitments, it is not necessary for Horizon to consider further mitigation or compensation nor any associated contribution. The framework of controls (Wylfa Newydd CoCP, sub-CoCPs, Wylfa Newydd CoOP and SWMP) that contractors will need to comply with provide a robust approach to achieve sustainable waste management practices and realising the opportunities outlined above. Furthermore, Horizon will engage with the local supply chain to support opportunities for local waste management suppliers to become suitably prepared so that they can partake in maximising the associated economic opportunity. This will be achieved through the SCAP secured via the draft DCO s.106 agreement.

12 Local Impact Report – Lighting

12.1 Introduction

12.1.1 Horizon has reviewed Chapter 12: Lighting of IACC LIR. This document responds to the key issues presented within that chapter, with reference to the corresponding paragraph numbers in the LIR chapter where appropriate.

12.1.2 Key issues in this response are:

- Clarification of the environmental zone relating to lighting
- Potential nuisance to individual properties as a result of construction and operational lighting
- Quantitative assessment
- Temporal assessment
- Control measures
- Colour temperature of Led luminaire
- Ecological impact resulting from lighting criteria
- Compliance monitoring
- Existing Power Station
- Variable lighting levels
- Site Campus lighting

12.2 Clarification of environmental zones

12.2.1 IACC is not in agreement with the baseline classifications of Environmental Zones adopted for Tregle and Cemaes (in paragraphs 1.4.2 to 1.4.5 of Chapter 12, LIR) and has requested that Tregle and Cemaes are assessed against the obtrusive light criteria as set out for an E2 Environmental Zone (paragraph 1.4.4).

12.2.2 Horizon's summary of the existing baseline conditions concluded that Cemaes and Tregle existing lighting levels were equivalent to E3 on account of the existing level of lighting within the settlements. However, section 1.4.2 of ES Volume D - WND A Development App D10-10 - Environmental Lighting Impact Assessment ("ELIA") [APP-201] clearly states that the Environmental Zone baseline assessment for the WND A site and surrounding area is E2. Most of the areas surrounding the WND A (including in the AONB) are classed as more sensitive E1 'Intrinsically Dark' areas. The Environmental Zones are illustrated on Figure 1.2 of the ELIA, and while this shows that Tregle and Cemaes are illustrated as E3 Environmental Zones, the assessment has been undertaken against a baseline of 'E2'.

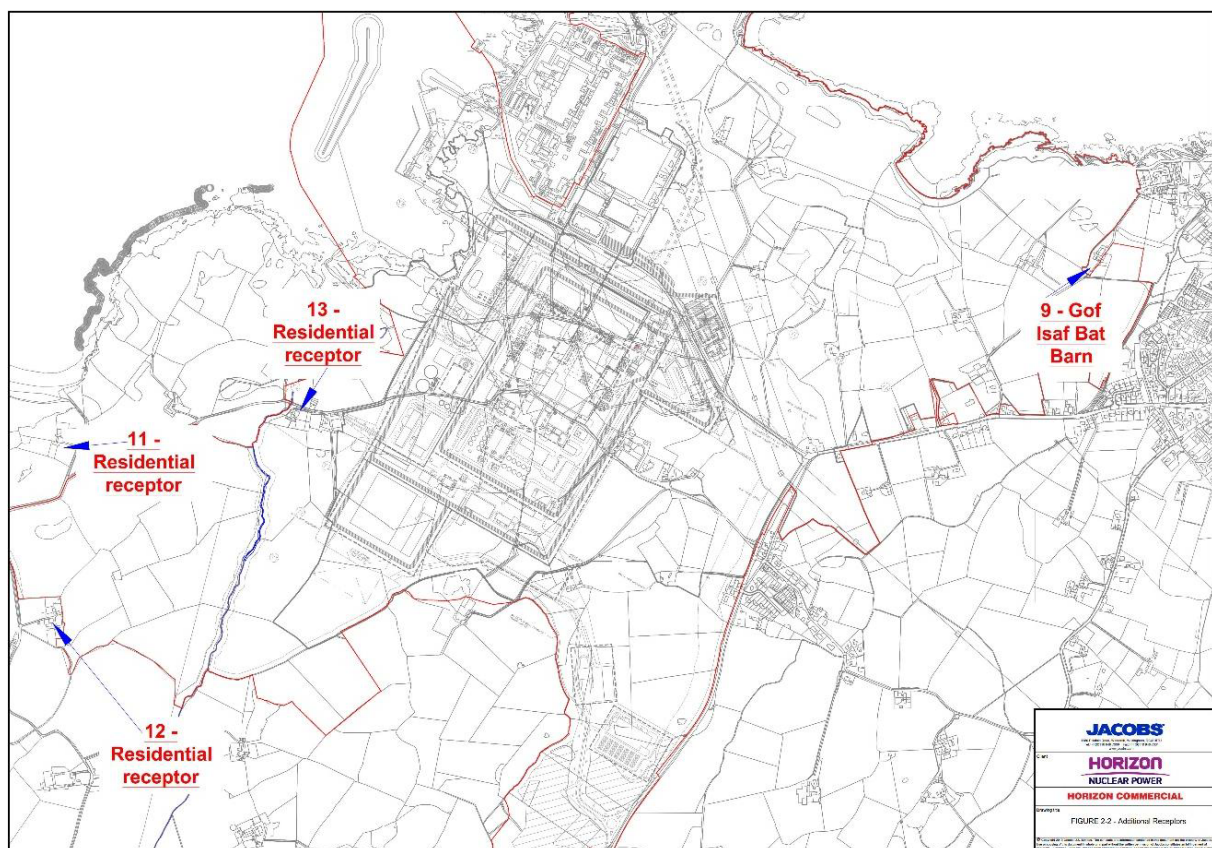
12.2.3 While Horizon maintains that the E3 Environmental Zone is appropriate for both Cemaes and Tregle as outlined in paragraphs 1.4.13 and 1.4.14 of ELIA, the assessment has adopted the more conservative approach set out in

guidance by assessing these zones as E2 rather than E3. Horizon therefore considers that its assignment of the Environmental Zone aligns to IACC's request to assess against E2.

12.3 Potential nuisance to individual properties

- 12.3.1 IACC is concerned with the lack of impact assessment at isolated properties around the proposed Wylfa Newydd DCO Project site (paragraph 1.4.5).
- 12.3.2 At the time the ELIA [APP-201] was undertaken access to private properties and land parcels was declined. This was highlighted in the ELIA Limitations section 1.3.33, and that other sources of information (aerial imagery and mapping) have been used to make assumptions on topography and other natural screening present.
- 12.3.3 Since completing the ELIA an additional four sensitive receptors have been identified that could potentially be affected by artificial lighting from the proposed Wylfa Newydd DCO Project site during construction. These are the Gof Isaf bat barn (Receptor 9), which is an ecological receptor, and three residential receptors. These residential receptors are located on the western boundary of the Wylfa Newydd Development Area (Receptor 11, 12 and 13).

Figure 12-1 Additional sensitive receptors



- 12.3.4 The lighting modelling showed no significant effects on these residential receptors 12 and 13. A medium adverse magnitude of effect was identified at

receptor 11, but with the proposed additional mitigation, to offer the installation of blackout blinds to the residents property, the magnitude of this effect would reduce to negligible.

- 12.3.5 Outlined in the table below is a summary of residual effects on the four additional receptors which are additional to table 1-8 presented in the ELIA [APP 201].

Table 12-1 Lighting effects on additional sensitive receptors as presented in appendix D10-10 [APP-201] of the Environmental Statement

Receptor reference	Light sensitive receptor	Residual magnitude of effect in DCO application	Significance of residual effect in DCO application	Description of potential effect of the proposed change	Potential change in assessment as a result of the proposed changes (magnitude change/ significance of effect)	Proposed additional mitigation	Post-mitigation magnitude of effect	Significance of residual effect
New ecological receptors								
9	Gof Isaf Bat Barn	N/A New receptor	N/A New receptor	The haul road lighting indicative design shows no light spill onto this location	Negligible / None	N/A	N/A	N/A
New community receptors								
11	Residential receptor	N/A New receptor	N/A New receptor	This dwelling is located west of the proposed site, 665m west of the proposed haul road. A baseline survey of this area was not completed so existing lighting baseline has not been established.	Small adverse / Medium adverse	Offer blackout blinds to residents as secured in the Wylfa Newydd CoCP [REP2-031]	Negligible	Negligible

Receptor reference	Light sensitive receptor	Residual magnitude of effect in DCO application	Significance of residual effect in DCO application	Description of potential effect of the proposed change	Potential change in assessment as a result of the proposed changes (magnitude change/ significance of effect)	Proposed additional mitigation	Post-mitigation magnitude of effect	Significance of residual effect
				There is potential for some task lighting and headlights associated with construction of Mound E to affect the dwelling, effects would be limited but with vehicle headlights it is difficult to measure. Earthworks cease at 19:00.				
12	Residential receptor	N/A New receptor	N/A New receptor	This dwelling is located southwest of the proposed Horizon site and 200m south of the	Negligible / None	N/A	N/A	N/A

Receptor reference	Light sensitive receptor	Residual magnitude of effect in DCO application	Significance of residual effect in DCO application	Description of potential effect of the proposed change	Potential change in assessment as a result of the proposed changes (magnitude change/ significance of effect)	Proposed additional mitigation	Post-mitigation magnitude of effect	Significance of residual effect
				proposed haul road. A baseline survey of this area was not completed so existing lighting baseline has not been established. No potential effects recorded.				
13	Residential receptor	N/A New receptor	N/A New receptor	This dwelling is located 300m from the proposed Horizon site boundary and located central to three proposed haul roads; minimum distance to haul road is 203m.	Negligible / None	N/A	N/A	N/A

Receptor reference	Light sensitive receptor	Residual magnitude of effect in DCO application	Significance of residual effect in DCO application	Description of potential effect of the proposed change	Potential change in assessment as a result of the proposed changes (magnitude change/ significance of effect)	Proposed additional mitigation	Post-mitigation magnitude of effect	Significance of residual effect
				No potential effects recorded.				

- 12.3.6 It should be noted that the proposed additional mitigation presented in table 1.1 is good practice mitigation that would be required to be in place and is already secured within the DCO application.
- 12.3.7 IACC is not in agreement with the robustness of the baseline lighting surveys and would like vertical measurements taken at properties at the edge of Cemaes and Tregele (paragraph 1.4.6).
- 12.3.8 The ELIA [APP-201] provides an assessment of the broad environmental lighting conditions for the area but does not account for impacts on every individual private property as its purpose is to assess environmental effects rather than potential private nuisance matters. The ELIA [APP-201] is based on reasonable assumptions on lighting levels predicted from the construction and operation of the Wylfa Newydd DCO Project.
- 12.3.9 Horizon is aware of IACC's vision to obtain Dark Sky Community status and has noted the conversion to LED street lighting around Cemaes and Tregele. Currently there is a mix of light sources in and around these areas. As IACC is transitioning to more energy efficient and controlled light sources it would not be helpful to take baseline vertical light levels at residential properties at this time since the construction phase of the proposed Wylfa Newydd DCO Project is still a number of years away and the baseline lighting context at any given location is evolving substantially. It is recommended that any lighting measurements from private properties to inform potential statutory nuisance matters are obtained closer to the time of construction. In any case, these are outside of the remit and purpose of the ELIA [APP-201], which has been to inform the environmental impact assessment.

12.4 Quantitative assessment

- 12.4.1 IACC has requested quantitative predictions of lighting levels (paragraphs 1.4.7/1.4.8).
- 12.4.2 As stated in section 1.3.19 of the ELIA [APP-201], 'At this stage, the design is indicative and therefore some assumptions on the realistic worst case have been made to help inform the assessment'.
- 12.4.3 The Institution of Lighting Professionals (ILP) PLG 04 "Guidance on undertaking environmental lighting impact assessments" section 5.1 acknowledges that detailed lighting designs are not often available at the time of assessment and therefore qualitative assessments can be made. The method and approach adopted in the ELIA is therefore considered to be acceptable for the stage of the Wylfa Newydd DCO Project and in line with ILP PLG 04.
- 12.4.4 Horizon confirms that further detail is being developed for inclusion within its lighting strategy. It is intended that this will be supplied within updates to the Wylfa Newydd CoCP [REP2-031] and Wylfa Newydd CoOP [REP2-037] at Deadline 4 (17 January 2019).

12.5 Temporal Assessment

- 12.5.1 IACC has requested that the temporal nature of effects is assessed more robustly and that in doing so it may be considered reasonable to reduce some of the significance ratings for residual effects that are of short-term temporary duration (paragraph 1.4.12). IACC specifically gives the example of mound construction in this regard.
- 12.5.2 Horizon has modelled and assessed lighting from the WNDA without the mounds present and therefore presents a worst case in the assessment for this area.
- 12.5.3 Paragraph 1.5.3 of the ELIA [APP-201] refers to the construction details and programme provided ES Volume D - WNDA Development D1 - Proposed development [APP-120]. Reading the ELIA alongside chapter D1 therefore enables an understanding of the duration of the aspects of the construction works assessed for lighting effects. It is considered that this is the most robust approach and that it is appropriate to the assessment undertaken.

12.6 Construction Detail

- 12.6.1 IACC has requested an assessed scheme layout for construction lighting (paragraph 1.4.7).
- 12.6.2 Horizon has plotted columns for the purposes of the ELIA assessment. The use of average light levels for safe working has been applied to provide the understanding of likely lighting requirements. This is based on HSG38 lighting at work, BSEN 12464 Light and lighting of work places part 2 – outdoor work places and BS1320 2003 Road lighting performance recommendations. (N.B. the use of average light levels is appropriate for lighting assessments since the light level at source is always brighter than the areas illuminated, but it is the overall illuminated area that is assessed as there is not currently a detail design and exact column positions have not yet been determined).

12.7 Control measures for construction lighting

- 12.7.1 IACC does not consider that the implementation of control measures for construction lighting is sufficiently robust and specifically comments on the use of 'where practicable'. IACC requires information on certain situations where it would be impracticable to implement certain control measures (paragraph 1.4.15).
- 12.7.2 In section 1.5.11 of the ELIA [APP-201] Horizon has identified that upward lighting is required for activities such as constructing walls around the main power block, backup building and intake structure for limited periods when reinforcing bar (rebar) work is being completed. Section 1.5.12 of the ELIA highlights that the Guidance Notes for the Reduction of Obtrusive Light (GN01:2011) acknowledges instances where upward light ratio cannot be maintained. To minimise any upward waste light the proper application of suitably directional luminaires and lighting control attachments will be applied. Further detail on the practicality of lighting management for certain tasks will

be supplied at Deadline 4 (17 January 2019) within updates to the Wylfa Newydd CoCP [REP2-031].

12.8 Colour temperature of LED luminaire

- 12.8.1 IACC has made requests for specific colour temperature to be used (paragraph 1.4.16).
- 12.8.2 Horizon has noted this request, but the appropriate colour temperature will be informed by the construction and safety requirements and subject to a robust risk assessment.

12.9 Ecological impact criteria

- 12.9.1 IACC would like specific threshold criteria on ecological receptors from lighting. Also, IACC has requested ecological calculation planes depending on the height that a specific species may be found at (paragraph 1.4.18).
- 12.9.2 The recent ILP Guidance²⁰ does not provide any strict criteria with regards to thresholds, and this would concur with Horizon's opinion that set thresholds cannot be created. Each assessment/design is done with consideration of the lighting sensitive species present, habitat present and lighting needs.
- 12.9.3 With regards to the ecological calculation planes, there are no flight heights defined for British bat species (paragraph 1.4.20). The higher-flying species include noctule, Leislars and Serotine but the flight height is generally defined as above/or at tree height or building height. The Bat Conservation Trust guide indicates that for Serotine this is about "to about 10m"²¹.
- 12.9.4 All other British bats fly lower with flight patterns characterised by being within or adjacent to vegetation/watercourses. So therefore, will be lower than tree height (<5m). (FSC Guide to British bats).
- 12.9.5 The vertical grids supplied are from ground level to 10m high. This is considered appropriate.

12.10 Ecological impact criteria at Cemlyn Bay

- 12.10.1 IACC queried the assessment of small-adverse for the exceedance of 0.1 lux criterion at Cemlyn Bay (paragraph 1.2.19).
- 12.10.2 The shadow HRA [APP-050 and APP-051] assessed the potential significance of lighting effects on terns and also the Anglesey Tern SPA. As construction on the mounds finishes at 7pm lighting will only be required on mound E during the darker months – when terns are not in residence. It is therefore considered that 'small adverse' is an appropriate assignment of magnitude given the short duration of lighting impact on the SPA each evening.

²⁰ <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting>

²¹ [https://cdn.bats.org.uk/pdf/About%20Bats/serotine_11.02.13.pdf?mtime=20181101151303\)/](https://cdn.bats.org.uk/pdf/About%20Bats/serotine_11.02.13.pdf?mtime=20181101151303)/)

12.11 Compliance monitoring

- 12.11.1 IACC requested a commitment to compliance monitoring (paragraph 1.4.22).
- 12.11.2 Horizon will outline its commitment to compliance and monitoring within the lighting section of the updates to the Wylfa Newydd CoCP [REP2-031] at Deadline 4 (17 January 2018).

12.12 Existing Power Station

- 12.12.1 IACC would like the upward light from the existing power station quantified (paragraph 1.4.23).
- 12.12.2 Horizon has approached Magnox for specific details on their existing exterior lighting. Magnox is sensitive to any request for information and will not give permission to share any information regarding their lighting.
- 12.12.3 While surveying their site, permission was given to visit only very specific locations. Horizon took lux level readings in these areas, but no photography was allowed and luminaire positions around their site could not be recorded.
- 12.12.4 It is evident from areas around the Existing Power Station that the lighting is poorly controlled and creates light pollution from a combination of light sources.
- 12.12.5 Horizon does not have access to the information to be able to quantify the upward light ratio (ULR) of the Magnox site.
- 12.12.6 IACC would like a scenario of “no development” at the existing power station to be assessed (Existing Power Station to be removed vs proposed power station (Construction and Operation), paragraph 1.4.24).
- 12.12.7 Section 1.4.8 of the ELIA [APP-201] refers to the Magnox Environmental Management Plan prepared as part of their decommissioning. Although there is very little information available on the lighting requirements, the Magnox Environmental Management Plan makes it clear that lighting will be required for the Care and Maintenance Preparations and Final Site Clearance of the Existing Power Station. It is therefore likely that there would continue to be lighting from the Magnox site for at least a further decade as part of the Care and Maintenance Preparations. Horizon does not consider a no development baseline to be appropriate. The presence of lighting at the Magnox site is part of the baseline and will continue in the future baseline.

12.13 Dimming

- 12.13.1 IACC would like dimming regime outlined in detail (paragraph 1.4.25).
- 12.13.2 A programme of dimming is not appropriate at this stage and will be developed as part of the contractor’s final construction program.
- 12.13.3 An overview of the dimming strategy will be outlined within updates to the Wylfa Newydd CoCP [REP2-031] and Wylfa Newydd CoOP [REP2-037] at Deadline 4 (17 January 2019). It will highlight the flexibility and benefits a Lighting Central Management System (CMS) will provide. This strategy will

outline dimming procedures for each area in both construction and operational phases.

12.14 Site Campus lighting

- 12.14.1 IACC is concerned about light spill from the site campus onto ecological receptors, specifically the bat barn by the multi-use games area (MUGA) (paragraph 1.4.26/27).
- 12.14.2 NRW has confirmed lighting of the MUGA is not an issue during winter months in the response to Q2.0.63 of the Examining Authority's First Written Questions submitted at Deadline 2 (4 December 2018).
- 12.14.3 The predicted lux levels next to the MUGA are low and screening from planting would reduce levels further so that the bat barn would be considered to be of negligible effect to bats.
- 12.14.4 Additionally, a commitment is made in para 4.5.1 of the Wylfa Newydd CoCP [REP2-031] to develop lighting designs to reduce spill light onto sensitive receptors. This includes ecological receptors. In consideration of the above the effect would be negligible without the detail in paragraph 4.4.3 Wylfa Newydd CoCP [REP2-031]. It is therefore considered that paragraph 4.4.3 is no longer required. Horizon will seek to agree this position with NRW and remove this paragraph during the course of the examination.
- 12.14.5 IACC is concerned that there is no firm commitment to ensure measures to control lighting from the site campus are implemented (paragraph 1.4.28).
- 12.14.6 Horizon will outline its lighting strategy for the Site Campus within the updated CoCPs at Deadline 4 (17 January 2019).

13 Local Impact Report – Air Quality

13.1 Introduction

13.1.1 Horizon has reviewed Chapter 13: Air Quality of the IACC LIR. This section responds to the key issues presented within that chapter, with reference to the corresponding paragraph numbers in the LIR chapter where appropriate.

13.1.2 Key issues in this response are:

- Issue 1 – adoption of the non-statutory World Health Organisation ("WHO") annual mean air quality guideline value of 10µg/m³ as an action level for monitoring of PM_{2.5} during construction;
- Issue 2 – one-hour mean nitrogen dioxide ("NO₂") concentrations at a layby adjacent to the A55 trunk road at Llanfair Pwllgwyngyll; and
- Issue 3 – further detail on the air quality monitoring strategy, commitment to using a higher percentage of newer construction plant that conform to stricter emissions standards and on the frequency of Community Liaison Group meetings.

13.2 Issue 1 – Adoption of WHO guideline value

13.2.1 As noted in paragraph 2.4 of the Air Quality chapter of the LIR, the IACC has consistently raised concerns regarding potential increases in concentrations of PM_{2.5} and the use of the annual mean air quality objective (AQO) value of 25µg/m³. As set out in chapter B5 [APP-070], Horizon acknowledges that there is a lack of evidence to indicate that there is a concentration below which health impacts do not occur, particularly for PM_{2.5}, and takes the potential health effects of increases in air pollutants seriously.

13.2.2 Consequently, whilst the assessment and determination of significance of air quality effects was based on compliance with the AQO of 25µg/m³, Horizon's approach is to maintain any increases in PM_{2.5} concentrations due to construction activities to as low a level as reasonably practicable. This is consistent with the theme of the 2017 Welsh Government Local Air Quality Management policy guidance²² which translates the goals of the Well-being of Future Generations (Wales) Act 2015. Horizon's approach includes adopting the following:

- Comprehensive dust mitigation and controls to prevent or reduce dust emissions from construction activities at source;
- Continuous real-time monitoring of total suspended particulates, PM₁₀ and PM_{2.5} at six locations (including dust deposition monitoring);

²² Welsh Government. 2017. Local Air Quality Management in Wales, Policy Guidance PG(W)(17). June 2017. Cardiff: Welsh Government.

- Use of stringent trigger values specified at levels well below the air quality objectives combined with thorough investigation and response mechanisms/actions when triggers are exceeded;
- Close liaison and working with the IACC, including provision of the monitoring data on a web-based environmental database to provide daily summaries and instant access to data;
- Visual inspections, complaints recording, investigation and response processes; and
- Regular reporting of air quality monitoring, complaints, responses and actions taken on site, including regular meetings of the Community Liaison Group to discuss issues affecting the local residents and wider community.

13.2.3 Recognising that there is no safe threshold for some pollutants, including PM_{2.5}, a Health Impact Assessment [APP-429] was undertaken to determine the potential for health effects to occur at concentrations below the AQOs. The mitigation includes proposals designed to monitor the impact on health of air quality effects to ensure that no adverse health effects occur as a result of the Wylfa Newydd DCO Project. For example, the Wylfa Newydd CoCP [REP2-031] provides for the establishment of a Health and Well-being sub-group (where terms of reference are anticipated to be attached to the DCO s106 agreement). The draft DCO s106 agreement provides for the Health and Well-being sub-group to receive health monitoring data collected throughout the construction period (existing indicators) relevant to air quality impacts (e.g. respiratory health).

13.2.4 Paragraphs 2.12 and 4.1(d) of chapter 13: Air Quality of the LIR request that Horizon adopts the non-statutory annual mean World Health Organisation ("WHO") air quality guideline value of 10µg/m³ as a threshold for monitoring PM_{2.5} concentrations during construction. The aim of the IACC's request is to supplement the approach and mitigation described above in the paragraphs above with regard to keeping PM_{2.5} concentrations as low as reasonably practicable. Horizon accepts that the request complies with the vision of the LAQM policy guidance referred to above and welcomes the further detail on this issue provided by the IACC on the expected actions should the threshold be exceeded.

13.2.5 Horizon confirms that it will adopt the annual mean level of 10µg/m³ for PM_{2.5} at the Wylfa Newydd Development Area during the construction period to trigger a joint review between Horizon and the IACC to determine if site activities have contributed to the threshold being exceeded. If it is agreed that the site activities have sufficiently increased PM_{2.5} concentrations from the baseline to contribute to the exceedance of the monitoring threshold, an action plan will be drawn up to investigate reasonable actions that can be implemented to prevent or reduce PM_{2.5} emissions (i.e. actions over and above those already implemented through the processes set out above). This could include measures such as increasing dust suppression application to; working areas aggregate stock piles or mounds. The action plan could also

extend to areas not previously considered to represent significant sources of dust emissions or during weather conditions not previously thought to lead to dust emissions from sources such as lower wind speeds.

- 13.2.6 It is agreed that a review of the action plan would be undertaken on an annual basis if the annual mean PM_{2.5} concentrations remain above the threshold of 10µg/m³ (and site activities continue to have sufficiently increased PM_{2.5} concentrations from the baseline levels).
- 13.2.7 The compliance targets will remain as set out in Table 7-4 of the updated Main Power Station Site sub-CoCP [REP2-032] submitted to the Examining Authority at Deadline 2 (04 December 2018).
- 13.2.8 Details of adopting the level of 10µg/m³ for PM_{2.5} monitoring at the Wylfa Newydd Development Area, as discussed above, will be included in a future update of the Main Power Station Site sub-CoCP, to be submitted at Deadline 4 (17 January 2018).

13.3 Issue 2 – A55 layby

- 13.3.1 In paragraphs 2.13 and 2.15 of the Air Quality chapter of the LIR, the IACC refers to an assessment of NO₂ concentrations at a layby receptor location (receptor R36) adjacent to the A55 at Llanfair Pwllgwyngyll. As noted, the predicted annual mean NO₂ concentration at R36 is predicted to increase from 39.4µg/m³ to 40.8µg/m³ in 2020 (representing year 2 of the Wylfa Newydd DCO Project) due to emissions from the road traffic associated with the Wylfa Newydd DCO Project. For other assessment scenarios (2023 representing the peak construction traffic in year 5 and 2033 representing the peak traffic flows during operation), the highest predicted total annual mean NO₂ concentration including the Wylfa Newydd DCO Project road traffic emissions at R36 was 36.1µg/m³.
- 13.3.2 The assessment set out in chapter C4 concluded that exceedance of the one-hour mean AQO (a value of 200µg/m³ not to be exceeded more than 18 times per calendar year) was very unlikely. This was based on an empirically derived annual mean threshold of 60µg/m³ set out in paragraph 7.91 of the LAQM technical guidance²³, below which the guidance states “...exceedances of the NO₂ 1-hour mean are unlikely to occur.” The threshold was derived based on research carried out on behalf of Defra and the Devolved Administrations which considered data from a large number of roadside/kerbside monitoring stations over the period 1980 – 2001. It should be noted that even when the annual mean concentration is above 60µg/m³, this does not necessarily result in an exceedance, only that it is probable or likely, with likely taken to be a 50% chance of the exceedance occurring.

²³ Department for Environment, Food and Rural Affairs, the Scottish Government, the Welsh Government and the Department of the Environment in Northern Ireland. 2016. *Local Air Quality Management: Technical Guidance (TG16)*. February 2018. London: Department for Environment, Food and Rural Affairs.

- 13.3.3 An updated analysis of this relationship was undertaken in 2008 using monitoring data from 2003 – 2007²⁴. This confirmed the original outcome that a threshold of 60µg/m³ should continue to be used as a trigger for considering a likely exceedance of the one-hour mean NO₂ AQO. The report stated that the probability of exceedance of the one-hour mean NO₂ AQO would be around 1% for annual mean concentrations of 40µg/m³ – 49µg/m³.
- 13.3.4 The IACC has previously adopted the threshold of 60µg/m³ to identify the likelihood of exceedance of the one-hour mean AQO when undertaking its LAQM assessments. For example, in the 2011 Air Quality Progress Report²⁵, the IACC concluded that the 2010 measured annual mean concentration of 49.4µg/m³ at the same layby adjacent to the A55 at Llanfair Pwllgwyngyll would not lead to an exceedance of the one-hour mean AQO and a Detailed Assessment was not required. This was the highest annual mean NO₂ concentration recorded at the layby since the IACC commenced monitoring in 2001.
- 13.3.5 Since 2010, the measured annual mean NO₂ concentration at the layby has decreased steadily and has stabilised at around the 38µg/m³ to 40µg/m³ level based on the last three years of available data (2014 – 2016). The IACC has adopted the threshold of 60µg/m³ as the trigger for identifying the likelihood of exceedance of the one-hour mean AQO in all of its LAQM assessments since the peak concentration recorded in 2010. This confirms that the IACC does not currently identify the layby as a location where the one-hour mean NO₂ AQO could be exceeded.
- 13.3.6 The assessment set out in chapter C4 [APP-091] predicts a maximum concentration of 40.8µg/m³ at R36 any stage during the Wylfa Newydd DCO Project. This is a relatively small increase on the current concentrations and it is Horizon's view that this represents a very low risk of exceedance of the one-hour mean AQO. The maximum concentration is considerably lower than the peak concentration of 49.4µg/m³ recorded at the layby in 2010 for which the IACC did not investigate further and concluded that the one-hour mean AQO for NO₂ is unlikely to be exceeded.
- 13.3.7 Paragraphs 2.16 and 4.1 (e) of the Air Quality chapter of the LIR sets out a request for Horizon to undertake real-time monitoring of NO₂ at the layby during the Wylfa Newydd DCO Project as a result of the additional traffic. Based on the above consideration, particularly that much higher concentrations than those predicted for the Wylfa Newydd DCO Project have not triggered any further investigation by the IACC, real-time monitoring is not considered to be required.

²⁴ AEA Technology plc. 2008. Report for Department for Environment Food and Rural Affairs, the Scottish Government, the Welsh Assembly Government and the Department of the Environment in Northern Ireland, *Analysis of the relationship between annual mean nitrogen dioxide concentration and exceedances of the 1-hour mean AQS Objective*, AEAT/ENV/R/2641 Issue 1. May 2008.

²⁵ Isle of Anglesey County Council (IACC). 2011. 2011 Air Quality Progress Report for Isle of Anglesey County Council. Isle of Anglesey County Council, Llangefni.

13.4 Issue 3 – Further detail requested

- 13.4.1 Paragraph 4.1 of the Air Quality chapter of the LIR requests that the Wylfa Newydd Code of Construction Practice (CoCP) [REP2-031] and sub-CoCPs [REP2-032 to REP2-036, REP2-373] are revised to include further details relating to the proposed air quality monitoring strategy. Horizon can confirm that these documents were updated and submitted to the Examining Authority at Deadline 2 (4 December 2018) [REP2-031 to REP2-036, REP2-373].
- 13.4.2 The revisions to the Wylfa Newydd CoCP and sub-CoCPs are in-line with the proposed amendments submitted to and discussed with the IACC during Statement of Common Ground meetings held in September 2018 and October 2018. This included provision of further detail on the real-time web-based monitoring system and data access, monitoring locations, thresholds and exceedance trigger levels for initiating action on site, the process for responding to measured exceedances of the trigger levels and air quality reporting and compliance. The updates also included the commitment to monthly meetings of the Community Liaison Group until First Nuclear Concrete.
- 13.4.3 As noted in paragraph 4.1 (a) of the Air Quality chapter of the LIR, Horizon has discussed further details of the proposed additional mitigation to control oxides of nitrogen (NO_x) emissions from construction plant and machinery with the IACC during Statement of Common Ground meetings held in September 2018 and October 2018. The additional mitigation was proposed in the DCO application (see section 5.6 of chapter D5 Air quality (excluding emissions from traffic) [APP-124] of the Environmental Statement and section 7.5 (emissions from plant and machinery) of the Main Power Station Site sub-CoCP [REP2-032].
- 13.4.4 This comprised a comprehensive air quality monitoring and reporting scheme which included a range of measures to ensure compliance with the appropriate environmental standards and reduce NO_x and NO₂ concentrations and nitrogen and acid deposition rates at human and ecological receptors. One element of the scheme was a commitment to utilise newer non-road mobile machinery (NRMM) which comply with more stringent NO_x emission standards. This element of the proposed additional mitigation has now been specified and included in section 7.5 (Emissions from plant and machinery) of the updated Main Power Station Site sub-CoCP [APP-415] submitted to the Examining Authority at Deadline 2 (04 December 2018).
- 13.4.5 A report presenting the findings of the assessment of the potential air quality effects of emissions from plant, machinery and marine vessels with the additional mitigation in place (i.e. representing the quantified residual effects of chapter D5 [APP-124] of the Environmental Statement) has been submitted to the Examining Authority at Deadline 3 (18 December 2018).
- 13.4.6 It is assumed that with the provision of the additional detail on the air quality monitoring strategy and air quality mitigation described above (and commitment to the adoption of the PM_{2.5} WHO air quality guideline as a monitoring review level discussed in Issue 1), that the IACC is able to agree

that the effect of dust emissions on human health and amenity during construction is not significant (see paragraph 2.3 of the Air Quality chapter of the LIR).

14 Local Impact Report – Noise and Vibration

14.1 Introduction

14.1.1 Horizon has reviewed chapter 14: Noise and Vibration of the IACC LIR. This section responds to the key issues presented within that chapter, with reference to the corresponding paragraph numbers in the LIR chapter where appropriate.

14.1.2 Key issues in this response are:

- Well-being of Future Generations (Wales) Act 2015;
- Practicality of mitigation;
- Eglwys Sant Padrig Church and Cemaes Primary School;
- Blasting strategy;
- Schedule of requirements and conditions;
- Health and well-being of workers;
- Local Noise Mitigation Strategy; and
- Financial contribution for environmental health staff.

14.2 Well-being of Future Generations (Wales) Act 2015

14.2.1 Horizon acknowledges that many of the construction activities have the potential to cause noise and vibration effects, and has committed to a range of embedded, best practice (Best Practicable Means) and additional mitigation measures to control and minimise such effects.

Embedded mitigation

14.2.2 Embedded mitigation is that which is inherent in the design of the Wylfa Newydd DCO Project, as demonstrated by Mound B1 which is designed to reduce noise from construction activities at Tregele by 5-7 dB at the closest dwellings.

Good practice mitigation

14.2.3 Good practice mitigation measures are set out in the Wylfa Newydd CoCP (Revision 2.0) [REP2-031]. This includes a large number of measures to reduce construction noise which will be undertaken whenever practicable. The good practice mitigation measures include a commitment to apply to IACC for prior consent for the works under section 61 of the Control of Pollution Act 1974. This commitment is set out in section 8.2 of the Wylfa Newydd Code of Construction Practice (CoCP) [REP2-031]. The Best Practical Means (BPM) of noise control to be applied to specific construction activities which are being applied for will be set out within the prior consent applications made under Section 61 of the Control of Pollution Act 1974 which are required by the Wylfa Newydd CoCP.

Noise and vibration monitoring

- 14.2.4 To monitor the effectiveness of noise and vibration mitigation measures, Horizon has committed to noise and vibration monitoring. A technical note was issued to IACC on 10 October 2018 and was subsequently discussed in the Statement of Common Ground meeting held between Horizon and IACC on 12 October 2018. The technical note proposed six monitoring locations for residential receptors around the WNDA, data management and access provisions, and reporting arrangements. The proposals were well received by IACC, and have subsequently been included in the Deadline 2 revision of the Wylfa Newydd CoCP [REP2-031]. The noise and vibration monitoring trigger levels for each monitoring location and phase of work will be set out in the corresponding Section 61 application for prior consent, and the escalation procedure that will be followed if the trigger values are exceeded is set out in the Wylfa Newydd CoCP.

Off-Site Mitigation

- 14.2.5 Finally, it should be noted that chapter D6 - Noise and Vibration of the Environmental Statement [APP-125] does not reduce the residual significance of effect reported at dwellings as a result of the Horizon's voluntary Local Noise Mitigation Strategy (LNMS). However, the principle has been established by other schemes (e.g. Thames Tideway, A14 Huntingdon to Cambridge) that if the minimum standard of avoiding significant adverse impacts cannot be achieved by mitigation incorporated into the scheme, the next option should be to offer mitigation at the receptor and compensation for loss of amenity, even if property values are unaffected. In this respect, the voluntary LNMS that Horizon has committed to offers additional mitigation at the receptor, the impact of which is not reflected in table D6-35 of the Environmental Statement [APP-125].
- 14.2.6 In their decision notice for Thames Tideway, the Secretaries of State ultimately concluded that through a similar noise insulation scheme (in combination with trigger action plans), the proposals succeeded in avoiding significant adverse impacts on health or quality of life.²⁶

14.3 Practicality of mitigation

- 14.3.1 In paragraphs 1.2.4, 1.2.5 and again at 1.4.1. a) of chapter 14, IACC notes concern that the noise and vibration management strategies would be 'implemented wherever practicable', and that this does not confirm that the approved strategies of managing noise and vibration required to mitigate the potential effects of noise and vibration will be implemented on all occasions.
- 14.3.2 Horizon wishes to clarify that the four principles of the noise and vibration management strategy set out in the Wylfa Newydd CoCP [REP2-031] will be

²⁶ Secretaries of State Decision Letter and Statement of Reasons, 12 December 2014, paragraph 72.

adhered to in all cases. In summary, the four principles of the strategy require Horizon and its contractors to:

- Employ specific and appropriate noise and vibration control methods;
- Make applications for prior consent for noisy works under section 61 of the Control of Pollution Act 1974 in accordance with the procedures outlined in the Wylfa Newydd Wylfa Newydd CoCP [REP2-031];
- Monitor noise and vibration levels according to requirements set out in the relevant sub-CoCPs; and
- Undertake relevant actions if thresholds are exceeded.

14.3.3 Section 8.1 of the Wylfa Newydd Wylfa Newydd CoCP [REP2-031] provides a list of the noise and vibration control methods which will be employed where practical. With regard to the practicality of implementing such measures, construction sites are dynamic environments with many competing demands, and BS 5228 states that [bold added for emphasis]:

*“The intention throughout any construction programme should be to minimize levels of site noise whilst having due regard to the **practicability and economic implication** of any proposed control or mitigation measures”.*

14.3.4 BS 5228-1 also states that: *“Local authorities should ensure that any noise level limits or restrictions being imposed are necessary and **practicable**”.*

14.3.5 The consideration of ‘*practicality*’ is reiterated many times within BS5228, as demonstrated by the following direct quotations from the standard [bold added for emphasis]:

- “**Where practicable**, alternative reversing warning systems should be employed to reduce the impact of noise outside sites”.
- “For an existing operational site, **where reasonably practicable**, noisy plant or activities should be replaced by less noisy alternatives (see Annex B for examples) if noise problems are occurring”.
- “**As far as reasonably practicable**, sources of significant noise should be enclosed”.
- “Plant from which the noise generated is known to be particularly directional should, **wherever practicable**, be orientated so that the noise is directed away from noise-sensitive areas”.
- “Materials should be lowered **whenever practicable** and should not be dropped”.
- “**Where practicable**, noisy static site elements should be located to take advantage of the screening effects of overburden and soil mounds”.
- “**Where practicable**, plant should be selected which will have the least impact in terms of noise”.
- “The movement of plant on and off the site should be restricted **as far as practicable** to within the agreed working hours for the site”.

- “On each day that blasting takes place it should be **restricted as far as practicable** to regular periods”.

14.3.6 The principle of 'practicality' is therefore well established, and BS 5228-1:2009+A1:2014 is clear that many mitigation measures may not be appropriate or practical in all situations; technical, safety, economic, or programme related factors may all make a particular measure unsuitable in a given situation. It is clearly not reasonable to impose requirements on Horizon to provide mitigation measures which are impractical, unnecessary, or which have excessive economic implications in a given situation.

14.3.7 Whilst there must be a degree of flexibility about the specific mitigation measures to be applied to individual activities, Horizon has committed to submitting applications for prior consent for each phase of works in accordance with section 61 of the Control of Pollution Act 1974. These applications will be submitted in advance of each work phase when better information about working methods, locations and plant selection is known. The applications require the contractor to demonstrate, to the satisfaction of IACC, that Best Practicable Means of noise control will be used; this process therefore allows specific mitigation measures which are appropriate to the activities being undertaken to be specified when sufficient information is available to do so. This is the mechanism by which specific noise mitigation for activities will be secured, and this process has been used successfully to control construction noise from the vast majority of other major infrastructure schemes (e.g. Thameslink, Crossrail, Thames Tideway, Hinkley Point C).

14.4 Eglwys Sant Padrig Church and Cemaes Primary School

14.4.1 In paragraph 1.2.15 of chapter 14, IACC has raised concerns over whether it is possible to install noise insulation measures at Eglwys Sant Padrig Church in Cemaes, and Cemaes Primary School. Construction noise mitigation at these buildings is proposed to be delivered via financial contributions, as set out in Schedule 10 of the draft DCO s.106 agreement (submitted at Deadline 3), rather than through the LNMS. Horizon appreciates that it may not be appropriate to install secondary glazing in some cases, and the draft DCO s.106 agreement anticipates IACC will agree appropriate measures to address the impacts of construction noise with the owners of both buildings, and will apply the contributions to these measures. The final mitigation measures have not yet been decided, but may include the installation of sound re-enforcement systems, internal reverberant sound absorption measures.

14.5 Blasting strategy

14.5.1 IACC objects to the Blasting Strategy as currently presented and requests the blasting strategy is amended to comply with BS6472-2:2008 for shots fired between 18:00 and 19:00 which would be subject to a lower ppv limit of 4.5 mms-1. No further comments are made on the blasting strategy up to 18:00.

- 14.5.2 Horizon is willing to amend the Blasting Strategy to comply with BS6472-2 and provide a limit of 4.5 ppv mms⁻¹ between 18:00 and 19:00 on weekdays. This additional mitigation will be secured in the revised Main Power Station Site sub-CoCP [REP2-032] to be submitted at Deadline 4 (17 January 2019) and will address IACC's concern.

14.6 Schedule of requirements and conditions

- 14.6.1 In paragraph 1.3.13 of chapter 14, IACC provides a list of potential requirements and conditions a) to g) that it would expect to address any potential adverse impacts on health. This list includes:

- a) Restrictions on total number of daily vehicle movements and movements during peak periods;
- b) Weight limits on construction traffic;
- c) Routing of traffic;
- d) Construction/operation Hours;
- e) Sequencing of construction operations;
- f) Noise, dust and odour management; and
- g) Community consultation on issues/activities likely to significantly impact upon amenity (including light pollution).

- 14.6.2 Each of these are commented on in turn below.

a) Daily and peak period vehicle movements

- 14.6.3 Restrictions on the number of HGVs which make deliveries to the Wylfa Newydd DCO Project are defined in paragraph 5.4.13 of the Wylfa Newydd CoCP [REP2-031]. Further restrictions have been developed since the submission of the DCO application as follows:

- In advance of the opening of the A5025 Offline Highway Improvement there will be the following restrictions on HGV movements measured at the Valley Junction:
 - o Monthly Maximum of HGV movements – 2,500 HGV movements each way;
 - o Hourly Maximum of HGV movements – 22 HGV movements each way; and
 - o Daily Max movements – 160 HGV movements each way

- 14.6.4 These restrictions will be included within the revised Wylfa Newydd CoCP to be submitted at Deadline 4.

b) Weight limits on construction traffic

- 14.6.5 Details of the vehicles and their weight to be used as part of the Wylfa Newydd DCO Project are provided in Horizon's Response to the Examining Authority's

First Written Questions (FWQ11.1.14) [REP2-002]. Details of the management of Abnormal Indivisible Loads are provided in section 4 of the Wylfa Newydd CoCP [REP2-031].

c) Routing of traffic

- 14.6.6 The proposed construction vehicle access routes are defined in section 5.1 of the Wylfa Newydd CoCP [REP2-031].

d) Construction/operation Hours

- 14.6.7 The working hours of various construction activities on the Wylfa Newydd Development Area is stated in Section 4.3 of the Main Power Station Site sub-CoCP [REP2-032]. However, it should be noted that Horizon has recently consulted upon a proposed Request for Non-Material Change related to construction Working Hours at the WNDA [REP1-017]. Horizon will have regard to consultation responses received, and then intends to submit this Request for Non-Material Change at Deadline 4 of the Examination. Construction and Operational Working Hours for the Associated Developments can be found in the relevant sub CoCPs for each development site [REP2-032 to REP2-036, REP2-373].

e) Sequencing of construction operations

- 14.6.8 The indicative sequencing of construction operations at the WNDA is shown in Figure D1-7 in chapter D1 of the Environmental Statement. Elements of this sequencing and the delivery of other Wylfa Newydd works are secured in the Phasing Strategy [APP-447].

f) Noise, dust and odour management

- 14.6.9 Noise, dust and odour management is covered in Sections 7 and 8 of the Wylfa Newydd CoCP [REP2-031] and site specific sub-CoCPs [REP2-031 to REP2-036, REP2-373]. The measures outlined in these CoCPs will manage the releases of dust, odour and noise to mitigate effects upon the health and amenity of construction workers.

g) Community consultation on issues/activities likely to significantly impact upon amenity

- 14.6.10 Horizon is unclear on IACC's concern and will seek to discuss the issue with IACC further.

14.7 Health and well-being of workers

- 14.7.1 In paragraph 1.3.14 of chapter 14, IACC raises the issue of potential measures to ensure the health and well-being of workers, include a corporate health policy and dissemination of health and safety information to workers.
- 14.7.2 The Wylfa Newydd CoCP [REP2-031] provides that a process of on-site communications, such as daily shift and activity briefings, will be used to

advise the site workforce of health, safety, environmental and community matters. This will include information obtained from CLG meetings (see section 3.2), such as noise generation and access issues, together with constraints detailed in the contracts (e.g. working hours) and other documents, such as the DCO and this Wylfa Newydd CoCP and the sub-CoCPs [REP2-032 to REP2-036, REP2-373], regulating the Wylfa Newydd DCO Project. Appropriate information will be addressed to all members of the workforce by way of an induction, including sub-contractors, before any person commences work. Toolbox talks or other appropriate means will be employed to disseminate information to the workforce on a routine basis.

14.8 Local Noise Mitigation Strategy

- 14.8.1 In paragraph 1.4.1 c) of chapter 14, IACC requests that the acceptability criteria for the voluntary LNMS is revised to include conservatories.
- 14.8.2 The LNMS is designed primarily to reduce noise in bedrooms and living rooms. However, following further discussion with IACC on this issue, Horizon agrees that there may be some situations in which a conservatory forms an integral part of a home such that it is regarded as part of a living room. Therefore where a conservatory forms an integral part of an eligible building and meets the other eligibility criteria, Horizon will explore whether there are any reasonable measures that would improve noise insulation.
- 14.8.3 Horizon is also enhancing the LNMS to reduce the noise levels at which potentially eligible buildings will qualify, and to provide new acoustic fencing around gardens in some situations (to reduce construction noise in outdoor spaces as far as practicable).
- 14.8.4 The reduced threshold levels for construction noise are based on the onset of a medium magnitude of change (which results in a major adverse effect at high sensitivity receptor) under the adopted magnitude scale for long-term construction plant and machinery noise set out in Chapter D6 – Noise and vibration of the Environmental Statement [APP-125].

Table 14-1 Construction noise eligibility criteria, dB $L_{Aeq,T}$ facade incident

Monday to Friday			Saturday			Sunday	
07.00 – 19.00 (T=12 hrs)	19.00 – 22.00 (T=3 hrs)	22.00 – 07.00 (T=9 hrs)	07.00 – 13.00 (T=6 hrs)	13.00 – 22.00 (T=9 hrs)	22.00 – 07.00 (T=9 hrs)	07.00 – 22.00 (T=15 hrs)	22.00 – 07.00 (T=15 hrs)
65	60	55	65	60	55	60	55

- 14.8.5 The qualification criteria for traffic noise levels during the construction or operation of the Wylfa Newydd DCO Project have also been reduced to 63 dB $LA_{10,18hrs}$ during the daytime, which is 5 dB lower than the original threshold which was based on the Noise Insulation Regulations 1975 as amended.
- 14.8.6 The commitment to lower noise insulation thresholds, providing noise insulation measures to conservatories, and providing acoustic fences where practicable will be made in the revision of the Wylfa Newydd CoCP [REP2-031] to be submitted at Deadline 4 (17 January 2019).

- 14.8.7 Further information on details of the noise insulation measures (as requested in 1.4.1 e) of chapter 14), and how the scheme will be administered and the noise insulation measures available are set out in the LNMS Companion Guide which will be submitted at Deadline 3. However, for convenience this information is summarised below.
- 14.8.8 A number of LNMS measures are available for eligible buildings. Those within the 'noise insulation package' include:
- Either secondary glazing (to fit existing windows) or standard double glazed replacement windows;
 - Additional (noise insulated) ventilation;
 - Acoustic treatment for external doors; and
 - Internal solar blinds or blackout blinds (for bedrooms).

Secondary glazing

- 14.8.9 Secondary glazing is where a separate pane of glass is installed typically 100 – 200mm inside the existing window (which remains in place). This can normally be opened for cleaning and ventilation. Compared to double glazing, secondary glazing tends to be more effective at reducing noise. The noise reduction benefit tends to be greatest at the lower frequencies associated with construction activities and road traffic movements.

Double glazing

- 14.8.10 The double glazing option consists of two panes of glass, typically around 12-20mm apart in a sealed casing, which is installed to replace the existing window. Double glazing is designed to reduce thermal loss (keeping rooms warm) and to reduce noise.
- 14.8.11 If a LNMS applicant wishes to take up the offer of double glazing, they will be made aware that it may not perform as well as secondary glazing in reducing the noise levels associated with construction activities and road traffic movements. If double glazing is selected, it will not be possible for an occupier or owner to apply for secondary glazing at a later date.

Acoustic ventilation

- 14.8.12 Windows work best to control noise when they are kept closed. Acoustic ventilation will be offered to residents so that rooms can be ventilated even when windows are closed. Acoustic ventilators typically involve fixing a small electric ventilator fan in a housing mounted on the inside face of an external wall, and installing an air duct through the wall so that the fan can draw fresh air in from outside. The ventilator provides fresh air but reduces sound transferring from outside to inside.

Acoustic treatment for external doors

- 14.8.13 Where an eligible room includes a qualifying door, it may be possible to provide a secondary door or a replacement double glazed door to improve noise insulation. The practicality of such measures will be assessed on a case by case basis during the survey stage.

Internal solar blinds or blackout blinds

- 14.8.14 Internal solar blinds are designed to help reduce the amount of heat within a room by reducing the transmittance of sunlight through windows. They are fitted close to the internal pane of a window (inside the eligible room), and are particularly useful in helping prevent rooms with south facing windows from becoming too warm when windows are closed.

Mitigation of noise at businesses

- 14.8.15 IACC also requests further detail as to how Horizon proposes to mitigate and compensate for the noise effects experienced by businesses and places/spaces used by the public including outdoor spaces.

- 14.8.16 Businesses such as guest houses, hotels and bed & breakfasts are considered to be similar to residential dwellings, and therefore are potentially eligible for noise insulation under the LNMS. However, construction noise and vibration may affect other businesses in different ways, and therefore Horizon will consider other types of businesses under the LNMS on a case-by-case basis, as explained in the companion guide which will be submitted into Examination at Deadline 3. That provides:

“The LNMS is a voluntary scheme primarily for residential properties and businesses in which people normally sleep overnight (guest houses, hotels and B&Bs).

Speak to Horizon in the first instance if you operate another type of business or institution where there exists a particular sensitivity to noise caused by the Wylfa Newydd DCO Project. Horizon will consider such cases on their merits.

Horizon is also reviewing more generally how it engages with local businesses and whether there are any practical measures that can be offered - either to help them benefit from the Wylfa Newydd DCO Project during construction and beyond, or where businesses feel concerned about the proposals.”

- 14.8.17 Horizon confirms that there are no proposals to provide noise mitigation at public outdoor spaces. This is because providing mitigation for public rights of way and other outdoor spaces is not practical, and these are transient spaces which are generally used for short periods of time.

14.9 Financial contribution for Environmental Health staff

14.9.1 In chapter 14, IACC requests:

“A financial contribution to the funding of the monitoring of the impacts of the development by Horizon is sought for the duration of the Wylfa Newydd construction phase in order to fund:

a) 1 x FTE Environmental Health Officer and

b) 1 x FTE Graduate Environmental Health Officer”.

14.9.2 Horizon agrees to the principle of providing funding for an Environmental Health Officer. This would comprise a change to Schedule 11 of the draft DCO s.106 agreement (to be submitted at Deadline 3) to extend the role provided there (currently defined as an Environmental Fund Officer) from a 0.5 Full Time Equivalent (FTE) role to a 1.0 FTE role, and with an expanded scope in recognition of the additional burden that reviewing section 61 prior consent applications and monitoring will place on the department. However, Horizon considers that a FTE Environmental Health Officer role, with assistance from the Environmental Clerk of Work role which has already been committed to in the Wylfa Newydd CoCP [REP2-031], will be sufficient for the workload.

15 Local Impact Report – Community

15.1 Introduction

15.1.1 Horizon has reviewed the chapter 15: Community of the IACC LIR. This section responds to the key issues presented within chapter 15, with reference to the corresponding paragraph numbers in the LIR chapter where appropriate.

15.1.2 Key issues in this response are:

- Leisure
- Community cohesion
- Utilities and Infrastructure
- DCO Requirements and Obligations

15.2 Leisure

Leisure Facilities

15.2.1 IACC refers to four different Leisure Centres that operate on the Island: Amlwch Leisure Centre, David Hughes Leisure Centre, Holyhead Leisure Centre and Plas Arthur Leisure Centre. IACC compares an estimate of latent demand for fitness with the number of members of these leisure centres.

Table 1: Comparison of IACC estimate of demand and actual demand figures

Leisure Centre	Latent demand	Member ships (Actual demand)	Difference	% Difference*	% diff in IACC report*
Amlwch Leisure Centre,	1,077	1,287	210	19%	19%
David Hughes Leisure Centre	1,014	228	-786	-78%	-22%
Holyhead Leisure Centre	1,863	2,296	433	23%	19%
Plas Arthur Leisure Centre	1,910	1,989	79	4%	4%
Total	5,864	5,800	-64	-1%	-1%

*rounded to the nearest decimal place

- 15.2.2 It should be noted that the percentage differences calculated by the IACC are inconsistent and therefore confusing. There is no explanation of how the latent demand was estimated but the figures are used to indicate that there is insufficient capacity for additional users on the island.
- 15.2.3 Horizon's position is that, based on a worst case, the increased population could result in an increase in visits of 11% over current visitor levels on Anglesey (calculations outlined below). Leisure facilities will be provided at Site Campus for workers residing there and will be available to workers living elsewhere in the KSA.
- 15.2.4 Overall, as a result of the provision of facilities in the Site Campus and taking into account the available usage level information, the effect is considered to be of minor significance before mitigation is considered, and of no significant effect once mitigation is considered. Given the potential distribution of workers based on the gravity modelling results, demand may be expected to be more concentrated in Anglesey North and Anglesey West.
- 15.2.5 The percentage of adults who regularly participated in sport and active recreation on Anglesey was 44% in 2008-09, in line with the Welsh average. The percentage in Gwynedd was slightly higher at 48%.
- 15.2.6 On Anglesey, there were around 8,400 visits per thousand population to local authority sport and leisure centres in 2014-15, slightly below the Welsh average (8,700). It was, however, much lower than in neighbouring Gwynedd (13,800).
- 15.2.7 Horizon does not have data on usage for each service provided by individual leisure centres on Anglesey (total participants numbers per individual leisure centre are provided below and again in Table 6-6 in Appendix C1-1 [APP-095]) and hence whether there are any existing capacity issues. However, by utilising the most recent information regarding visits per thousand population from 2014/2015 (8,400) (C1 [APP-088], paragraph 1.3.20), it is possible to estimate the number of visits that would result due to an additional population (7,505) (C1, paragraph 1.5.48 & Table C1-14 [APP-088]). This is estimated to be around 63,000 visits undertaken by the additional population on Anglesey brought on by the Wylfa Newydd DCO Project, which represents an 11% increase on the current known uptake or participant numbers of leisure centres on Anglesey, as shown in Table 6-6 from C1-1 [APP-095] below. See table below for this working.

Table 2: Leisure participation numbers on Anglesey

Participant numbers - Anglesey total	553,739
Visits per thousand	8,400
Additional population from Horizon	7,505
Additional visits caused by the population increase	63,042

Additional visits caused by the population as % of population	11%

- 15.2.8 It should be noted that the current submitted scheme in the DCO application is illustrative, bounded, for the purposes of EIA, by a set of parameters within which Horizon will construct the project. Horizon will take into consideration the views of IACC as it completes the final design of the Site Campus when it comes to discharge Requirement WN19 Site Campus detailed design approval. This Requirement states that no construction of the Site Campus may commence until plans and written details of the design are submitted to and approved by IACC. The final design will also need to reflect environmental parameters and constructability.
- 15.2.9 In terms of mitigation, as secured in schedule 2 of the draft DCO s.106 agreement (provided to the Examining Authority at Deadline 3), Horizon proposes to make contributions totalling £3.86 million towards Indoor Sports Hall, Outdoor Facilities, and Swimming Facilities as detailed below.
- 15.2.10 The draft DCO s.106 agreement would require IACC to use the Indoor Sports Halls contribution to:
- Upgrade the existing indoor sports facilities at the Amlwch Leisure Centre and the Holyhead Leisure Centre within 18 months of receipt of the Leisure (Indoor Sports Halls) Contribution;
 - Improve and expand the car parking facilities at Amlwch Leisure Centre within 18 months of receipt of the Leisure (Indoor Sports Halls) Contribution; and
 - From Implementation monitor usage of the indoor sports facilities at the Leisure Centres to obtain monitoring data on the usage profile of indoor sports facilities at the Leisure Centres.
- 15.2.11 The draft DCO s.106 agreement would require IACC to use the Leisure (Outdoor Facilities) Contribution to:
- Upgrade the existing outdoor multi use games areas at Amlwch Leisure Centre and Holyhead Leisure Centre to provide additional 3G standard pitches within 18 months of receipt of the Leisure (Outdoor Facilities) Contribution; and
 - From Implementation monitor usage of the outdoor multi use games areas at Amlwch Leisure Centre and Holyhead Leisure Centre to enable the provision of data which sets out the usage profile of these leisure centres.
- 15.2.12 The draft DCO s.106 agreement would require IACC to use the Leisure (Swimming Facilities) Contribution to:

- Undertake alterations to improve, remodel and/or expand the changing facilities at Amlwch Leisure Centre within 18 months of receipt of the Leisure (Swimming Facilities) Contribution; and
- From Implementation monitor usage of the swimming facilities at Amlwch Leisure Centre to enable the provision of data which sets out the usage profile of these facilities.

15.2.13 These contributions respond directly to mitigation requests made by IACC. It is anticipated also that the Community Fund (secured in schedule 12 of the draft DCO s.106 agreement) could be open to further leisure enhancements. In light of the provisions detailed above, Horizon does not propose to replace the old Wylfa Sports and Social club as requested in paragraph 3. 10.

15.3 Community cohesion

15.3.1 An ongoing challenge when considering the issue of community cohesion is to agree a definition. Welsh Government defines community cohesion as: ²⁷ *“a term used to describe how everyone in a geographic area lives alongside each other with mutual understanding and respect. A cohesive community is where a person has a strong sense of belonging. It is safe, vibrant and able to be resilient and strong when tensions occur. Community cohesion describes the ability of all communities to function and grow in harmony together rather than in conflict. It aims to build communities where people feel confident that they belong and are comfortable mixing and interacting with others, particularly with different people with different protected characteristics.”*

15.3.2 The Welsh Government continues to define community cohesion as what must happen in all communities to enable different groups of people to get on well together. A key contributor to cohesion is integration, which is what must happen to enable new residents and existing residents to adjust to one another and live harmoniously with one another. Horizon has adopted the definition of community cohesion as described above for the purposes of assessment for the Wylfa Newydd DCO project.

15.3.3 The vision of an integrated and cohesive society is based on three foundations:

- People from different backgrounds having similar life opportunities;
- People knowing their rights and responsibilities; and
- People trusting one another and trusting local institutions to act fairly.

15.3.4 Horizon recognised the importance of community cohesion on the Isle of Anglesey and the surrounding areas. It analysed various elements of community cohesion's definition in order to provide a rounded interpretation

²⁷ Protected characteristics are defined in the *Equality Act (2010)* and include age, disability, sex, gender reassignment, marriage and civil partnership, pregnancy, maternity, race, religion or belief, and sexual orientation.

of this subjective concept. This complexity highlights the difficulty in analysing community cohesion related issues.

15.3.5 Mitigation is discussed in table 6-1 of ES Volume C - Project-wide effects App C1-3 - Community Cohesion Report [APP-097]. That covers a range of issues including Welsh Language, Housing, Access to Services, Local Employment, opportunities for local businesses, community issues, and management of the workforce. This table has been updated to show items of mitigation related to community cohesion contained in the draft DCO s.106 agreement . As noted above, the definition of community cohesion is challenging. The key drivers will vary in any location and be subject to a range of factors. It is Horizon's position that all key aspects/supporting elements of community cohesion have been considered and measures are identified and secured via Wylfa Newydd CoCP [REP2-031] and the draft DCO s.106 agreement to reduce the risk of any adverse outcomes, and to monitor and manage changes should that be required. It is Horizon's view that the production of an action plan would not provide any greater risk reduction than Horizon is already fully committed to.

Table 3: Proposed measures to reduce the potential for adverse effects on community cohesion updated with draft S106 content

Issue	Measure	S106 agreement with IACC
Welsh language (s.106 Schedule 1)	- Appointment of Welsh Language and Culture Coordinator - Horizon would implement measures such as linguistic training to all staff, a Welsh language programme, mentoring for learners, and approving businesses who operate similar schemes. - Further details are in the Welsh Language and Culture Mitigation Enhancement Strategy.	- Appointment of Welsh Language and Culture Coordinator - Developer led Polisi Iaith Gymraeg/Welsh Language Policy - Implement a Welsh Language Management Group - Welsh Language will be part of the recruitment process as the Developer will use the Welsh language skills competency framework and assessment tool

Issue	Measure	S106 agreement with IACC
		• Community Translation Service Contribution • Welsh Language Education (Annual) Contribution to fund the employment of two or more peripatetic teachers to support current Welsh immersion education capacity. • Welsh Language and Culture Coordinator who will be responsible for developing measures to ensure continued Welsh speaking characteristics of organisations and activities in the local communities • The developer will be involved in a series of community engagement obligations such as Work Insight Week, Wylfa Newydd DCO Project Technical Apprenticeship Scheme
Housing (Project design)	• Embedded mitigation: the	• The Developer will establish the

Issue	Measure	S106 agreement with IACC
and s.106 Schedule 5)	provision of the Site Campus and facilities within it during the construction of the Wylfa Newydd DCO Project to house the majority of workers migrating to Anglesey. The provision of a Worker Accommodation Management Service (WAMS) as set out in the Worker force Accommodation Strategy.	Workforce Accommodation Management Service prior to Commencement and thereafter operate it for the duration of the Construction Period. - The Developer will appoint and work with a managing agent to ensure the operation of the Workforce Accommodation Management Service during the Construction period (or such other period agreed between the Developer and the Council). - The Developer and the Council will establish the WAMS Oversight Board so that it is operational for the period of operation of the Workforce Accommodation Management Service. - The Developer and the Council agree that the purpose of the WAMS Oversight Board is to:

Issue	Measure	S106 agreement with IACC
		- oversee the operation of the Workforce Accommodation Management Service; - report on the operation and effectiveness of the Workforce Accommodation Management Service to the Accommodation, Tourism and Leisure Sub-Group on a [quarterly basis] (or other such reasonable period agreed with the Accommodation, Tourism and Leisure Sub-Group) for the duration of the Construction Period (or such period agreed with the Accommodation, Tourism and Leisure Sub-Group); and - have due regard to any recommendations made by the Accommodation, Tourism and Leisure Sub-Group in terms of improving the operation of the Workforce Accommodation Management Service, including the operation of the Workforce Accommodation Portal.

Issue	Measure	S106 agreement with IACC
		• The Developer will open the Worker Accommodation Portal prior to Commencement. • The Developer will work with the Agent to ensure the operation of the Worker Accommodation Portal in accordance with the Workforce Accommodation Strategy for the duration of the Construction Period.
Access to services (Project design, Phasing strategy and s.106 Schedule 2, 8, 9)	• Embedded mitigation: the provision of Site Campus and facilities within it during the construction of the Wylfa Newydd DCO Project to house the majority of workers migrating to Anglesey, therefore reducing the impact on local communities in terms of public service provision, including health service provision. • Providing appropriate provision for	• The Public Services (Ambulance) Contribution will be paid by the Developer to Welsh Ambulances Service NHS Trust towards building resilience and mitigating impacts of the Wylfa Newydd DCO Project on ambulance services on Anglesey. • The Public Services (Fire) Contribution will be paid by the Developer to North

Issue	Measure	S106 agreement with IACC
	medical health, occupation health and emergency services. Monitoring of workers use of public services.	Wales Fire and Rescue Service towards building resilience and mitigating impacts of the Wylfa Newydd DCO Project on fire and rescue services on Anglesey. - The Public Services (Police) Contribution will be paid by the Developer to North Wales Police towards building resilience and mitigating impacts of the Wylfa Newydd DCO Project on police services on Anglesey - Funding provision for use of GB and other NSH services by non home based workers and their dependents. - Dental and pharmacy services proposals provided by the Developer to IACC and commitment to the implementation of provisions outlined within. - The Health (Monitoring)

Issue	Measure	S106 agreement with IACC
		Payment which will be paid for the purpose of monitoring the effects of the Wylfa Newydd DCO Project on Local Health Services during the Construction Period; • The health and Wellbeing Sub-Group will use monitoring data if it indicates a significant additional demand or forecasts trends which indicate a significant additional demand on the Local Health Services as a result of the Wylfa Newydd DCO Project: - it will make a recommendation report in accordance with Paragraph [1.1] of [Schedule 16]; and - The WNMPOP may make a mitigation direction in accordance with Paragraph [1.2] of [Schedule 16]; and where - Such recommendation report and mitigation directions must have

Issue	Measure	S106 agreement with IACC
		regard to the mitigation amounts determined by the formula set out in Paragraph [4.2]. - A significant additional demand on the Local Health Services will be demonstrated
Employment opportunities for local residents (s.106 Schedule 4)	• Good practice mitigation: implementation of a Jobs and Skills Strategy in order to enhance the employment opportunities for local residents. During the operational phase of the Wylfa Newydd DCO Project, the Jobs and Skills Strategy would continue to be implemented. • Additional mitigation: Wylfa Newydd Employment and Skills Service, which would provide additional training to meet needs identified for the Wylfa Newydd DCO Project. The Employment and Skills Service would also aim to offset potential effects of labour	• The Developer undertakes to comply with the Jobs and Skills Implementation Plan for the duration of the Construction Period and the Operational Period. • The Jobs and Skills Implementation Plan would be updated on a three yearly basis during construction, and a final update would include identification of further review points needed during operation. • Formation of the Jobs and Skills Sub-Group, which may identify a "Training and Employment Initiative" which supports a number of areas, such as

Issue	Measure	S106 agreement with IACC
	churn that existing local business may encounter by backfilling vacant posts to support businesses whose workers have moved on to the Wylfa Newydd DCO Project.	Initiatives for upskilling of existing construction workers in the local area to enable them to access employment opportunities on the Wylfa Newydd DCO Project. • The Parties recognise that the WNESS as the mechanism by which enhancement and mitigation of education and skills training for the local community in respect of Wylfa Newydd DCO Project will be delivered. The WNESS will seek to: - Ensure the best/most suitable people are able to work on the Wylfa Newydd DCO Project and that it benefits local residents as a result; - Provide a point of access into the Wylfa Newydd DCO Project for local people seeking work (including people who have moved away and want to return);

Issue	Measure	S106 agreement with IACC
		- Support any employers who lose employees to the Wylfa Newydd DCO Project to backfill their roles; and - Guide the provision of training to support these aims. • The Developer and the Council will support the WNESS for the duration of the Construction Period
Business opportunities for local enterprises (s.106 Schedule 4)	• Good practice mitigation: Supply Chain Charter and Action Plan that aims to present opportunities for local businesses to be involved with the project. During the operational phase of the Wylfa Newydd DCO Project, the Supply Chain Charter will continue.	• The Developer will implement the Supply Chain Action Plan during the Construction Period (or such other period agreed between the Developer and the Council). • The Developer will operate and maintain the Supply Chain Portal in accordance with the Supply Chain Action Plan during the Construction Period (or such other period agreed between the Developer and the Council). • The Supply Chain Portal will be operated to enable

Issue	Measure	S106 agreement with IACC
		the Developer to engage with the local supply chain and maximise local employment opportunities • Economic Development Officer who is responsible for representing the Council and local business in engaging with the Developer's supply chain, engaging with the Supply Chain Service Working Group, liaising with potential supply chain related businesses, liaising with the Welsh Government officers to promote the supply chain, and monitor the operation and effectiveness of the Supply Chain Portal.
Community issues (Project design, WMS and s.106 Schedule 14)	• Implementation of a Code of Conduct, ensure sufficient resources available for local providers to deal with potential issues.	• Community Involvement Officers will liaise with communities, the Council and the Developer in respect of Workforce conduct issues (in

Issue	Measure	S106 agreement with IACC
	- Community Liaison Office – Horizon would employ a Community Liaison Officer and provide a 24-hour hotline to allow members of the public to raise any concerns. - Community Liaison Group – Horizon would also appoint a Community Liaison Group that would consist of a group of local residents from the immediate local communities, businesses and representatives of local groups. This is discussed further in the EqIA.	accordance with the Community Safety Management Strategy). - Horizon will employ a CIO and will contribute £40,000 to the IACC to employ a CIO. Both officers will work together to develop a CIO Joint Work Plan and then execute this plan by delivering the following actions: [Manage/establish] community language services (including the development of appropriate training materials). - Support the integration of the Workforce and Workforce Dependents. - Liaise with communities, the Council and the Developer in respect of Workforce conduct issues (in accordance with the Community Safety Management Strategy).

Issue	Measure	S106 agreement with IACC
		• Delivering and operating the community translation service described in Schedule 1. • Promote education, upskilling, training and local employment opportunities including support for young people from disadvantaged backgrounds. • Provide information about planned PRow diversions to local communities including via the use of bi-lingual information boards. • Promote local walking, cycling, public transport, car sharing, travel planning, leisure facilities and road safety initiatives. • Disseminate information about construction and operational safety. • Provide support and a communication channel for people experiencing

Issue	Measure	S106 agreement with IACC
		elevated levels of emissions or disturbance; • Promoting community cohesion. • Support the integration of incomers into host communities. • Report regularly to the Health and Wellbeing Engagement Sub-Group and the Welsh Language and Culture Sub-Group in respect of the above matters. • Provide support to groups wishing to access the Community Fund; • Other matters which may be agreed with the Developer from time to time. • Community Liaison Group is discussed in the Wylfa Newydd CoCP [REP2-031].
The Workforce Management Strategy (DCO requirements)	• The Workforce Management Strategy defines the vision of Horizon Nuclear Power to attract the right workforce resources to	• Principles of the Workforce Management Strategy secured by DCO requirement and delivered by the WAMS under

Issue	Measure	S106 agreement with IACC
	construct the Wylfa Newydd nuclear power plant and minimise impact of the large construction workforce team on the local community.	Schedule 5 of the draft DCO s.106 agreement, to minimise impact of the large construction workforce team on the local community.

- 15.3.6 Horizon acknowledge comments raised by IACC in terms of impact on amenity and daily travel arrangements of local communities. The impact of the Wylfa Newydd DCO Project on the operation of the road network on Anglesey has been examined in the DCO Transport Assessment [APP-101]. The roads examined as part of this process are shown in Figure B3-1 of ES Volume B - Introduction to the environmental assessments Figure Booklet - Volume B [APP-087]. These roads have been chosen as they are the roads which are expected to be used by traffic associated with the Wylfa Newydd DCO Project. Links 42 and 43 pass through Bodedern and the results of the assessment of these links are providing in ES Volume C - Project-wide effects C2 - Traffic and transport.
- 15.3.7 The road through Bryngwran has not been assessed in detail as it is not a route expected to be used by construction workers given that the A55 lies to the south providing a faster route to the Wylfa Newydd Development Area. Construction vehicles will also not use a route through Bryngwran. Roads near Llanfhangel yn nhowyn and RAF Valley have not been assessed in detail due to the expected low number of construction workers who will live in these locations and because no construction vehicles will use these roads in this location (see Figure 6-8 of the Appendix F Integrated Traffic and Transport Strategy [APP-107] for a figure showing the expected distribution of construction workers).
- 15.3.8 Paragraph 5.2 of Chapter 15 suggests that the Wylfa Newydd CoCP and sub-CoCPs need to be re-written to provide more detailed information. A revised and updated version (Revision 2.0) of the Wylfa Newydd CoCP [REP2-031] was submitted at Deadline 2 (4 December 2018). This revised version includes enhanced information about the methods to manage car sharing (section 5.7), management of construction vehicles (section 5.8), traffic incident management (section 5.9) and monitoring measures (section 5.10). Further information concerning the arrangements for engagement with the local community are provided in chapter 3 which includes information about the Wylfa Newydd Major Permissions Oversight Panel ("WNMPOP") and the Community Liaison Group. In addition, amendments were made to the sub-CoCPs [REP2-032 to REP2-036, REP2-373].

- 15.3.9 In response to points raised at paragraph 3.3 since the submission the DCO application, Section 2.2 of the Workforce Management Strategy [APP-413] has been updated to state that the Code of Conduct will include a clause restricting construction workers to 'A' class roads and avoid 'B' class roads wherever practicable to avoid causing unnecessary nuisance and disturbance to local communities.
- 15.3.10 Horizon recognises the potential for instances of impacts to community safety which could include higher instances of hate crime, slavery, an increase in the night time economy and safeguarding risks. Details relating to safeguarding can be found in the response to chapter 6. The Wylfa Newydd CoCP [REP2-031] provides for Horizon to establish a dedicated and free telephone hotline available for anyone with concerns about the project that will deal with enquiries or complaints from the public, IACC, and other key stakeholders and ensure appropriate action is taken (see paragraph 3.3 of the Wylfa Newydd CoCP. In addition, the Community Involvement Officer Joint Work Plan and Community Safety Management Strategy detailed below will seek to promote community cohesion and detail methods of reporting, monitoring and addressing impacts to community safety.
- 15.3.11 Draft DCO s.106 agreement at Schedule 14 details the commitment relating to the Community Involvement Officers. The Community Involvement Officer Joint Work Plan sets out how the Community Involvement Officers will deliver the following actions:
- Manage/establish community language services (including the development of appropriate training materials).
 - Support the integration of the Workforce and Workforce Dependents.
 - Liaise with communities, the Council and the Developer in respect of Workforce conduct issues (in accordance with the Community Safety Management Strategy).
 - Delivering and operating the community translation service.
 - Promote education, upskilling, training and local employment opportunities including support for young people from disadvantaged backgrounds.
 - Provide information about planned PRow diversions to local communities including via the use of bi-lingual information boards.
 - Promote local walking, cycling, public transport, car sharing, travel planning, leisure facilities and road safety initiatives.
 - Disseminate information about construction and operational safety.
 - Provide support and a communication channel for people experiencing elevated levels of emissions or disturbance;
 - Promoting community cohesion.
 - Support the integration of incomers into host communities.

- Report regularly to the Health and Wellbeing Engagement Sub-Group and the Welsh Language and Culture Sub-Group in respect of the above matters

15.3.12 Furthermore, DCO requirement PW11 requires the development of a Community Safety Management Strategy (CSMS). The principles of the CSMS are secured through the Wylfa Newydd CoCP [REP2-031]. It is proposed to amend the proposed principles relating to Community Safety in the Wylfa Newydd CoCP in response to engagement with the emergency services and relevant partners which will be submitted at deadline 4 (17 January 2018). Horizon continues to be committed to ongoing engagement with North Wales Police, and other public bodies to include IACC and emergency services, to draft a CSMS in accordance with draft requirement PW11. The CSMS will set out how Horizon will work with existing public bodies, including IACC and the emergency services, and will include a framework of communication routes and ways of working to mitigate any potential impact of the construction workforce within the community.

15.3.13 Horizon confirms a commitment to additional resourcing required to maintain community safety as a direct result of the project. Resourcing commitments to the emergency services will be set out in Schedule 9 of the Draft DCO s.106 agreement.

15.3.14 In response to paragraph 3.5 of chapter 15, Section C.4 of the Health Impact Assessment (HIA) Report [APP-429] considers the potential for likely significant health effects arising from competition for rental properties due to accommodating part of the construction workforce in existing housing. The HIA notes the potential for vulnerable groups to be affected. The HIA notes mitigation measures, including that:

- Horizon would appoint a bi-lingual Community Involvement Officer, as detailed above, whose responsibilities would include the development and implementation of a sensitive lettings policy. This is intended to reduce housing displacement pressure on vulnerable groups e.g. social tenants, minority groups, young people and disabled people..
- Horizon would establish the Health and Well-being engagement sub-group, which would consider monitoring data relevant to the Project. A set of key topics and indicators would be agreed, but is expected to include housing market pressures. The group would monitor routinely collected public health data (existing indicators), relevant to the Project, to determine if any changes in the housing market indicate community accommodation pressures are of concern. When appropriate, Horizon would facilitate bespoke analysis of routinely collected public health data (existing indicators), relevant to the Project. The information would inform discussion by the Health and Well-being Monitoring Group. If appropriate, the Group would discuss the need for additional mitigation or follow-up investigation.

- 15.3.15 On this basis, the HIA concludes that the residual significance of potential health and well-being effects is considered to be negligible for the general population and minor adverse for vulnerable groups (with vulnerability being particularly linked to being a private rental market tenant on a low income). It is considered that the existing mitigation commitments by Horizon would provide appropriate adaptive monitoring and a mechanism for additional mitigation if appropriate.
- 15.3.16 In response to paragraph 3.6 of chapter 15, Horizon acknowledges the comments raised with regard to a potential increase in sex work during the course of the project. Horizon welcomes the opportunity to further discuss this issue with relevant partners and commits to co-operating with existing support structures operating in North Wales.
- 15.3.17 Furthermore, Horizon will take reasonable steps to safeguard the welfare of its employees, its supply chain and, in relation to the activities of its construction workforce, the general public. Prior to, and throughout the construction of the Wylfa Newydd Power Station, appropriate dialogue will be maintained between Horizon, the contractor, the supply chain and local safeguarding agencies, including North Wales Police. Discussions will include any individual or coordinated measures appropriate to avoiding risks to vulnerable groups, for example in relation to human trafficking and direct or indirect sex work. Security protocols will be agreed by Horizon and North Wales Police, and other safeguarding agencies, and reviewed regularly. An appropriate number of Horizon and supply chain staff will be trained in safeguarding issues so that, for example, security staff who conduct site and/or vehicle inspections will be aware of signs of illegal activity such as human trafficking. These measures will be secured in the update to the Wylfa Newydd CoCP (for submission at Deadline 4 (17 January 2018)). Further details relating to safeguarding are addressed in Chapter 6.

Community Liaison and Communications

- 15.3.18 IACC has requested funding for five Community Liaison Officers (CIOs) and hub sites for their operation. It has also asked for further clarity on how community cohesion issues will be flagged to Horizon. Within the Wylfa Newydd CoCP [REP2-031] the Wylfa Newydd Engagement Framework is set out which highlights how issues relating to community cohesion will be monitored and flagged to the Community Liaison Group which will consist of a group of local residents from the immediate local communities, businesses, representatives of local groups, Horizon representatives and IACC representatives where appropriate. In addition, as stated above, the draft DCO s.106 agreement at Schedule 14 details the CIO Joint Work Plan setting out commitment relating to the CIOs promoting community cohesion. It is not agreed that a request for five CIO and a community cohesion officer is justified.
- 15.3.19 The Wylfa Newydd CoCP [REP2-032] also highlights that Horizon will establish a dedicated and free telephone hotline to be available for anyone with concerns about the construction programme or Project. It will deal with enquiries or complaints from the public, the IACC or other key stakeholders

and ensure appropriate action is taken in response to concerns or questions arising from construction arrangements or consented plans. The system will be staffed by bilingual personnel.

- 15.3.20 In response to IACC's concern to ensure that full and adequate communication is had with the construction workforce, the Workforce Management Strategy (WMS) [APP-413], paragraph 2.3.1, states: "Employers will comply with any requirements advised by Horizon in respect of recruitment processes including requirements to advertise job profiles through Welsh and local brokerage services, include language requirements within job profiles, and appoint a Welsh speaking staff member to all interviews for roles which require Welsh language skills." On this basis a level of language of staff will be confirmed prior to their appointment, ensuring they meet required levels on language necessary to safely undertake their job.
- 15.3.21 The Wylfa Newydd CoCP [REP2-032]) states that all permanent and temporary public signs will be bilingual. A more detailed review of different classifications of on-site signage will be undertaken by Horizon to consider whether it is appropriate for 'safety-critical' signage to be bilingual recognising the operational language of the nuclear industry and regulators in the UK is English.
- 15.3.22 The WLIA Non-Technical Summary [APP-430] states in paragraph 5.3.5 that community and local services language mitigation will include helping fund a community translation service (where relevant to Horizon Wylfa Newydd) to enable local organisations to provide simultaneous translation facilities for community groups as well as other measures. This will be secured through planning obligations and implemented prior to commencement of construction. Furthermore, Measure 10 states that Horizon will include Welsh language information requirements as an agenda item for all contractor meetings. Horizon will provide information on its Welsh language capacity, Horizon's Welsh Language Policy and obligations, and how contractors will adhere to Horizon's Welsh Language Policy (i.e. through recruitment processes and internal and external communications). These matters are secured in Schedule 1 of the draft DCO s.106 agreement.
- 15.3.23 The draft DCO s.106 agreement, Schedule 1: Welsh Language and Culture, paragraph 1.1 Developer-led Welsh language management and policy, details the role of the Welsh Language and Culture Coordinator to include:
- (g) assist the Council to operate the community translation service established in accordance with Paragraph [6] below.*
- 15.3.24 Furthermore, Schedule 1, paragraph 7 details the Community Translation Service Contribution, to fund provision of a community translation service.

15.4 Utilities and Infrastructure

- 15.4.1 The proposed potable water supply for the permanent site is being taken via a new pipeline(s) from Alaw Water Treatment Works. DCWW has undertaken the necessary assessments, met with regulators and is satisfied that capacity exists to meet the demands being requested by Horizon.

- 15.4.2 The proposed foul water treatment for the permanent site is at the existing Wylfa Head Treatment Plant, with the Biological and Hydraulic capacity of the plant being upgraded where required (DCWW will produce an outline design to determine this). The connection from the site will be made directly to the waste water treatment works via a new rising main.
- 15.4.3 With regard to the electricity supply, National Grid Electricity Transmission (NGET) has a formal contract in place with Horizon to provide a connection by an agreed date. It is NGET's responsibility to consider the impact of the Wylfa Newydd development on the Transmission System, including consideration of both existing and future transmission users who have similar connection agreements in place. This obligation on NGET is outlined in the Transmission System license.

15.5 DCO Requirements and Obligations

- 15.5.1 In response to paragraph 5.1 and 5.2, Horizon has always acknowledged that the Wylfa Newydd CoCP [APP-414] and sub-CoCPs [APP415 to APP-420] would be further refined during Examination, in response to scrutiny and comments from the Examining Authority, other interested parties and stakeholders. Horizon has already submitted pro-active revisions of the Wylfa Newydd CoCP and relevant sub-CoCPs at Deadline 2 (4 December 2018) [REP2-031 to REP2-036, REP2-373] and will provide additional revisions at Deadline 4 (17 January 2019). It is Horizon's opinion that by the close of the DCO Examination period, the Wylfa Newydd CoCP and sub-CoCPs will contain the necessary level of detail sought by the relevant stakeholders to be precise and enforceable. Therefore, Horizon considers there is no need to add an additional approval requirement in respect of these documents.
- 15.5.2 In response to paragraph 5.3, regarding the request to amend the WMS to include mitigation measures in particular context to hate crime, Horizon is continuing to discuss matters of community safety, which would include a response to the risk of hate crime, with the emergency services and relevant stakeholders. The WMS currently includes the principle that personnel must treat others with respect and refrain from anti-social, criminal, violent or discriminatory behaviour or sexual harassment and understand that these behaviours will not be tolerated at any time. Furthermore, as described above, Horizon is committed to developing a detailed Community Safety Management Strategy in line with the principles outlines in the Wylfa Newydd CoCP. Horizon is engaging continually with the emergency services to better understand the detailed mitigation measures to include in the Community Safety Management Strategy.
- 15.5.3 In response to paragraph 5.4, as noted above, Horizon considers that its provision for two CIOs (who will deliver a Joint Work Plan on community issues), up to three accommodation officers, and a transport officer (as well as the other mitigations referred to above), are sufficient such that a separate community cohesion plan is not required and funding for five CIOs is not justified.

- 15.5.4 In response to paragraph 5.5, a Community Fund is proposed and the details of eligibility to access that fund were first shared with IACC in late October 2018 and are the same as what has been agreed as appropriate (in terms of access to an equivalent type of fund) in the agreed draft site preparation and clearance s.106 agreement.

16 Local Impact Report – Cumulative Impacts

16.1 Introduction

- 16.1.1 Horizon has reviewed chapter 16: Cumulative Impacts of the IACC LIR. This section responds to the key issues presented within that chapter, with reference to the corresponding paragraph numbers in LIR chapter 16 where appropriate.
- 16.1.2 Key issues in this response are:
- Reasonably Foreseeable Future Projects (RFFPs).
 - Wylfa Newydd and National Grid North Wales Connection Project (NWCP).
 - IACC analysis.
 - Mitigation.
- 16.1.3 Where appropriate, cross-referencing is provided to existing application documents. Please refer to the Wylfa Newydd DCO Project Environmental Statement Volume I [APP-384 to APP-397] for the full scope, methodology and results of the assessment of cumulative effects.

16.2 Reasonably Foreseeable Future Projects

- 16.2.1 Section 2 of the LIR chapter 16 discusses RFFPs and the cumulative impact assessment methodology. It is noted that IACC agree “with a substantial proportion” of the RFFPs included within the scope of the assessment but refer to a small number of “notable exceptions”. These are summarised in paragraphs 2.1.2 to 2.1.7 of chapter 16, LIR.
- 16.2.2 It should be noted that the projects listed under these exceptions are considered in the assessment in the application for development consent. They are presented in the RFFP long-list in Table I2-2 of the Wylfa Newydd DCO Project Environmental Statement Volume I – Cumulative Effects I2 – Scope [APP-385]. Each of the projects was scoped out of the short-list with a justification provided.
- 16.2.3 Horizon has taken the opportunity to review the available information on each of these projects and considers that following the existing methodology, each would remain scoped out of the cumulative effects assessment. Further commentary is provided below:
- Project AN12 – West Anglesey Demonstration Zone (Menter Mon)
There is no new information. The latest available information is provided within an EIA Scoping Report published in 2015. The potential spatial link remains (as acknowledged in Table I2-2 of APP-385) for the demonstration zone, with respect to further detail the scoping report acknowledges, “the project is very much at the early stage of development and much of the detail for the project is as yet unknown”. There is no information available indicating the proposals for a

demonstration project within the identified zone and no temporal information on such proposals.

- Project AN17 – House building programme (IACC):

The IACC website has been reviewed with regards to the house building programme. Four small developments (ranging four to seven dwellings) at widespread locations on Anglesey have been published for consultation for 2018/19. While there is an element of spatial relationship (as acknowledged in Table I2-2 of [APP-385]), these would not be considered to meet the criteria in Table I2-1 [APP-385] to be included in the long-list alone. No further information is available on the 400 units referred to in LIR Chapter 16.

- Project AN22 – Third Bridge across the Menai Straits (Welsh Government):

Please refer to the Horizon response to First Written Question 11.1.50 [REP2-002]. In summary, the announcement for the preferred option does not include further environmental information and there remains insufficient information available for the basis of a cumulative assessment.

- Project CN02 – Improvements to Junction 15 and 16 of the A55:

The Welsh Government Consultation Document, 'A55 Junction 15 and 16 Improvements', identifies a series of options. A preferred option is yet to be announced.

16.2.4 On the basis of the above, each of the above projects remains scoped out at long-list stage as per the ES Volume I2 [APP-385]. None of the information made available since submission of the application for development consent or the correspondence referred to by IACC would change the assessment or conclusions within the Environmental Statement.

16.2.5 With respect to the two projects requested for inclusion in the RFFP list at paragraph 2.1.8 (Holyhead Outer Harbour Breakwater Restoration/Improvements and the IACC Joint Local Development Plan Allocations), there is no published detail on project proposals or environmental information for these schemes.

16.2.6 It is noted that where there is insufficient information about the effects of another development to be considered in the Wylfa Newydd cumulative effects assessment, the Wylfa Newydd DCO Project and other RFFPs would need to be a consideration during the cumulative assessment and consenting for those other developments.

16.3 Wylfa Newydd and the North Wales Connection Project

16.3.1 Paragraph 2.1.11 of the IACC LIR chapter 16 notes that, "IACC expects that Horizon and National Grid should have engaged extensively during the pre-application stage," to ensure "mutual understanding" with respect to

cumulative environmental effects. Horizon would like to note the IACC assertion that, “it would appear that this approach has not been followed” is not correct.

- 16.3.2 The Horizon team liaised with National Grid and used the best available information at the time of production of the application. This assessment is detailed in the Wylfa Newydd DCO Project Environmental Statement Volume I – Cumulative Effects I5 – Inter-project Cumulative Effects [APP-388]. Conservative scenarios have been used where appropriate information was not available.
- 16.3.3 It should be noted that the NWCP application for development consent was submitted following the Wylfa Newydd DCO Project application and therefore the full suite of Wylfa Newydd application documents and assessments was available to National Grid.
- 16.3.4 Section 4.9 of the Overarching National Policy Statement for Energy (EN-1) recognises the approach taken and Horizon considers, as required by EN-1, the requirements of the EIA directive including cumulative effects have been addressed in the DCO application in a robust manner.

16.4 IACC analysis of cumulative effects

- 16.4.1 Sections 3.2.23 to 3.2.33 of the IACC LIR chapter 16 outlines IACC’s position on cumulative effects. IACC notes that the Horizon assessment identifies, “with reasonable accuracy, the potential interactions which could result in cumulative effects upon receptors” but raises a concern over the value in terms of “achieving a clear spatial understanding of the distribution of specific receptors and/or clusters of receptors which may be subject to cumulative effects.” A series of figures and analysis has been provided in the table in section 3.
- 16.4.2 Horizon acknowledges the value and importance of spatial relationship to other RFFPs and it is a core consideration in the Horizon cumulative effects assessment. Section 2.1 and 2.2 of the ES Volume I2 [APP-385] set out the definition of spatial limits for the topic assessments. It is noted at paragraph 2.2.3 of [APP-385] that maps are not included with “zones of influence” for each short-listed project due to the lack of available consistently detailed information. Horizon met with the Planning Inspectorate in April 2017 to present the proposed methodology for the cumulative effects assessment. Planning Inspectorate Advice Note 17: Cumulative effects assessment has been taken into account with appropriate justification where the methodology differs, as per the above.
- 16.4.3 It should also be noted that the temporal relationship is a key element to the Horizon cumulative effects assessment.
- 16.4.4 The IACC analysis and figures produced for section 3 of chapter 16, LIR focus on its assessment of cumulative effects between the Wylfa Newydd DCO Project and the North Wales Connection Project (National Grid). Horizon would like to note the following significant limitations to the analysis as follows:

- Annex 16B Figure 2 and Annex 16C Figure 3 include the note that "Wylfa Newydd construction phase impacts are represented without mitigation". This is not appropriate and therefore misrepresents the findings of the Wylfa Newydd Environmental Statement. The significant residual effects in the Wylfa Newydd DCO Project Environmental Statement take account of all embedded, good practice and additional mitigation;
- The number and location of significant effects identified in the figures and used in the table are therefore not considered accurate;
- It is not detailed how temporal relationships are considered in the analysis. This is a fundamental element in assessment of cumulative effects;
- No other RFFPs except the NWCP are considered in the IACC analysis;
- Topics considered are limited to noise, air quality and visual effects.

16.4.5 IACC requests at paragraph 5.1.4 that, "Horizon provides transparent spatial information of a similar nature to enable consensus to be reached on the targeting of mitigation and compensation measures." Horizon considers that the existing assessment and identification of effects presented in the Wylfa Newydd DCO Project Environmental Statement Volume I [APP-384 to APP-397] is accurate and robust. For further comment on mitigation, see below.

16.5 Mitigation

- 16.5.1 Horizon notes IACC's comments in section 5 of chapter 16, LIR with regard to mitigation. It is recognised that the receptors with "the greatest magnitude of change" should be the focus of mitigation and compensation where appropriate.
- 16.5.2 Throughout the Wylfa Newydd DCO Project Environmental Statement, the topic assessments identify the magnitude of change arising from the development. This magnitude of change is considered along with the sensitivity of the receptor in identifying the significance of the effect on a topic by topic basis.
- 16.5.3 Mitigation for these effects has been identified throughout the environmental assessment process and is secured throughout the Wylfa Newydd DCO Project control documents (for example, the Wylfa Newydd Code of Construction Practice, [REP2-031].
- 16.5.4 IACC focuses on cumulative effects in section 5, but does not specifically identify further mitigation to that already included in the DCO application. However, IACC notes that local communities should be "subject to compensatory intervention by Horizon" as well as "the need for contingency and community funds and the flexibility in deployment of them, both in their scope and amount available within them to meet particular needs."
- 16.5.5 The draft DCO s106 agreement includes details of the funds and mechanisms for their deployment. This includes a Community Fund, which would be for the purpose of mitigating any intangible and residual impacts of the Wylfa Newydd

DCO Project on communities (see Schedule 12 of the draft DCO s106 agreement).

17 Local Impact Report – Wylfa Newydd Development Area

17.1 Introduction

17.1.1 Horizon has reviewed chapter 17: Wylfa Newydd Development Area ("WNTA") of IACC's LIR. This section responds to the key issues in respect of the WNTA presented within chapter 17, with reference to the corresponding paragraph numbers in the LIR chapter where appropriate.

17.1.2 Key issues in this response are:

- Planning policy;
- Landscape and visual, including public rights of way ("PRoW");
- Historic environment;
- Ecology;
- Hydrology and groundwater;
- Land contamination;
- Soils and geology; and
- Development Consent Order ("DCO") requirements and Draft DCO s.106 Agreement planning obligations.

17.2 Planning policy

17.2.1 National Policy Statements ("NPS") EN-1 and EN-6 remain important and relevant matters which should carry significant weight in the determination of nuclear energy nationally significant infrastructure projects ("NSIPs") that will deploy after 2025. They continue to represent the primary policy basis for a decision made by the Secretary of State on this DCO application. Notwithstanding this, relevant local planning policy and guidance, including the Wylfa Newydd Supplementary Planning Guidance (2018) and the Anglesey and Gwynedd Joint Local Development Plan (2017), have been considered by Horizon in preparing the DCO application and in formulating this response.

17.2.2 Please refer to the Planning Statement [APP-406] for further detail in respect of the status of the NPSs and the planning policy considered by Horizon.

17.2.3 Part 3 of NPS EN-1 defines and sets out the need that exists for NSIPs, including new nuclear power stations. Paragraph 3.1.1 states that the UK needs all the types of energy infrastructure covered by the NPS in order to achieve energy security at the same time as dramatically reducing greenhouse gas emissions. Paragraph 3.1.2 goes on to state that it is for industry to propose new energy infrastructure and that the UK Government does not consider it appropriate for planning policy to set targets for or limits on different technologies.

- 17.2.4 The urgency of the need for new electricity generating capacity is underlined by projections within NPS EN-1 that indicate up to 22 gigawatts ("GW") of existing capacity will close over the period to 2020 in part due to the Industrial Emissions Direction but also as a result of some existing power stations reaching the end of their operational lives (paragraph 3.3.7). In response to this, NPS EN-1 identifies a minimum need for 59 GW of new generating capacity over the period to 2025 (paragraph 3.3.23). Please also refer to appendix 11-2 of the Statement of Reasons [APP-032] which provides further evidence of the urgent need for new nuclear power.
- 17.2.5 Section 2.2 of NPS EN-6 deals specifically with the need for new nuclear power stations. Paragraph 2.2.3 states that a failure to develop new nuclear power stations significantly earlier than the end of 2025 would increase the risk of the UK being locked into a higher carbon energy mix for a longer period of time than is consistent with the UK Government's ambitions to decarbonise electricity supply. As a result, it would become more difficult and expensive to meet the Government's targets for significant and urgent decarbonisation of the economy and enhanced security of supply (see Part 3 of NPS EN-1).
- 17.2.6 NPS EN-6 (paragraph 4.1.1) identifies the majority of the WNDAs (known as the 'Wylfa NPS Site') as one of a small number of sites in the UK that the UK Government considers to be 'potentially suitable' for the deployment of new nuclear power stations. As such, the principle of nuclear power generation at the site is established.
- 17.2.7 Section 5 of NPS EN-1 sets out 'generic impacts' relevant to all energy NSIPs. This is followed by detailed guidance on a topic by topic basis to guide the applicants as well as the decision maker in their detailed approach to NSIPs, informing their design, assessment and mitigation. These are listed in table 3-2 in the Planning Statement [APP-406]. In addition to the generic impacts set out in NPS EN-1, NPS EN-6 sets out a list of "Nuclear Impacts" that are considered particularly relevant to the development of new nuclear power stations (paragraph 3.4.3, NPS EN-6). This is followed by detailed guidance on these topics informing their design, assessment and mitigation (paragraphs 3.6-3.12).
- 17.2.8 These Nuclear Impacts are:
- Flood risk;
 - Water quality and resources;
 - Coastal change;
 - Biodiversity and geological conservation;
 - Landscape and visual impacts;
 - Socio-economic; and
 - Human health and well-being.
- 17.2.9 The Wylfa Newydd DCO Project is assessed relative to the generic impacts and each of the Nuclear Impacts in the Planning Statement [APP-406],

including consideration of compliance with both national and local planning policy.

17.2.10 Paragraph 4.1.3 of NPS EN-1 states that in considering any proposed NSIP the decision maker should take into account:

- Its potential benefits, including in addition to its contribution to meeting the need for energy, its contribution to job creation and any long term or wider benefits; and
- Its potential adverse impacts, including any long term and cumulative adverse impacts as well as any measures to avoid, reduce or compensate for any adverse impacts.

17.2.11 In summary, the Wylfa Newydd DCO Project will deliver significant benefits including a major contribution to meeting the pressing, and increasing, need for nuclear power by 2035 and significant benefits to the local economy. Whilst potential adverse impacts arise from the Wylfa Newydd DCO Project subject to appropriate mitigation, it would not have impacts on the local or the wider area which are sufficient to override the overall presumption in favour, as to warrant refusal of DCO. Please refer to the Planning Statement [APP-406] for more detail.

17.3 Landscape

Impacts & Evidence Base

Effects on landscape fabric

17.3.1 IACC states at paragraph 2.2.2 that “*contrary to the Overarching National Policy Statement for Energy (EN-1) ... ES Chapter D10 (and its associated appendices) does not include an assessment of impacts on landscape fabric...*”. However, whilst NPS EN-1 (Department of Energy and Climate Change, 2011) states that assessment should include effects on “*landscape components and landscape character*”, the policy is not prescriptive on how this assessment should be done, nor does it state that the effects on landscape components and landscape character should be assessed separately.

17.3.2 As explained in chapter D10 (landscape and visual) of the Environmental Statement (ES) [APP-129] at paragraph 10.3.3, “*...the effect on ... constituent elements, such as trees, woods or hedgerows, has been considered as part of the effects on landscape and seascape character and not as individual receptors.*” Appendix D10-6 of the ES [APP-197] provides an assessment of the effects on the landscape fabric in relation to each landscape character receptor, with the greatest level of detail provided in relation to the Local Landscape Character Areas (LLCAs) and Local Seascape Character Areas (LSCAs) in tables 1-2 and 1-4 respectively, which describes the specific changes within each area under the ‘direct effects’ descriptions.

17.3.3 The approach taken to the assessment of landscape fabric (the constituent elements/components of the landscape) in chapter D10 of the ES [APP-129]

is consistent with that taken in the landscape and visual chapter of the Wylfa Newydd DCO Project Site Preparation and Clearance ES (November 2017), accompanying the application for planning permission under the Town and Country Planning Act 1990, which IACC has resolved to grant.

- 17.3.4 In respect of chapter 17, paragraph 2.2.4, Horizon notes that an explanation of how the value of landscape elements comprising the fabric of the landscape has been considered in relation to the value of landscape character is provided in paragraphs 10.3.88 to 10.3.95 of chapter D10 of the ES [APP-129].
- 17.3.5 In respect of chapter 17, paragraph 2.2.6, Horizon agrees with IACC that the effects on the landscape fabric (features) of the WNDA outside the Power Station Site will be negligible adverse once the proposed planting mitigation measures have become established.
- 17.3.6 However, Horizon considers that proposed planting mitigation would have become effective by year 15 of operation and it would not take 20 years to become effective as implied by IACC. Paragraph 10.4.38 of chapter D10 of the ES [APP-129] sets out the heights that embedded mitigation planting is assumed to have reached by year 15 of operation (woodland planting 7m, scrub planting 3m and dense trimmed hedgerow planting 2m). This is a conservative assumption since some planting implemented early during construction and in advance of operation, for example, planting on the landscape mound adjacent to Tregele, would have been established for considerably longer than 15 years.
- 17.3.7 With regard to potential indirect effects on landscape fabric outside the WNDA referred to by IACC in paragraph 2.2.7 of chapter 17, it is noted that measures to control the effects on air quality, surface water and soil water are set out in the Wylfa Newydd CoCP [REP2-031] and Main Power Station Site sub-CoCP [REP2-032].

Effects on landscape and seascape character

- 17.3.8 IACC correctly states in paragraph 2.2.10 of chapter 17 that Horizon's assessment of landscape and seascape character "*does not separately assess the direct and indirect impacts...*" on landscape and seascape character. However, it is not clear what significant effects on landscape and seascape character IACC considers have not been identified, unless this comment refers to sub-division of the significance level of direct and indirect effects.
- 17.3.9 Direct effects on landscape character comprise physical changes to the landscape within the affected character area. This could include the removal, or alteration of existing features or addition of new features or both, with resulting changes to the character of the landscape.
- 17.3.10 A landscape character area may also be affected by changes taking place outside its defined boundary; these effects are known as indirect effects because they do not physically affect the character area. Such effects can result from intervisibility with changes to characteristics within another character area, which form an important or noticeable characteristic of the

affected area, for example, changes to a ridgeline providing a backdrop to a character area or changes to the rural context of a character area by the introduction of uncharacteristic elements. However, just because there is intervisibility with a change, such as new development, from a potentially indirectly affected character area, this does not necessarily mean there will be a change to its landscape character. For a change to occur there must be an appreciable change to a particular characteristic of the indirectly affected landscape character area.

- 17.3.11 In some cases, a landscape character area may be affected by both direct physical changes and indirect changes taking place beyond its defined area. Direct and indirect effects would not be experienced in isolation and therefore combining the assessment of direct and indirect effects into one conclusion for magnitude of change and one conclusion for significance of effect provides a more realistic assessment of the effects on a particular character area and avoids double counting the effects on landscape and seascape character.
- 17.3.12 In paragraph 2.2.10 of chapter 17, IACC also states that Horizon's assessment *"...does not clearly identify the geographical areas within which the impacts on landscape and/or seascape character would be significant..."* However, appendix D10-6 of the ES [APP-197] provides an assessment of the geographical extent of effects on each landscape and seascape character area in accordance with the criteria set out in table B10-16 of chapter B10 of the ES [APP-075], which align with good practice set out in the *Guidelines for Landscape and Visual Impact Assessment, Third Edition* (Landscape Institute and Institute of Environmental Management and Assessment, 2013.) The assessment of geographical extent of effects has therefore contributed to the overall conclusions on magnitude of change for each receptor. Given the assessment of geographical extent provided and the description of effects set out in appendix D10-6 of the ES [APP-197], it is not considered necessary or practical to 'map' the extent of significant effects within each landscape or seascape character area, as implied by IACC's comment in paragraph 2.2.10.
- 17.3.13 Horizon generally agrees with IACC's conclusions on landscape and seascape character effects in paragraph 2.2.11 of chapter 17, with the following exceptions:
- With respect to the directly affected part of LLCA 1 (North Drumlins), LLCA 2 (Wylfa Landscape Setting) and LSCA 2 (Porth-y-Pistyll), Horizon considers that the short-term effect of the Site Preparation and Clearance would be moderate adverse in the short term and not major as IACC concludes. This is because even though there would have been a noticeable loss of characteristic features within these areas, other characteristic features would remain, such as the rolling drumlin landform and views to the sea.
 - With respect to the directly affected part of LLCA 2 (Wylfa Landscape Setting), Horizon considers that the long-term and permanent residual effect of operation of the Power Station would be moderate adverse and not major as IACC concludes. This is because there would have

been a moderate loss of characteristic features and introduction of uncharacteristic features, affecting this generally inward facing medium sensitivity character area, which is already affected by intervisibility with the Existing Power Station.

17.3.14 Horizon also generally agrees with IACC's conclusions in paragraph 2.2.12 of chapter 17, with the following exceptions:

- The effects on landscape character would reduce 15 years into operation not 20 years, for the reasons explained above in response to paragraph 2.2.6 of chapter 17.
- With respect to the part of LSCA 4 (Wylfa Head) within the WNDA, Horizon considers that the effect at summer year 15 of operation would be minor adverse and not significant rather than major to moderate adverse and significant as IACC concludes. This is because scrub and species rich grassland would have established within the directly affected part of the character area and intervisibility with a small part of the Power Station would only affect the character to a limited extent, due to the influence of the Existing Power Station.

17.3.15 In relation to IACC's comments at paragraph 2.2.14 of chapter 17, Horizon does not agree that there would be significant effects from Site Preparation and Clearance on all of the listed LCAs, LLCAs and LSCAs within approximately 5km of the WNDA. Significant effects from Site Preparation and Clearance would not generally extend beyond approximately 1km from the WNDA, given the relatively minor nature of the works. As stated in paragraph 10.5.39 of chapter D10 of the ES, the *"effects of the Site Preparation and Clearance would be relatively localised"* and a number of LLCAs and LSCAs were scoped out of the assessment for this stage *"on the basis that there is unlikely to be a significant effect on these areas"*. These areas include LLCA 8 (Llanfairynghornwy), LLCA 9 (Mynydd y Garn), LLCA 13 (North Coast Hinterland), LSCA 8 (North Coast Cliffs) and LSCA 11 (Hen Borth), which IACC claims would experience a significant effect. Effects on these areas were therefore not assessed in the Wylfa Newydd DCO Project Site Preparation and Clearance ES (November 2017) accompanying the planning application submitted to IACC, which IACC has resolved to grant. Furthermore, the effects on LLCA 4 (Cemaes), LLCA 6 (Tregele), LLCA 7 (A5025 Farmland), LSCA 1 (Cemlyn Bay) and LSCA 4 (Wylfa Head) during Site Preparation and Clearance have been assessed to be minor adverse and therefore not significant; the effect on LLCA 5 (Llanfechell Farmland) and LSCA 7 (Porth Padrig) has been assessed to be negligible adverse and therefore not significant; while the assessment concludes that there would be no change to the landscape character of LLCA 11 (Llanfechell) and LSCA 6 (Inner Cemaes Bay) during Site Preparation and Clearance. Horizon also consider that the indirect effect on LCA 4 (North West Coast) and LCA 5 (North West Anglesey) would be minor adverse and not significant during Site Preparation and Clearance, rather than major to moderate adverse and significant as IACC concludes.

- 17.3.16 Horizon does not agree with IACC's statement in paragraph 2.2.14 of chapter 17 that there would be a significant effect on all of the LLCAs and LSCAs listed within 5km of the WNDA during Main Construction. This is because the effects on LLCA 11 (Llanfechell), LLCA 13 (North Coast Hinterland) and LSCA 8 (North Coast Cliffs) have been assessed as minor adverse and therefore not significant.
- 17.3.17 In relation paragraph 2.2.16 of chapter 17, Horizon does not agree with the 'blanket' IACC assessment that there would be significant effects on landscape character up to 5km from the WNDA until the end of operation. This is because effects on landscape character diminish with distance and the permanent residual effect at LLCA 5 (Llanfechell Farmland), LLCA 8 (Llanfairynghornwy), LLCA 9 (Mynydd y Garn), LSCA 4 (Wylfa Head), LSCA 5 (Outer Cemaes Bay), LSCA 7 (Porth Padrig), LSCA 10 (Outer Cemlyn Bay) and LSCA 11 (Hen Borth) has been assessed as minor adverse and therefore not significant, while the permanent residual effect on LLCA 11 (Llanfechell), LLCA 13 (North Coast Hinterland) and LSCA 6 (Inner Cemaes Bay) has been assessed as negligible adverse and not significant.
- 17.3.18 As stated in chapter D10 of the ES [APP-129], the *"Effects on the landscape character would be greatest within approximately 3km of the Power Station, beyond which the dominance of the new buildings and structures would begin to diminish."*

Isle of Anglesey AONB and North Anglesey Heritage Coast

- 17.3.19 With regard to paragraphs 2.2.18 and 2.2.19 of chapter 17, Horizon confirms that both the direct and indirect effects on the landscape character of the Area of Outstanding Natural Beauty ("AONB") have been assessed, following the same approach which IACC acknowledges in paragraph 2.2.10 has been taken for the assessment of effects on landscape and seascape character. The assessment does not separately assess the direct and indirect effects for the reasons explained above under responses relating to landscape and seascape character. (Further explanation on this issue is provided in Horizon's response to FWQ.7.0.4 of the Examining Authority's First Written Questions as submitted at Deadline 2 [REP2-002].) It is not clear what significant indirect effects on the landscape and seascape character of the AONB and Heritage Coast IACC considers have not been identified, unless this comment refers to sub-division of the significance level of direct and indirect effects.
- 17.3.20 In relation to paragraph 2.2.27 of chapter 17, as stated in chapter D10 of the ES, the *"greatest indirect effects on the landscape character and setting of the AONB during operation would be experienced within approximately 3km of the Power Station."*

Mynydd Mechell and Surrounds Special Landscape Area (SLA)

- 17.3.21 Horizon does not agree with IACC's statement in paragraph 2.2.28 of chapter 17 that there are likely to be moderate adverse indirect effects as a result of the Site Preparation and Clearance, main construction and operational phases of the Wylfa Newydd Development on Mynydd Mechell and Surrounds

SLA. Horizon does not consider that the effects on the landscape character of this SLA would be significant. This is in part due to distance, as the boundary of the SLA is 1.4km from the boundary of the WNDA, but 2.8km from the tallest elements of the Power Station (the main stacks). It is also due to the limited intervisibility of the SLA to the Wylfa Newydd Development from publicly accessible areas and since intervisibility of the Power Station on higher ground within the SLA would be within the context of the Existing Power Station. There would therefore be limited perceptual changes to its key characteristics, as set out in appendix D10-6 of the ES [APP-197]. It is noted that IACC does not provide any justification for its assessment conclusions. However, it is agreed that the effects would not undermine the purpose of this designation to protect the landscape from inappropriate development within the designated area.

Policy Position

- 17.3.22 Horizon acknowledges the policy overview in paragraphs 2.3.1 to 2.3.8 inclusive of chapter 17 and would add that Horizon's response to FWQ.7.0.4, as submitted at Deadline 2 [REP2-002], provides a summary of how the landscape and visual mitigation measures for the Wylfa Newydd DCO Project address policies relating to the conservation and enhancement of the AONB, the effects on published landscape character areas, protection of SLAs and use of LANDMAP to inform assessment.

Gaps in information

Impact assessments

- 17.3.23 Please refer to Horizon's response on assessment of effects on landscape fabric above.
- 17.3.24 Please refer to Horizon's response on assessment of direct and indirect effects on landscape and seascape character above.
- 17.3.25 Please refer to Horizon's response to FWQ.7.0.4 as submitted at Deadline 2 [REP2-002] for a summary of how the landscape and visual mitigation measures for the Wylfa Newydd DCO Project address policies relating to the conservation and enhancement of the AONB.

Landform design

- 17.3.26 With regard to paragraph 2.4.3 of chapter 17, maximum parameters (heights and slope gradients) for construction landforms (temporary mounds) are provided in Schedule 3 Requirement WN2 of the Draft DCO [REP2-020]. The areas which these parameters apply to will, at the beginning of construction, be at existing ground level and during construction will be raised in height within the defined parameters and then later remodelled as part of the final landscaping. The dynamic nature of the mounds means that a minimum parameter cannot be defined. Horizon is committed to providing screening landform to local settlements and visual receptors at Cemaes and Treglele to mitigate construction impacts, this is secured through the design principles within the Landscape and Habitat Management Strategy ("LHMS") [paragraph

4.1, APP-424]. The parameters defined in Requirement WN2 of the Draft DCO [REP2-020] apply to construction landforms (temporary mounds), they do not control the depth of excavation and associated temporary lowering of ground levels.

- 17.3.27 The stability of temporary and permanent slope gradients steeper than 1:3 referred to in paragraph 2.4.3 of chapter 17 is a matter for detailed design development, which will be finalised post grant of DCO.

17.4 Visual

Context

- 17.4.1 In relation to IACC's statement paragraph 3.1.4 of chapter 17 that *"it is important that the design of the built development, landform and planting fully takes into consideration the views and visual amenity of people living in properties that are located outside the two main settlements which include Llanfairynghornwy and Llanfechell"*, it should be noted that visual effects on these communities have been assessed as part of the visual assessment in chapter D10 of the ES (landscape and visual) [APP-129] and appendix D10-7 (visual effects schedule) [APP-198]. However, due to the intervening landform between Llanfechell and the WNDA, which would screen most of the proposed Power Station, no specific landscape mitigation is considered required to specifically address visual effects on this community during operation (refer to Representative Viewpoint 3). Furthermore, during construction, it would not be practicable to screen views from Llanfechell of construction cranes above the intervening landform, due to the heights of the cranes.

Impacts and evidence base

Evidence base

- 17.4.2 With reference to IACC's comments at paragraphs 3.2.5 and 3.2.13 of chapter 17 regarding the lack of assessment of visual impacts upon residents in properties outside the four communities in the vicinity of the WNDA (Cemaes, Tregle, Llanfairynghornwy and Llanfechell), the approach taken to Horizon's assessment has been to assess the visual impact on communities from publicly accessible locations rather than individual resident's views (which forms part of residential amenity) from private land. As explained in chapter B10 of the ES (landscape and visual) [APP-075], this approach was set out in the methodology document provided to IACC and discussed during the stakeholder meeting held on 1 April 2016 where IACC expressed support for a community views approach to the assessment.
- 17.4.3 Further information on the approach taken to the assessment of community views is provided within chapter D10 of the ES [APP-129], which explains that the assessment of visual effects is based upon 'representative' views, that is typical views, likely to be experienced by the community in general from publicly accessible locations, rather than individual residents within the community. This is considered consistent with the Landscape Institute and

Institute of Environmental Management and Assessment's *Guidelines on Landscape and Visual Assessment, Third Edition* (GLVIA3) (Landscape Institute and Institute of Environmental Management and Assessment, 2013), which advocates a proportionate approach to LVIA and recommends that representative viewpoints should be *"selected to represent the experience of different types of visual receptor, where larger numbers of viewpoints cannot all be included individually and where the significant effects are unlikely to differ"*.

- 17.4.4 Therefore, as explained in chapter B10 of the ES [APP-075], the selection of representative viewpoints, which has formed the basis of the visual assessment of effects on views from local communities, is not intended to *"identify every possible view available, but to identify a representative range of viewpoints that typify the views experienced by people living... in... the area."* Residents in close proximity of the boundary of the WND A are likely to experience effects of a similar nature to those assessed for representative community viewpoints near the WND A, for which significant visual effects are reported during construction. Other representative viewpoints within the study area provide an indication of the level of visual effects beyond the four main communities. With respect to the embedded landscape mitigation, as described and illustrated in the LHMS [REP2-039], this would not only provide mitigation for the main communities, but also scattered properties surrounding the WND A.
- 17.4.5 In the comments previously provided by IACC in its position letter *Review of Horizon's DCO Submission (Wylfa Newydd Development Area)* dated 1 October 2018, IACC did not raise concerns regarding the community views assessment approach and did not request that visual effects on residential properties outside the four communities should be assessed.
- 17.4.6 In relation to IACC's reference to the *"visual impact assessment methodology's reliance upon viewpoint assessment"* in paragraph 3.2.7 of chapter 17, it should be noted that the use of viewpoints in visual impact assessment is consistent with good practice guidance in GLVIA3. The detailed visual effects schedule provided in appendix D10-7 of the ES [APP-198] provides transparency on how the conclusions reached on the assessment of significance for each receptor group has been derived.
- 17.4.7 In relation to the observation in paragraph 3.2.9 of chapter 17 that IACC *"does not agree that, when assessed as a single visual receptor group, the visual effects that will be experienced by people living in Cemaes will be not significant"*, Horizon assumes that this comment is made with reference to the minor adverse and therefore not significant residual effect stated for the community in Cemaes during summer year 15 of operation in table D10-44 of chapter D10 of the ES [APP-129], since for all other assessment stages significant adverse effects are identified in chapter D10. IACC has not provided any reasoning why it believes there would be a significant visual effect on Cemaes during summer year 15 of operation. Horizon believes that the conclusion of its assessment is correct, as much of Cemaes will be screened by existing topography or built development, and further visual screening would be provided by proposed landscape mounding and woodland

planting by summer year 15. The Power Station would therefore not be a clearly noticeable feature in views from Cemaes when considering both worst case views from the western edge of the settlement, as well as the limited views from elevated locations within the settlement.

Construction Period

- 17.4.8 It is not clear what IACC means by its statement in paragraph 3.2.10 of chapter 17 that *“Horizon also assess that there will be no variance within these six [receptor] groups between viewpoints where visual effects would be significant and viewpoints where visual effects would be not significant.”*
- 17.4.9 With reference to IACC's observation in paragraph 3.2.10 of chapter 17 that *“no viewpoint visualisations have been produced that show the visual impacts during the construction period”*, Horizon is considering providing illustrative construction visualisations to supplement the current information on construction effects.
- 17.4.10 IACC observes in paragraph 3.2.11 of chapter 17 that there are no representative viewpoints located on sections of the Wales Coast Path (“WCP”) and Copper Trail (National Cycle Network Route 566) that would be temporarily or permanently diverted. This is because it is not considered appropriate to assess the visual impact from a section of footpath or cycleway that will cease to exist; nor is it considered practical to assess the visual impact from a new route which does not yet exist. Reference should instead be made to the assessment of effects in chapter D-4 of the ES (public access and recreation) [APP-123]. However, a number of representative viewpoints on the WCP and Copper Trail are included in the visual impact assessment, such as views at close range to the WNDA (Viewpoints 27, 10, 14 and 13 on the WCP) and Viewpoint 37 on the Copper Trail and inland route of the WCP at the western extent of the WNDA. In addition, a number of other representative local and middle-distance views along the WCP between Carmel Head to the west and Ogof Gynfor to the east, and along the Copper Trail between the route near Taldrwst to the west and near Hafodllin to the east, have been included in the assessment. These viewpoints are considered to provide a proportionate and representative range of the types of views that would be experienced from the two routes. As such, Horizon does not consider the statement made at paragraph 3.2.11 of chapter 17 to be accurate in suggesting that the assessment results *“in an under assessment of the spatial extent of significant negative effects upon the people who will use these routes in construction and operation periods.”*
- 17.4.11 Horizon does not agree with IACC's statement in paragraph 3.2.12 of chapter 17 that the information provided by Horizon is insufficient for IACC to form an opinion on visual impacts, mitigation and interaction between visual impacts and other environmental impacts for Cemaes and Tregele. Representative Viewpoints 12, 13 and 16 in Cemaes and Representative Viewpoint 18 in Tregele are considered to provide examples of ‘worst case’ visual effects on these communities. Furthermore, the interaction between visual impacts and other environmental impacts is covered in the assessment of combined topic

effects presented in chapter D16 (combined topic effects) [APP-135], which makes specific reference to residential receptors in Cemaes and Treglele.

17.4.12 However, at the request of IACC in a meeting held on 17 October 2018, Horizon has agreed to consider providing supplementary assessment of three additional representative viewpoints for Cemaes and one additional viewpoint at Treglele, in order to provide further information on the likely effects on visual amenity within the communities of Cemaes and Treglele. As requested by IACC at that meeting, this assessment will be informed by preparation of additional photomontage views from close to the Illustrative Viewpoints F and G in appendix D10-5 of the ES (illustrative viewpoints) [APP-196] on the western edge of Cemaes (to provide new representative viewpoints) and a new representative viewpoint from high ground within the settlement, as well as an additional photomontage from another new representative viewpoint within Treglele as well as from the current Representative Viewpoint 18 on the western edge of Treglele. Horizon is planning to submit these documents into Examination at Deadline 6 (19 February 2019).

17.4.13 The IACC suggests at paragraph 3.2.14 of chapter 17 that “*advance planting, other forms of temporary or permanent screening and/or amendments to the detailed construction programme for the formation of some of the mounds so that parts of some mounds do not have to be re-profiled at the end of the construction period*”. With the exception of enhancements to existing planting on boundaries, planting in advance of construction is not considered practicable due to the space required for earthworks and construction. As set out in chapter D10 (landscape and visual) [APP-129], the additional mitigation measures for construction include enhancements to existing boundary features, which could include “*infill planting and management to improve structure and species diversity, and introduction of hedgerow trees where appropriate*”, in accordance with the LHMS [REP2-039] and Requirement WN8 of the Draft DCO [REP2-020]. However, the proposed landscape mounding will provide effective visual mitigation much sooner than planting, which would take time to establish. As explained in chapter D10 of the ES (landscape and visual) [APP-129], it is proposed that landscape mounding and associated landscaping be sequenced in accordance with the Phasing Strategy [APP-447], with the aim of reducing the adverse visual effects of construction and implementing landscape mitigation provided by landscape mounding at the earliest practical opportunity to limit the extent of disturbance. This would include implementation of the proposed landscape mound to the west of Treglele, to be delivered prior to Main Construction works. An updated Phasing Strategy [APP-447] will be submitted at Deadline 4 (17 January 2019).

Operation period

17.4.14 Horizon welcomes IACC's acknowledgement in paragraph 3.2.17 of chapter 17 that adoption of suitable colour scheme for the Power Station has the potential to reduce visual impacts for some visual receptors.

17.4.15 While IACC states in paragraph 3.2.18 of chapter 17 that it broadly agrees with the conclusions of the visual assessment for operation in the ES (chapter D10 (landscape and visual) [APP-129] and appendix D10-7 [APP-198]), a smaller number of exceptions are noted. Responses to these exceptions are set out below, explaining why Horizon considers that the assessed conclusions for these viewpoints are justified. For brevity, the responses have been grouped by relevant additional mitigation measures as opposed to receptor group.

Long-term landscape management plan

17.4.16 With regard to paragraph 3.2.19 and 3.2.23 of chapter 17, Horizon wishes to clarify the apparent IACC misconception that some reductions in the significance of residual effects at year 15 of operation is as a consequence of the long-term landscape management plan. This is not the case for any representative viewpoint, although clearly landscape management will help ensure the successful establishment of planting mitigation. Instead, the assessed reduction is always due to another additional mitigation measure.

Natural colour scheme of the Power Station

17.4.17 In relation to IACC's request for further detail regarding the colour scheme for the Power Station in paragraph 3.2.17 of chapter 17, Horizon considers that the aspirations set out for the natural colour scheme (explained in the paragraph below) are sufficient to support the assessed reductions in the residual visual effects of some receptors, from significant to not significant. This includes the minor adverse residual effects reported for Representative Viewpoint 9 (on the WCP) and Representative Viewpoint 2 (junction between public right of way (PRoW) and the A5025), during winter year 1 and summer year 15 of operation, which is contrary to what IACC states in paragraphs 3.2.21, 3.2.26 and 3.2.28 of chapter 17. The reason Horizon has arrived at these conclusions, is that the Power Station would only be visible within a small part of both of these views and, when considering the application of a natural colour scheme on the buildings, the Power Station would only alter the overall composition of the view to a limited extent.

17.4.18 The full wording of the relevant mitigation measure listed in table D10-41 in chapter D10 (APP-129) states that *"A colour scheme based on natural colours to be developed in accordance with the design principles in volume 2 of the Design and Access Statement [APP-408], which would seek to: break down the scale and massing of the Power Station buildings; help integrate them into the landscape, using a similar approach to that used for the Existing Power Station; and be compatible with operational and safety requirements for a nuclear facility."* This mitigation has been secured as a design principle in volume 2 of the Design and Access Statement [APP-408].

17.4.19 Schedule 3 of the Draft DCO [REP2-020], Requirement WN3, requires that *"No construction may commence in respect of a building or other structure ... until plans and written details of the design (including size, external appearance, siting and materials) have been submitted to IACC for approval."* This would allow IACC to ensure that the colour scheme for the Power Station

meets the design principles relating to the Power Station in volume 2 of the Design and Access Statement [APP-408], before commencement of construction.

- 17.4.20 In paragraph 3.2.22 of chapter 17, IACC makes it clear that they do not agree with the reduction of effect assessed at Representative Viewpoint 10 on the WCP, from moderate adverse and therefore significant at winter year 1 to minor adverse and not significant at summer year 15 (appendix D10-7 [APP-198]). The reason for the reduction in effect at this viewpoint is the establishment of the proposed embedded planting mitigation on the landscape mounds, which would help to integrate the mounding into the landscape in views south-east. Whilst the planting mitigation would not affect views of the Power Station or breakwater, these features would be seen in the context of the Existing Power Station, which is a prominent existing feature in the view. As such, the overall composition of the view would only be altered to a limited extent.
- 17.4.21 At Representative Viewpoint 31 on the WCP/ Copper Trail/ Cemlyn Road, the minor adverse and therefore not significant effect reported for winter year 1 and summer year 15 of operation in appendix D10-7 [APP-198], is not a result of the additional mitigation referred to by IACC in paragraph 3.2.26 of chapter 17. The reason the effect has been assessed as minor adverse is that the existing *“intervening landform would screen most of the Power Station buildings, [though] barely perceptible glimpses of the upper parts of buildings would be visible, seen within the context of the Existing Power Station and associated OHLs and pylons”* (appendix D10-7 [APP-198]). Furthermore, there would only be barely perceptible views of the western breakwater beyond the shingle bar at Cemlyn lagoon. As such, this would only alter the overall composition of the view to a limited extent.

Natural appearance of sedimentation ponds

- 17.4.22 IACC states that it is not demonstrated how measures relating to the detailed design of sedimentation ponds would reduce the residual adverse effect on some viewpoints so as to be not significant (see paragraphs 3.2.19, 3.2.20, 3.2.23 and 3.2.27 of chapter 17).
- 17.4.23 The principle of the mitigation of the sedimentation ponds is set out in table D10-41 of chapter D10 of the ES [APP-129] and states that *“Sedimentation ponds for landscape mounding to be designed to achieve a more natural appearance for the final landscape scheme, in keeping with the local landscape character, and in accordance with the landscape and habitat design principles in the Landscape and Habitat Management Strategy”* [REP2-039]. This has been secured within a design principle in the LHMS [APP-424 and APP-245] (among other principles relating to drainage). Figures 6.14a and 6.14b of the LHMS [REP2-039] provide a typical plan and section illustrating the principle of a natural appearance for the sedimentation ponds. This is considered sufficient to support the conclusions of the reductions in residual visual effects at Representative Viewpoint 13 on the WCP for winter year 1 to minor adverse and summer year 15 of operation to negligible adverse, and at viewpoint 16 on a PRow at the edge of Cemaes to minor adverse for summer

year 15 of operation. Furthermore, Schedule 3 of the Draft DCO [REP2-020] Requirement WN9 requires that the final landscape and habitat scheme must be prepared in accordance with the principles in chapter 4 of the LHMS [REP2-039] and must include details about a number of specific elements including, amongst other things, the permanent drainage designs. The final landscape and habitat scheme must be submitted to IACC for approval and this requirement will therefore allow IACC to ensure that the detailed design of the sedimentation ponds meets the principles set out in the LHMS [APP-424 and APP-245].

Other observations regarding operational assessment

- 17.4.24 In relation to IACC's observation in paragraph 3.2.30 of chapter 17, that *"Horizon do not provide a quantitative assessment of the numbers of people resident in the communities"* that would be affected by significant adverse visual effects, it should be noted that GLVIA3 makes it clear that *"assessing visual effects is not a quantitative process"* (paragraph 6.3), although it is recognised that establishing the approximate number of receptors that would be affected can be useful, where possible, and that this may simply *"be a relative judgement, for example noting comparatively few people in one place compared with many in another"* (paragraph 6.15).
- 17.4.25 The visual impact assessment is therefore considered to be consistent with this guidance, as the assessment at each representative viewpoint has considered the number of viewers who would be likely to be affected as part of the conclusions drawn on 'geographical extent'. This is made clear in the criteria in table B10-17 of chapter B10 of the ES [APP-075], which refer to numbers of viewers in terms of 'large', 'moderate', 'small' or 'very small'. As an example, the geographical extent at Representative Viewpoint 16 has been assessed as 'medium', reflecting that open close-range views to the WNDA from Cemaes would be likely to be experienced by a 'moderate' number of viewers, as views from much of the community in Cemaes would be restricted by topography and built development.
- 17.4.26 IACC also states in paragraph 3.2.30 of chapter 17 that *"Horizon's visual impact assessment does not provide a firm indication of the lengths of the sections of the various roads, cycle routes, the Wales Coast Path nor the local public rights of way network where users will sustain significant adverse effects"*. As explained above, visual assessment is not a quantitative process and GLVIA3 also notes that *"the emphasis in EIA is on [identifying] likely significant effects rather than on comprehensive cataloguing of every conceivable effect that might occur"* (paragraph 7.5). It is therefore not intended to identify every possible view available from these routes, but a selection of representative views.
- 17.4.27 As defined in paragraph 6.19 of GLVIA3, a representative viewpoint is *"selected to represent the experience of different types of visual receptor, where larger numbers of viewpoints cannot all be included individually and where the significant effects are unlikely to differ - for example, certain points may be chosen to represent the views of users of particular public footpaths and bridleways"*. The viewpoints selected are considered to provide a

proportionate and representative range of the types of views that users would experience from the different routes. However, for each representative viewpoint, the extent of the route that would be likely to be affected by a particular type of view ('geographical extent'), has been considered in the assessment. The criteria for assessing the geographical extent of visual impact is set out in table B10-17 of chapter B10 of the ES [APP-075], which refers to the proposal being seen from the 'majority', 'moderate part', 'limited sections' or a 'very limited section' of a linear route. For example, the geographical extent of the visual impact at Representative Viewpoint 11 on the WCP at Llanbadrig Point, has been assessed as 'medium' because panoramic views south-west towards the WNDA are available from a 'moderate part' of the WCP in this location, due to the gently undulating topography restricting some views. Furthermore, the assessment narrative in section 10.5 of chapter D10 of the ES [APP-129] provides a description of the changing views for users of the routes, with reference to the representative viewpoints. For the main routes, including the WCP, Copper Trail and the A5025, the assessment narrative has been split into a description of the views approaching the WNDA from both the west or south-west, and east to provide a comprehensive baseline description.

17.4.28 In addition, with reference to IACC's observations in paragraph 3.2.30 of chapter 17, chapter B10 of the ES [APP-075] explains that the *"selection of key representative viewpoints to be used for the visual impact assessment was discussed with IACC and NRW. Visual receptors identified for the assessment of visual impact were set out in the Pre-Application Consultation Stage Two Preliminary Environmental Information Report. A stakeholder meeting was held with IACC and NRW on 1 April 2016, to discuss the proposed methodology for the LVIA, following which minor amendments were made to address comments."*

17.4.29 During the meeting on the 1 April 2016, IACC commented on the proposed methodology for the visual assessment (which had been provided to IACC in advance of the meeting, as well as the locations of the proposed viewpoints which had been issued as an appendix to the landscape and visual chapter of the EIA Progress Report (2016)). The comments received from IACC on the Stage Two and Stage Three Preliminary Environmental Information Reports, IACC's *Response to Scoping Request: Horizon Nuclear Power* (April 2016) and IACC's *Response to Scoping Addendum Request: Horizon Nuclear Power* (June 2017) did not raise any concerns on the proposed approach to assessment or selection of representative viewpoints. Further to this, draft Environmental Statement chapters including the landscape and visual chapter, were provided to statutory and key non-statutory stakeholders including IACC during September 2017.

Policy position

17.4.30 In paragraph 3.3.1 of chapter 17, IACC states that *"additional mitigation and also compensation"* is required to address local visual impacts from construction and operation. Chapter D10 of the ES [APP-129] sets out extensive embedded and good practice mitigation in section 10.4, as well as

additional mitigation measures to address visual effects in table D10-40 for construction and table D10-41 for operation, including references to the appropriate securing documents.

- 17.4.31 With references to IACC's suggestions for 'off-site' planting and improvements in paragraphs 3.3.3, 3.3.7 and 3.3.10 of chapter 17, it is noted that IACC has not suggested any specific locations where they consider off-site planting would be appropriate. Horizon considers that in general landscape and visual mitigation is most effectively provided 'at source' since measures within the WNDA will mitigate landscape and visual effects on a broad range of surrounding locations and viewpoints, and there is adequate space to provide meaningful mitigation. By contrast off-site mitigation tends to provide mitigation for a limited location, specific receptor or viewpoint. It is also noted that off-site mitigation requires either control of the land concerned or agreement of the landowner. Landowners are more likely to be inclined to agree to off-site mitigation where they would be the direct beneficiaries. It is acknowledged that in certain circumstances, off-site mitigation can play a role in supplementing on-site mitigation, but IACC has not put forward any rationale for off-site mitigation or any specific suggestions.
- 17.4.32 With respect to IACC's comments in paragraph 3.3.5, 3.3.6 and 3.3.10a, b, c, d, h, i and j of chapter 17, Horizon has proposed payments to IACC as part of the Draft DCO s.106 Agreement for contributions for implementing improvements to, and maintenance of, the existing PRow Network (as defined in the Draft DCO s.106 Agreement to encompass PRow in the vicinity of the WNDA). Further proposed payments to IACC are also set out in the Draft DCO s.106 Agreement for contributions to improved signage on the Copper Trail cycle route and updates to the Sustrans Copper Trail information leaflets.
- 17.4.33 In relation to paragraph 3.3.10e of chapter 17, Horizon wishes to note that the landscape scheme for the WNDA will be designed in accordance with the high-quality design principles set out in the LHMS [REP2-039].
- 17.4.34 In relation to paragraph 3.3.10g of chapter 17, the additional mitigation measures listed in table D10-41 of chapter D10 [APP-129] propose *"Implementation of long-term landscape management strategy to ensure successful establishment of proposed landscaping and long-term viability of planting on the Wylfa Newydd Development Area, in accordance with the landscape and habitat design principles in the Landscape and Habitat Management Strategy [REP2-039]."* This would *"include quarterly landscape site inspections for a five-year period after implementation, followed by annual inspections for second five-year period (total 10 years), to ensure the landscape planting scheme successfully establishes and achieves the intended mitigation. In the event that these inspections identify that planting has not established, replacement planting on a like for like basis would be undertaken during the first available planting season."* This mitigation has been secured through a design principle in the LHMS [APP-424 and APP-425].

Gaps in information

- 17.4.35 Please refer to the response to other observations regarding operational assessment in relation to IACC's comment in paragraph 3.4.1 of chapter 17 LR regarding the methodology for the visual impact assessment.
- 17.4.36 It is not clear why in paragraphs 3.4.2, 3.4.3 and 3.4.4 of chapter 17, IACC claims that the *“visual impact assessment does not allow IACC to gain a comprehensive understanding of the individual and cumulative length of the sections”* of the WCP, Copper Trail, local PRoWs and local road network or the proportion of open access land *“where negative significant visual effects will be experienced by”* the users of these routes and land, given the extensive visual impact assessment provided. As explained above, the visual impact assessment has been based on the assessment of representative viewpoints in accordance with best practice guidance in GLVIA3 and visual assessment is not a quantitative process. As such, quantifying the ‘individual’ lengths of the different routes or areas that would be affected is not relevant. Furthermore, the reference to ‘cumulative’ is not relevant, as the assessment of cumulative effects refer to *“additional changes to the landscape or visual amenity caused by the proposed development in conjunction with other developments (associated with or separate to it), or actions that occurred in the past, present or are likely to occur in the foreseeable future”* (GLVIA3 paragraph 7.2). The viewpoints selected are ‘sequential’ and are considered to provide a proportionate and representative range of the types of views that would be experienced from the different routes and open access land, and to represent the ‘worst case’ views available from these. Refer to response to paragraph 3.2.30 of chapter 17 in relation to the assessment of ‘geographical extent’.

Wales Coast Path

- 17.4.37 The visual impact assessment narrative in chapter D10 of the ES [APP-129] considers the overall effects on users of the WCP based on the detailed assessment of representative viewpoints in appendix D10-7 [APP-198]. The assessment concludes that there would be a significant residual adverse effect on all of the 12 representative viewpoints assessed during construction, but this would reduce to only six representative viewpoints with significant residual effects during operation (Viewpoints 25, 26 and 27 approaching from the west, and Viewpoints 29, 11 and 14 approaching from the east). As such, significant residual visual effects have only been assessed intermittently at viewpoints between Cemlyn Bay and Ogof Gynfor during operation; which add up to a section of the WCP up to approximately 10km long, not 15.5km as IACC states in paragraph 3.4.2 of chapter 17 (as the residual effect at Viewpoint 9 near Carmel Head has not been assessed as significant during operation). However, views from this 10km section would not be continuous and the significance of residual effect on some representative viewpoints along parts of the WCP within this section would not be significant, including those at Viewpoints 31 and 37 (on the inland route around Cemlyn lagoon), Viewpoint 10 (at Wylfa Head), Viewpoint 13 (on the edge of Cemaes) and Viewpoint 12 (within Cemaes).

Copper Trail/National Cycle Route 566

17.4.38 The visual impact assessment narrative in chapter D10 of the ES [APP-129] considers the overall effects on users of the Copper Trail based on the detailed assessment of representative viewpoints in appendix D10-7 [APP-198]. The assessment concludes that there would be a significant residual adverse effect on five of the six representative viewpoints assessed during construction, but this would reduce to only two representative viewpoints with significant residual effects during operation (Viewpoints 28 and 8 approaching from the west), both located on more elevated sections of the route near Mynydd y Garn. Refer to Horizon's response to paragraph 3.2.11 of chapter 17 in relation to assessment of diverted routes.

Local PRow, open access areas and local road networks

17.4.39 The visual impact assessment narrative in chapter D10 of the ES [APP-129] considers the overall effects on users of PRowS and open access land as well as the local road network based on the detailed assessment of representative viewpoints in appendix D10-7 [APP-198].

17.4.40 The assessment concludes that there would be a significant residual adverse effect on all 13 representative viewpoints on PRowS, including four representative viewpoints within open access land, assessed during construction, but this would reduce to 11 at winter year 1 of operation and 10 by summer year 15 of operation (Viewpoints 36, 7, 25, 26, 27, 38, 24, 22, 21 and 11). These visual impacts are generally confined to within 1.2km of the WNDA, with the exception of Viewpoints 36 and 7, which represent specific and limited locations on elevated ground 2.9km and 2.7km to the south-west at Mynydd y Garn and near Llanrhuddlad.

17.4.41 In relation to the local road network, the visual assessment concludes that there would be a significant residual adverse effect on eight of the 13 representative viewpoints assessed during construction, but this would reduce to five during operation. These visual impacts are generally confined to within approximately 0.6km of the WNDA, with the exception of Viewpoints 8 and 28, which represent limited viewpoints located on elevated ground 1.9km and 2.8km to the south-west at Llanfairynghornwy and near Taldrwst.

17.4.42 The reason why most viewpoints that would experience a residual significant effect are located on the PRow, open access land and local road network locally to the WNDA, is that the undulating topography, hedgerows or walls would restrict most middle-distance or distant views towards the WNDA, and, as such, the overall composition of these views would only be changed to a limited extent.

17.4.43 As explained above, it is considered that the extensive on-site mitigation proposed would be more effective at reducing visual effects than potential off-site mitigation for specific receptors. Furthermore, off-site planting designed to screen views of the Power Station along such routes could equally result in adverse visual effects by obscuring views of Anglesey.

Residents in Cemaes, Tregele and other residential properties close to WNDA

- 17.4.44 In relation to paragraphs 3.4.6, 3.4.7 and 3.4.7a of chapter 17 regarding the assessment of residents' views, IACC expressed support for a community views approach to the visual assessment in a meeting held on 1 April 2016 and residential views have not been assessed for the reasons detailed above. The reason why there is limited variation in the conclusions on significance of effect for the communities in Cemaes and Tregele is that the assessment has been based upon those views considered to represent the 'worst case'. This is in line with guidance in GLVIA3 which advocates a proportionate approach to LVIA, with emphasis placed on the need to focus on the potential for significant effects.
- 17.4.45 With regard to paragraph 3.4.7 of chapter 17, IACC did not raise any concerns regarding the assessment of effects on the community of Llanfairynghornwy in their position letter *Review of Horizon's DCO Submission (Wylfa Newydd Development Area)* dated 1 October 2018 or in the subsequent meeting on 17 October 2018. As this settlement is located more than 1.5km from the WNDA, Horizon considers that the current representative viewpoint within this community is proportionate and no supplementary assessment of effects on Llanfairynghornwy is considered necessary.
- 17.4.46 With regard to paragraph 3.4.7a of chapter 17, schedule 3 of the Draft DCO [REP2-020] Requirement WN9 requires that the final landscape and habitat scheme must be submitted to IACC for approval and this requirement will therefore allow IACC to ensure that the detailed design meets the principles set out in the LHMS [REP2-039]. As noted by IACC, figure 5-12a in the LHMS shows an illustrative section between Tregele and the laydown area during the construction period. The detailed design for this location will also be submitted to IACC for approval under Requirement WN9. However, Horizon do not agree that *"IACC has to assume a worst-case scenario that no mitigation measures will be introduced during the construction period beyond the generic measures shown on the Reference Point Drawings 2 and 3"* in the LHMS (Part 2 of 2) [APP-425]. The key mitigation measure is secured by the principle in chapter 4 of the LHMS (Part 1 of 2) [APP-424] that states *"phased implementation of landscape mounding, seeding of pasture and woodland planting must include early creation of the outer slopes of the linear landscaped mound adjacent to Tregele..."*

General information gaps

- 17.4.47 With regard to paragraph 3.4.8a of chapter 17, the post-operation restoration strategy for the Site Campus is presented in volume 3 of the Design and Access Statement, appendix 1-2 (Site Campus) [REP2-029 and REP2-030] section 9.1. Horizon considers that the restoration strategy provides sufficient detail to inform the landscape and visual assessment of users of the WCP and local PRow network.
- 17.4.48 With regard to the remaining gaps identified by IACC in relation paragraphs 3.3.10g, 3.2.17, and 3.2.14 of chapter 17:

- Reference should be made to the response to paragraph 3.3.10 of chapter 17 in relation to the long-term landscape management strategy earlier in this report;
- Reference should be made to the response to paragraph 3.2.17 of chapter 17 in relation to the natural colour scheme of the Power Station earlier in this report; and
- Reference should be made to the response to paragraph 3.2.14 of chapter 17 in relation to sequencing of landscape mounding earlier in this report.

17.5 Historic environment

17.5.1 Horizon understands that the key issues with regard to the Historic Environment are as follows:

- Issue 1: Presentation of archaeological fieldwork results in the ES does not reflect the full extent of fieldwork undertaken to date and it is not clear how these results have been used to inform the assessment of value.
- Issue 2: The ES does not adopt a scheme of valuation that is clearly compatible with the understanding of heritage significance-based approach that is presented in NPS EN-137, NPS EN-1 (5.8.2) or Conservation Principles (Cadw 2011).
- Issue 3: Confirmation is needed whether the assessment of non-designated archaeological remains of high value and historic buildings of medium value means they are considered to be of equivalent significance to scheduled monuments and listed buildings in the ES. If the same valuation is applied should they be treated as substantial harm to the significance of a designated heritage asset in line with NPS EN-1 (5.8.14 and 5.8.15).
- Issue 4: Provision of clear and convincing justification for substantial harm, demonstration that the loss of the historic fabric is necessary to deliver the substantial public benefits and adequacy of mitigation to offset the substantial harm on Cestyll Garden, a Grade II Registered Park and Garden. Remodelling of the west breakwater to provide a more natural appearance.
- Issue 5: Assessment of the value, adequacy of mitigation for Dame Sylvia Crowe's designed landscape Dame Sylvia Crowe Designed Landscape and sufficient monies should be secured to provide for the cost of any restoration Dame Sylvia Crowe landscaping.
- Issue 6: More detail required in relation to the controls to avoid effects of vibration on Felin Gafnan Corn Mill and building recording.
- Issue 7: Lack of detail of noise effects in the assessment.

- Issue 8: Adequacy of the impact assessment for Old Farmhouse at Plas Cemlyn (Asset 215).
- Issue 9: Absence of information on the Bristol Beaufighter crash site.
- Issue 10: The implications of the parameter approach on Cestyll Garden should be clearly illustrated and explained, and clarity regarding exactly what is to be lost, how Cestyll Garden and its Essential Setting will be affected by the final design and the mitigation and restoration proposed within and around the garden.
- Issue 11: ES (D11; APP-130) Sections 11.7.12 and 11.7.13 references substantial harm being made anticipated to arise at Cestyll Garden, but there is no statement regarding less than substantial harm to other designated heritage assets.
- Issue 12: The Written Scheme of Investigation (WSI) for archaeological mitigation fieldwork and recording of historic buildings is required in advance of the determination of the DCO.
- Issue 13: Any engagement scheme should be considered at a project level to allow integration with other mitigation and offsetting measures required in respect of other effects. Delivery of the engagement strategy should be secured through inclusion on a scheme to be approved under a requirement and funding for this would be secured through a financial obligation.
- Issue 14: The assessment of the cumulative effects of the Wylfa Newydd and NGET projects on this heritage asset does not appear to have fully taken into account the likely extent of the loss of woodland on these mounds.

Issue 1

- 17.5.2 In paragraph 4.2.3 (a) of chapter 17, IACC has stated the presentation of the results of archaeological fieldwork in the ES does not reflect the full extent of fieldwork undertaken to date. It is not clear how these results have been used to inform the assessment of value (paragraph 4.3.22). It notes that this information would also be required to inform the development of any detailed mitigation (paragraph 4.3.22).
- 17.5.3 In addition, IACC also states the ES does not incorporate the results of archaeological work but focuses on assessing effects on individual Historic Environment Record (HER) records which can comprise elements of more comprehensive and significant heritage assets (paragraphs 4.2.3 (b) and 4.2.6).
- 17.5.4 As stated in Horizon's response to Q6.0.2 of the Examining Authority's First Written Questions submitted at Deadline 2 (4 December 2018) [REP2-002], the sources used to establish the baseline were identified in section 11.3 of chapter D11 (cultural heritage) [APP-130]. Paragraph 11.3.4 of chapter D11 notes that while reports were not available, through personal

communications from Horizon's on-site archaeologist, who also consulted with Gwynedd Archaeological Planning Service (GAPS), the baseline was updated to take into account the results of the archaeological investigations undertaken in 2017.

- 17.5.5 The last personal communication was received in January 2018, and while there was inevitably a point after which the results of the archaeological investigations could not be included in chapter D11, the process identified above, along with availability of the results of the extensive trial trenching and geophysical surveys undertaken (see appendix D11-1 Wylfa Newydd Proposed New Nuclear Power Station Cultural Heritage Baseline Report [APP-202 and APP-203], appendix D11-2a Wylfa Newydd Isle of Anglesey – Archaeological Trial Trenching Vol. 1 to 3 [APP-204 and APP-205], appendix D11-2b Wylfa Newydd Proposed New Nuclear Power Station: Archaeological Trial Trenching - Post-Excavation Assessment and Updated Project Design [APP-206]), significantly reduced the risk that the results of archaeological investigations undertaken since 2017 would significantly reduce the robustness of the baseline and the assessment of magnitude and significance of effect presented in chapter D11.
- 17.5.6 For ease of reference, the table below provides a correlation between the locations for the archaeological investigations and heritage assets identified in chapter D11 and appendix D11-1 of the ES.

Table 1: Site numbers and excavation areas where there are effects on the new sites and their value has been re-assessed

Location	Heritage assets
Area 2 (L8/L12/L16)	Park Lodge Enclosure (Asset 121) and Park Lodge Ring-ditch (Asset 127)
Area 3 (K11)	Pits, North of Neuadd (Asset 593)
Area 4 (E3)	Tregele Romano-British Settlement (Asset 540)
Area 5 (A1)	Cafnan Field System (Part of) (Asset 162)
Area 7 (A3)	Pre-18th Century Field System (Asset 204) and Pennant Enclosure and Cist Cemetery (Asset 205)
Area 8 (A9)	Rhwng y Ddau Fynydd Burnt Mound and Ring Ditch (Asset 207) and Possible Burnt Mound, South of The Firs (Asset 525)
Cemetery Site	Aerial Photograph site, Cemaes Bay (Asset 78), Porth Wylfa Cist Cemetery (Asset 580) and Porth Wylfa Gully and Postholes (Asset 581)
F1	Porth yr Ogof Roman Settlement (Asset 573)
K2	-
L2	Paleochannel, South of Porth Wylfa (Asset 584) and Cooking Pits, South of Porth Wylfa (Asset 587)

Location	Heritage assets
L1(w)	Linears, Pits and Postholes, West of Porth Wylfa (Asset 575)
L1(c)	Roman Industrial Activity, West of Porth Wylfa (Asset 577)
L1/L20	Neolithic Flint Processing Site, West of Porth Wylfa (Asset 579)
L1(e)	Possible Burnt Mound, West of Porth Wylfa (Asset 578)
O5 (n)	Roman Settlement, North-west of Tregale (Asset 567)
O5 (s)	Romano-British Settlement, East of Tyddyn Gele (Asset 547) and Romano-British Settlement, North-east of Tyddyn Gele (Asset 566)
O6	Stone Trackway, North-west of Tregale (Asset 568)
Hot Spot 5	Burnt Mound, Rhwng Dau Fynydd (Asset 251)
Hot Spot 6	Caerdegog Isaf Burnt Mount (Asset 245)
Hot Spot 7	Possible Postholes, North-east of Pen-lôn (Asset 560)
Hot Spot 8	-
Hot Spot 9	Ring-gully, Rhwng Dau Fynydd (Asset 550)
Hot Spot 10	-
Hot Spot 11	-
Hot Spot 12	-
Hot Spot 13	Rhwng Dau Fynydd Enclosure (Asset 209)
Hot Spot 14	-
Hot Spot 15	-
Hot Spot 16	-
Hot Spot 17	-

17.5.7 As can be seen from the above, the results of the 2017 archaeological fieldwork, along with the other sources identified in chapter B11 of the ES [APP-076], was used to inform the assessment of the value of heritage assets. Where these were not previously identified on the HER, professional judgement was used to identify new heritage assets.

17.5.8 In some cases, these comprised individual features, in other cases, these were concentrations of features. This identified and took into account attributes such as date and form.

Issue 2

- 17.5.9 In paragraphs 4.2.3 (c), 4.3.25 and 4.3.31 of chapter 17, IACC states that the ES does not adopt a scheme of valuation that is clearly compatible with the understanding of heritage significance-based approach that is presented in NPS EN-137, NPS EN-1 (5.8.2) or Conservation Principles (Cadw 2011). While paragraph 4.3.24 identifies that the lack of engagement with the significance-based approach means that the historic interest of archaeological remains has not been considered.
- 17.5.10 Horizon does not agree with IACC's position that assessment criteria do not adequately reflect the significance-based approach to understanding value of, and effects on, heritage assets as set out in NPS EN-1 or Cadw 2011 Conservation Principles: Policies and Guidance for the Sustainable Management of the Historic Environment in Wales. As identified in paragraph 11.4.16 of chapter B11 (Cultural heritage) [APP-076], the value of cultural heritage assets was assessed using professional judgement informed by the criteria presented in table B11-11, which has been developed with reference to Conservation Principles. This is expanded in paragraph 11.4.17 of chapter B11.
- 17.5.11 In addition, Horizon does not agree that the historic interest of many heritage assets has not been appropriately considered. As identified in paragraph 11.4.17 of chapter B11 of the ES, while the value of many archaeological remains is derived from their evidential value, where relevant historical value was also considered. As identified in table B11-11, historical associations were one of the criteria used to inform professional judgement in the assessment of the value of historic buildings, and where relevant was considered to be one of the historic building elements identified in table B11-11. As requested by PINS (please refer to table B11-4 in chapter B11) LANDMAP data was used as the basis for the identification and the assessment of value of Historic Landscape Types (HLT) and this includes the identification of associations with people/ movements/ institutions/ events/ trends/ technical/ scientific discoveries.

Issue 3

Porth-yr-Ogof (Asset 573), flint processing site West of Porth Wylfa (Asset 579) and Enclosure and Cist Cemetery at Pennant (Asset 205), Site 05 South, Wylfa Head and Porth-yr-Ogof

- 17.5.12 In paragraph 4.2.6 of chapter 17 IACC asks for confirmation of whether the assessment of the Roman Settlement at Porth-yr-Ogof (Asset 573), flint processing site West of Porth Wylfa (Asset 579) and Enclosure and Cist Cemetery at Pennant (Asset 205) as 'high importance' means that these assets are considered to be of equivalent significance to scheduled monuments in the ES. IACC also notes in paragraphs 4.3.11 and 4.5.3 that no rationale is cited to support the contention that other substantial harms, particularly at Site 05 South, Wylfa Head and Porth-yr-Ogof meet the test for necessary harm.

17.5.13 While the public benefits resulting from the Wylfa Newydd DCO Project would outweigh the harm resulting from their removal, which is required for the construction of the Power Station, in the case of effects on archaeological remains assessed to be of high value (including those heritage assets identified above) it is Horizon's view that through the completion of archaeological investigations (including archaeological excavation) (which have been agreed with Cadw and GAPS and monitored by GAPS in their role as Curator) and the programme of reporting, analysis, publication, dissemination and archiving means that substantial harm to these heritage assets have been avoided. This position is reflected in paragraph 13.3.31 of the Welsh Government's Written Representation [REP2-367] which states that:

"To avoid any substantial harm (as described in EN-1) to archaeological assets within the WNDA, Horizon must provide:

- Detailed Summary Reports for all excavation works completed on-site in a timely manner. Horizon must also commit to undertake a programme of analysis, reporting, archiving and dissemination commensurate with the results of the investigations. This will be developed based on the results of post-excavation analysis, reporting, archiving and dissemination.
- A Written Scheme of Investigation for the 18-remaining archaeological 'hot-spots'."

Nant Orman (Asset 138) and Tre'r Gof Uchaf (Asset 263)

17.5.14 In paragraph 4.2.10 of chapter 17, IACC identified that non-designated historic buildings Nant Orman (Asset 138) and Tre'r Gof Uchaf (Asset 263) have been assessed to be of medium value which suggests that the loss of these buildings should be treated as substantial harm to the significance of a designated heritage asset in line with NPS EN-1 (paragraphs 5.8.14 and 5.8.15).

17.5.15 The results of the Level 3 Historic Building recording of Nant Orman (Asset 138) undertaken by GAT (Davidson, J. 2012. Wylfa Archaeological Building Recording Report (GAT Report 1066)) was reviewed. Based on this review, the value of this historic building has been revised from medium to low. Horizon considers that the negligible adverse residual significance of effect predicted in chapter D11 (Cultural heritage) of the ES [APP-130] is appropriate and does not constitute substantial harm.

17.5.16 Historic building recording of Tyddyn Gele and Tyddyn Gele Garage (Asset 263) has been undertaken and report is being prepared (GAT, in prep.). The survey found that while in respect of the layout of Tyddyn Gele little has changed since the late 19th century, the entirety of the exterior and interior of the main house has been substantially renovated and modernised in recent years, and a significant proportion appears to have been entirely rebuilt. The roof, windows, floors, doors and fireplaces are all modern and all walls are recently rendered or plastered. The results of the historic building recording

therefore support the assessment of low value presented in chapter D11 (cultural heritage) of the ES [APP-130]. Horizon also considers that the negligible adverse residual significance of effect predicted in chapter D11 is appropriate and doesn't constitute substantial harm.

Issue 4

- 17.5.17 In paragraphs 4.2.22, 4.3.29 (a) and 4.5.3 of chapter 17 IACC has stated Horizon has not provided a clear and convincing justification for the substantial harm to Cestyll Garden or demonstrated that the loss of the historic fabric is necessary to deliver the substantial public benefits. In paragraph 4.3.11, IACC states that there is no clear evidence base for the decision-making process that lead to the selection of the form and location of the MOLF.
- 17.5.18 The Planning Statement [APP-406] provides details on the need for the Wylfa Newydd DCO Project and the urgent need for a number of new nuclear power stations at identified sites, including at Wylfa. Chapter D2 (Alternatives and design evolution) in the ES [APP-121] identifies alternatives considered for locations of some components of the Power Station. Chapter A4 (Strategic alternatives) [APP-058] outlines the need for the Wylfa Newydd DCO Project and the strategic alternatives considered. Volume 2 (Wylfa Newydd Development Area) of the Site Selection Report [APP-437] provides further detail on the options that have been considered in determining the layout of the WNDA Development.
- 17.5.19 Appendix A to the Planning Statement [APP-406] identifies the need for the location of the construction laydown area which contributes to the substantial harm to Cestyll Garden.
- 17.5.20 As identified in chapter D11 (cultural heritage) of the ES [APP-130], substantial harm to Cestyll Garden would result primarily from:
- Removal of the kitchen garden, the plot of land where Cestyll House formerly stood, and part of its Essential Setting by a construction laydown area.
 - Construction of the temporary causeway, proposed breakwaters and the MOLF would introducing a source of noise and visual intrusion into the valley garden.
 - The continued presence of the Power Station as a dominant feature in the setting of Cestyll Garden (HLT 2; high value), and of the breakwater as a dominant feature in the Significant View from the valley garden.
- 17.5.21 Volume 2 of the Site Selection Report [APP-437] sets out Horizon's reasoned approach to determining the location of the main temporary and permanent components to be accommodated within the WNDA, including in relation to Cestyll Garden.
- 17.5.22 It is important to recognise that the process of locating components within the WNDA started with the Power Station itself. Horizon's approach to locating the Power Station has been largely driven by the need to deliver and operate it in a timely, safe and efficient manner. As a result, many of the key permanent

components are limited in terms of where they can be located, particularly the main plant. This requirement has in some respects resulted in limited options when locating other components within the WNDA, on the basis that for engineering, space and safety reasons (amongst other things) the position of the Power Station and other key components has determined the location of supporting components, such as construction laydown areas.

17.5.23 The consideration of alternatives in regard to Cestyll Garden should therefore not be viewed in isolation from other components in the WNDA.

17.5.24 The construction laydown area would require removal of the kitchen garden. It has not been possible to locate the laydown area in an alternate location as a result of the following:

- The area is required to provide access to the western breakwater and allow surface water and treated effluent discharge. The surface water and treated effluent discharge are located here as it is the nearest point next to the sea prior to discharge (at the northern end of the west breakwater, [APP-120]) and where minimal change occurs throughout construction. While the treatment plants could be located in another area where a significant amount of change occurs during construction, this approach would likely to disrupt the works and increase safety risks.
- The area is the only available space in close proximity to the western breakwater, as other areas adjacent to Porth-y-pistyll Bay are required to support other components (e.g. the MOLF); and
- Repositioning the laydown area further away from Cestyll Gardens would require other laydown areas within the WNDA to be repositioned, meaning that it may be necessary to encroach on the Tre'r Gof SSSI.

17.5.25 The above is as a result of the lack of available space within the WNDA.

Need of the MOLF and location of the MOLF

17.5.26 A summary of the case for the need for the MOLF and for the location of the MOLF is provided below:

- Due to the nature of the project there is a need to import bulk materials and Abnormal Indivisible Loads (AILs).
- For transporting AILs, it is Government policy to avoid road transport as far as possible by using alternative transport modes, such as water.
- Potential alternative methods of transporting construction materials were reviewed (appendix 10-1 of the Integrated Travel and Transport Strategy, [APP-107]), including sea and rail via Holyhead, then by road to site. The review identified that:
- Transporting raw bulk materials by rail would require up to three trains per day during peak construction. A lack of existing rail infrastructure in the vicinity of Wylfa Newydd would also require onward transport to the

WNDA via road (paragraph 10-1.1.8 of the Integrated Travel and Transport Strategy [APP-107]).

- Transporting bulk materials by road would add substantial volumes of lorries to the road network; it is estimated that around 238,000 HGV deliveries would be required over the duration of the project to deliver the equivalent of the materials that could be delivered to the MOLF, once the MOLF is complete (paragraph 10-1.1.9 of the Integrated Travel and Transport Strategy [APP-107]).
- Due to proposals by Network Rail to increase passenger services (trains per hour), night time deliveries would be relied upon, which could result in an increase in noise levels for unloading and transporting of material (paragraph 10-1.1.15 of the Integrated Travel and Transport Strategy [APP-107]).

17.5.27 In addition, not all AILs would fit on the roads, so redesign would be necessary and more time to build up modules on site, as well as the provision of sufficient space. This alternative method for importing bulk materials and AILs would result in a longer construction programme, which could prolong construction effects on local communities.

17.5.28 As identified in paragraphs 2.3.41 to 2.3.45 of chapter D2 of the ES [APP-121], three alternative locations to Port-y-pistyll (site 1) for the location of the MOLF were considered:

- Site 2 – at Porth-y-Gwartheg, to the west of the Existing Power Station;
- Site 3 – at Porth yr Ogof to the east of Wylfa Head; and
- Site 4 – at Porth Wylfa, approximately 500m to the east of Porth yr Ogof.

17.5.29 These alternative locations were shown on figure D2-5 [APP-237].

17.5.30 As noted in paragraph 2.3.43 of chapter D2, in order to determine the best location for the MOLF, the assessment considered the sites against the following criteria:

- Operational availability, in terms of berth availability based on water depth;
- And site wave exposure, including possible protection works that may need to be employed;
- MOLF layout, construction and protection requirements, dredging methods, maintenance and berth availability;
- Impact on natural terrestrial and marine environments; and
- Impact on Cestyll Garden.

17.5.31 As noted in chapter D2 of the ES (paragraph 2.3.44) [APP-121], site 2 was discounted on the basis of its exposed nature and the considerable engineering required to make it workable and acceptable. Site 4 was discounted on the basis of its exposed nature and its narrow inlet channel making it unsuitable for delivery of AILs. The preferred location for a MOLF

were therefore at site 1 or at site 3, both of which offered good levels of availability due to the shelter provided by natural topography.

17.5.32 Port-y-pistyll (site 1) was identified as the preferred location for the MOLF rather than Porth yr Ogof to the east of Wylfa Head (site 3) as:

- Locating the MOLF at site 3 would require the construction of a 50m wide heavy haul route from the MOLF to the construction site, a distance of approximately 1km. This heavy haul route and particularly its use during construction could affect both the Tre'r Gof SSSI and Dame Sylvia Crowe's Landscaping.
- Site 3 would require re-routing of the existing 400kV overhead transmission lines – at best the requirement would be to raise the pylons along one short stretch to provide a crossing point. While this could be part of National Grid Electricity Transmission's (NGET) infrastructure upgrades it would require its DCO to tie in with the Project, adding complexity and increasing consenting risk, thus delaying the start of construction (at least 2 years) and adding another year to the construction schedule, which could prolong construction effects on local communities.
- Site 3 would require traffic to cross the Existing Power Station's access road during construction, potentially increasing health and safety risks.
- Site 3 would require the exclusion of the public from the WCP and restricting public access to Wylfa Head.
- Site 3 would increase visual impact from many parts of the WCP around Cemaes Bay and out to Llanbadrig Point.
- Site 3 could impact sensitive sea bird colonies on Wylfa Head.

Scale of the MOLF

17.5.33 It is not considered possible to reduce the scale of the MOLF as a smaller MOLF could only support smaller vessels which would then require more trips to transport materials, and extend the construction schedule, potentially prolonging effects on local communities, and increasing marine disturbance and delaying the start of operation.

Location of the Cooling Water Intake

17.5.34 There is a need for a breakwater structure to protect the cooling water intake from wave surges. As identified in paragraphs 2.3.55 to 2.3.58 of chapter D2 of the ES [APP-121] a number of alternative locations for the cooling water intake were considered. These alternative locations were shown on figure D2-5.

17.5.35 A number of these alternative locations were screened out due to ecological considerations comprising:

- Longer biocide exposure times for entrained organisms.

- Long tunnels (up to 1,250m) underneath the seabed introduce significantly increased health and safety risks during construction (fire hazards in confined spaces) and maintenance (due to working offshore).
- The possible presence of major structural features and/or poorer quality ground that could affect tunnel design.
- Effects on Regionally Important Geodiversity Sites (RIGS).

17.5.36 In addition, if an offshore intake location was chosen then the construction schedule would be extended by more than 12 months due to sub-sea construction and complex offshore geology, which could potentially prolong effects on local communities.

17.5.37 While the effects on Cestyll Garden are acknowledged, as identified in paragraphs 2.3.55 to 2.3.58 of chapter D2 of the ES [APP-121] the onshore cooling water option at Porth-y-pistyll was identified as the preferred location for the reasons identified below:

- No or limited marine tunnels and no requirement to install and maintain intake structures; resulting in reduced seabed footprint, limited seaward construction activities, reduced construction cost and programme, and reduced health and safety risks.
- Due to the absence of long intake tunnels there would be a reduced requirement to biocide extensive offshore sections of the system, resulting in increased survival of entrapped fish and other marine species.
- Greater opportunity to control intake velocities to limit the entrapment of fish and other marine species.
- An onshore intake would reduce transit times before water is returned to the sea, result in limited pressure changes and reduced exposure of cooling water to biocides. The result would be the increased survival of organisms (typically zooplankton, including fish larvae, and phytoplankton) entrapped by the system.
- Mitigation measures used such as acoustic or other fish deterrent systems and strobe lighting could be effectively tested and maintained over the life of the Power Station.
- Offshore seabed intake structures and tunnels would be difficult to maintain through the life of the Power Station.
- There are quantifiable impacts of fish entrapment using extensive data collected from the onshore intake at the Existing Power Station. Fish entrapment at the Existing Power Station is extremely low.
- An offshore intake would be associated with increased health and safety risks during construction and operation and increased construction costs.

17.5.38 As identified in paragraph 2.3.62 of chapter D2 of the ES [APP-121] the location of the breakwaters is defined by the position of the cooling water

intake, in that they must be designed and positioned to provide optimum protection.

- 17.5.39 The use of a rubble for construction of the western breakwater would allow the reuse of suitable material excavated within the WNDA, reducing the requirement for importing construction materials and waste material. This could reduce traffic movements and effects on local communities from noise and vibration and changes in air quality.
- 17.5.40 In paragraphs 4.2.20, 4.2.26, 4.2.29, 4.3.27, 4.3.29(c) and 4.4.14 of chapter 17, IACC stated that it does not consider that the measures to mitigate the effects on Cestyll Garden identified in chapter D11 (cultural heritage) of the ES are adequate and that there is a need for Conservation Management Plan (CMP) to capture the long-term management and enhancement of Cestyll Garden, funded by Horizon. In addition, in paragraph 4.4.19 IACC has stated that sufficient monies should be secured to provide for the cost of any restoration of Cestyll Gardens, and that it may be appropriate for fund for the CMP and enhancement works proposed within the parts of Cestyll Garden that are outside of Horizon's ownership to be secured by way of Draft DCO s.106 Agreement planning obligations (paragraph 4.4.20).
- 17.5.41 In paragraph 4.2.42 of chapter 17 IACC has also stated that CMP should also include measures to mitigate impacts associated with the Grade II* Listed Felin Gafnan Corn Mill (Porth y Felin) (Asset 137), Grade II Listed Corn-drying house at Felin Gafnan (Asset 141), and Grade II Listed Mill house at Felin Gafnan, Cylch-y-Garn (Asset 144).
- 17.5.42 The measures to mitigate effects on Cestyll Garden are set out in section 11.6 of chapter D11 (cultural heritage) of the ES [APP-130]. Good practice mitigation identified in chapters D5 (air quality) [APP-124], D6 (noise and vibration) [APP-125] and D10 (landscape and visual) [APP-129], and set out in sections 7, 8, 10 and 11 of the Wylfa Newydd CoCP [REP2-031] and Main Power Station Site sub-CoCP [REP2-032] would help mitigate potential adverse effects on Cestyll Garden such as those arising from vibration, dust, noise and lighting. As stated in paragraph 11.5.40 of chapter D11, no impacts were identified as a result of changes to surface or ground water (see also chapter D8 [APP-127]).
- 17.5.43 The mitigation for Cestyll Garden also includes a commitment for Horizon to work with the landowners and other interested parties to consider appropriate enhancement measures such as greater interpretation, including on-site interpretation boards at the valley garden, enhanced public access to the valley garden, regular maintenance and restoration of the valley garden.
- 17.5.44 As IACC is aware, Horizon does not have control over Cestyll Garden; however, Horizon and the NDA are in the process of agreeing heads of terms for the acquisition of a number of land interests which include Cestyll Gardens, although it is currently subject to contract, Horizon notes NDA's desire to safeguard the amenity of Cestyll Garden and Horizon's proposals align with this objective.

- 17.5.45 In addition, the draft DCO s106 Agreement submitted at Deadline 3 (18 December 2018) makes provision for a payment to be made to deliver a CMP for Cestyll Garden for the Operation Period, and a commitment to use reasonable endeavours to enter a deed of covenant to develop and deliver a CMP.
- 17.5.46 Pending further discussions with NDA, it is anticipated that an updated position will be offered.
- 17.5.47 The mitigation for effects on the Grade II* Listed Felin Gafnan Corn Mill (Porth y Felin) (Asset 137), Grade II Listed Corn-drying house at Felin Gafnan (Asset 141), and Grade II Listed Mill house at Felin Gafnan, Cylch-y-Garn (Asset 144) are set out in section 11.6 of chapter D11 (cultural heritage) of the ES [APP-130]. In addition, the following mitigation measures will also be undertaken:
- Historic England Level 4 Historic Building Recording of the Grade II* Listed Felin Gafnan Corn Mill (Porth y Felin) (Asset 137), Grade II Listed Corn-drying house at Felin Gafnan (Asset 141), and Grade II Listed Mill house at Felin Gafnan, Cylch-y-Garn (Asset 144); and
 - Pending the identification of an appropriate location, Horizon is content to explore the provision of enhanced interpretation in the form of an additional interpretation board at Felin Gafnan with the landowner.
- 17.5.48 Horizon considers that the measures to mitigate effects Grade II* Listed Felin Gafnan Corn Mill (Porth y Felin) (Asset 137), Grade II Listed Corn-drying house at Felin Gafnan (Asset 141), and Grade II Listed Mill house at Felin Gafnan, Cylch-y-Garn (Asset 144) identified in chapter D11 (cultural heritage), and above, can be effectively implemented and secured through inclusion in chapter 12 of the Wylfa Newydd CoCP [REP2-031] and chapter 12 of the Main Power Station Site sub-CoCP [REP2-032], compliance with which is secured through requirements in the Draft DCO [REP2-020]. The CMP would therefore be for Cestyll Garden only.
- 17.5.49 In paragraphs 4.4.18 (c) and 4.4.2 of chapter 17, IACC states that the reinstatement of the Kitchen Garden, Gardener's Cottage, House Plot and Essential Setting should use existing materials retained for this purpose.
- 17.5.50 Due to the operational requirements of the Power Station it is unlikely that the kitchen garden can be reinstated at its former location. However, Horizon is reviewing what practicably can be achieved, and will provide a response at Deadline 6 (19 February 2019).
- 17.5.51 In paragraph 4.4.18 (b) of chapter 17 IACC requests a design to be submitted to and agreed with IACC for the re-modelling of the west breakwater at the end of construction to give a more natural appearance to reduce long-term impacts on views from Cestyll Garden.
- 17.5.52 The west breakwater was incorporated to provide protection to allow the wave condition requirements at the cooling water intake structure. A wave height of around 2m at the intake face is required to provide optimal performance of the intake. Without the breakwater this would be exceeded. The breakwater has

been developed to the minimum height and length to provide this protection. A smaller, lower breakwater would not provide the required protection.

- 17.5.53 As identified in paragraph 2.3.65 of chapter D2 (Alternatives and design evolution) armour to be used to cap the breakwater structure was also subject to appraisal. Natural rock armour was preferred to concrete armour (formed of pre-cast concrete) for visual purposes, so as to be in keeping with the coastal area. However, concrete armour units offered advantages in terms of higher structural stability, such that this was determined to be the most appropriate solution.
- 17.5.54 Marine ecological habitat enhancements measures will be provided in suitable locations unconstrained by engineering design and functionality, to include pre-cast ecological units (e.g. rockpools or features similar to bio-blocks) and modification of the permanent artificial structures (e.g. construction material, surface roughness or the addition of surface features) [APP-416 at paragraph 11.2.1].
- 17.5.55 While the marine ecological enhancement measures would provide a more natural appearance and soften views from Cestyll Garden, as stated in paragraph 11.5.54 of chapter D11 (Cultural heritage) of the ES [APP-130] and illustrated by the photomontage from Viewpoint 15, see appendix D10-8 [APP-199], the breakwater would be a continued presence in the Significant View from the valley garden. The magnitude of this effect was assessed to be large and the significance of effect to be major adverse.

Issue 5

- 17.5.56 In paragraph 4.2.32 of chapter 17, IACC states that they consider the significance of Dame Sylvia Crowe's designed landscape to be high rather than medium and consequently the impacts greater than those assessed on the ES. Paragraph 4.3.27 states that while recording is proposed it is not clear how this would mitigate impacts. Paragraphs 4.2.33 and 4.4.26 identifies that mitigation should be set out in a detailed CMP to include proposals for ongoing management and to ensure that landscaping proposals respond to the existing landscaping scheme (paragraph 4.4.15). In addition, IACC considers that an arboricultural survey (paragraphs 4.3.30 (a) and 4.5.3) and Woodland Management Plan (paragraph 4.4.18 (g)) should be submitted to and agreed with IACC (paragraph 4.4.18 (g)), and that sufficient monies should be secured to provide for the cost of any restoration Dame Sylvia Crowe landscaping. This sum should be secured through a section 106 agreement or similar mechanism (paragraph 4.4.19).
- 17.5.57 As requested by PINS (please refer to table B11-4 in chapter B11) LANDMAP data was used as the basis for the identification and the assessment of value of Historic Landscape Types (HLT) and this includes the identification of associations with people/movements /institutions/event/trends/technical/scientific discoveries.
- 17.5.58 The Historic Landscape and Cultural Landscape information available for Wylfa Nuclear Power Station from LANDMAP (<https://landmap->

maps.naturalresources.wales/PrintExtendedResults.aspx?filter=CL|YNSMN CL010&MapCollectionName=LandMap&Layer01=CL;YNSMNCL010; accessed 10 December 2018) does not make reference to Dame Sylvia Crowe or the landscaping. The Visual and Sensory layer, which assesses the Wylfa Nuclear Power Station to be of low value, makes the following reference "From close up, it is partially screened by bunds and woodland and the grounds are neatly managed" (<https://landmap-maps.naturalresources.wales/PrintExtendedResults.aspx?filter=VS|YNSMN VS086&MapCollectionName=LandMap&Layer01=VS;YNSMNVS086;> accessed 10 December 2018).

- 17.5.59 Horizon therefore does not agree that as the value of Wylfa Nuclear Power Station has been assessed by LANDMAP to be of Outstanding (as a striking and dominant landscape of architectural brutalism and as a location for a controversial type of power plant), and in chapter D11 of the ES [APP-130] as being high value (identified as Wylfa (HLT 8); see paragraph 11.3.69), this assessment of value should be automatically extended to Dame Sylvia Crowe's Landscape Design.
- 17.5.60 To allow the proper assessment of potential effects, Dame Sylvia Crowe's Landscaping Area (HLT 3) was identified as separate HLT in chapter D11 (APP-130). The basis for the value of the assessment is set out in appendix D11-5 Assessment of the Significance of Dame Sylvia Crowe's Landscape Design at the Existing Power Station [APP-212]. As noted this is based primarily on historical association. Horizon is therefore content that the assessment of the value as medium is appropriate and that the mitigation identified in chapter D11 [APP-130] is appropriate to the value of the asset and the effect predicted.
- 17.5.61 A draft management plan for Dame Sylvia Crowe's Mound Woodland Site has been produced and issued for consultation to environmental non-governmental organisations in September 2018. The management plan identifies how landscape features associated with Dame Sylvia Crowe's designed landscape, such as the exiting broadleaved and coniferous woodland, would be managed.
- 17.5.62 Landscape management is secured by the Main Power Station Site sub-CoCP [REP2-032 at paragraphs 11.17.1 and 11.17.2] and the Wylfa Newydd CoOP [REP2-037] in-line with the LHMS [REP2-039]. This would include requirements for management and enhancement of landscape features, including areas of Dame Sylvia Crowe designed woodland and how new areas of landscaping would completed areas of retained landscape mounding.

Issue 6

- 17.5.63 In paragraphs 4.2.41 and 4.5.4 of chapter 17, IACC has stated that it requires more information in relation to the controls to avoid effects of vibration on Felin Gafnan Corn Mill including a reference to technical information (paragraph 4.3.32). In addition, in paragraph 4.4.24 IACC identify the need for detailed recording of Felin Gafnan as a precaution and to inform restoration in the event that mitigation measures intended to avoid vibration damage are ineffective.

- 17.5.64 Please refer to the Horizon's response submitted at Deadline 3 (18 December 2018) to the National Trust's Written Representation on Noise and Vibration Impact on Tenanted Properties and Heritage Assets [REP2-323] for more information on vibration monitoring.
- 17.5.65 In addition to measures identified in chapter D11 of the ES [APP-130], the following mitigation measures would also be undertaken:
- Historic England Level 4 Historic Building Recording of the Felin Gafnan Corn Mill (Asset 137).
 - Pending the identification of an appropriate location, Horizon is content to explore the provision of enhanced interpretation in the form of an additional interpretation board at Felin Gafnan with the landowner.
- 17.5.66 Horizon considers that the measures to mitigate effects Grade II* Listed Felin Gafnan Corn Mill (Porth y Felin) (Asset 137), identified in chapter D11 (cultural heritage), and above, can be effectively implemented and secured through inclusion in chapter 12 of the Wylfa Newydd CoCP [REP2-031] and chapter 12 of the Main Power Station Site sub-CoCP [REP2-032], compliance with which is secured through requirements in the Draft DCO [REP2-020]. Updates to the relevant sub-CoCP will be submitted at Deadline 4 (17 January 2019).
- 17.5.67 Where Horizon is responsible, it is content to make good damage to the following historic buildings:
- Grade II* Listed Felin Gafnan Corn Mill (Porth y Felin) (Asset 137);
 - Grade II Listed Corn-drying house at Felin Gafnan (Asset 141); and
 - Grade II Listed Mill house at Felin Gafnan, Cylch-y-Garn.

Issue 7

- 17.5.68 In paragraph 4.3.34 of chapter 17 IACC has requested more detail in relation to the assessment of noise effects with particular reference the church of St Patrig (Asset 26) (paragraph 4.3.34).
- 17.5.69 As identified in chapter B11 of the ES [APP-076] at paragraph 11.2.4, the *Setting of Heritage Assets in Wales* (Cadw 2017) has been used to inform the assessment of setting of heritage assets. In addition to potential visual effects potential effect from other sources such as noise have been included in the assessment. As noted in paragraph 11.4.2 of chapter D11 (cultural heritage) [APP-130], the assessment of changes to the noise environment of heritage assets was supported by the noise assessment presented in chapter D6 (noise and vibration) [APP-125] (see especially figures D6-3 to D6-10 ([APP-237 and APP-238])). The assessment took into account the contribution that the existing noise environment made to the value of a heritage asset (based on professional judgement informed by site inspections) and changes to that environment that could result from construction or operation based on the results of noise modelling presented in chapter D6 (noise and vibration).

17.5.70 The sources of noise during construction, operation and decommissioning are presented in section 6.4 of chapter D6 (noise and vibration) of the ES [APP-125]. Table D6-7 in chapter D6 provides an overview of the principal construction activities and section 1.2 of appendix D6-1 (Noise model inputs and outputs) [APP-142] details the plant and machinery and activity sound power levels used in noise assessment for construction. Changes in the noise environment resulting from these construction activities have been identified in paragraph 11.5.24 of chapter D11 for the Grade II* Listed Church of St Padrig (Llanbadrig) (Asset 26).

17.5.71 In relation to the church of St Padrig (Asset 26), in addition to the mitigation identified in chapter D11 (Cultural heritage), the Draft DCO s.106 Agreement submitted at Deadline 3 (18 December 2018) includes a payment for appropriate noise insulation measures (to be agreed by IACC and the owners) to reduce noise to address impacts of construction noise for this heritage asset. However, the fund identified in the Draft DCO s.106 Agreement above, could be extended to include provision of interpretation should the owners so wish.

Issue 8

17.5.72 In paragraph 4.2.44 of chapter 17 IACC has stated that the Old Farmhouse at Plas Cemlyn (Asset 215) would be subject to a degree of harm to significance during construction resulting from visible and audible changes to its setting.

17.5.73 As stated in paragraph 11.3.75 of chapter D11 [APP-130], the Old Farmhouse at Plas Cemlyn (Asset 215) comprises a post-medieval farmhouse in the local vernacular style. The value of this Grade II Listed Building is derived from its special architectural and historic interest (paragraph 4.3.19; appendix D11-1 Wylfa Newydd Proposed New Nuclear Power Station Cultural Heritage Baseline Report (1 of 2) [APP- 202]). As detailed in appendix A of appendix D11-1, the rural location and views across Cemlyn Bay and the inter-relationship between the other buildings in the farm complex form part of this heritage assets setting, the latter of which contributes to this heritage asset's value.

17.5.74 As presented in appendix D11-6 [APP-213], construction activities would result in visual and noise intrusion in the rural setting of this heritage asset (supporting information for the basis of this assessment is presented on figures D6-3 to D6-10 [APP-237] and viewpoint 25 of appendix D10-4 [APP-195]). However, the interrelationship with the other farm buildings at Plas Cemlyn would be retained and this heritage asset's location on Cemlyn Bay would not be affected. Using professional judgement and the criteria presented in table B11-12 of chapter B11 [APP-076], this constitutes a slight change to this heritage asset's setting. Based on this, before mitigation the significance of this effect was assessed to be minor adverse. No mitigation was proposed, and the significance of residual effect was therefore assessed to be minor adverse.

Issue 9

- 17.5.75 In paragraph 4.3.23 of chapter 17 IACC is concerned by the absence of further information on the Bristol Beaufighter crash site and raise the possibility that the site could be designated as a controlled area under the Protection of Military Remains Act 1986.
- 17.5.76 The Bristol Beaufighter VI X8194 (Asset 185) was identified as the possible crash site of an aircraft within the WNDA and is recorded on the National Monuments Record of Wales (see paragraph 11.3.39 chapter D11 if the ES (cultural heritage) [APP-130]). As detailed in chapter D11 and appendix D11-1 (Wylfa Newydd Proposed New Nuclear Power Station Cultural Heritage Baseline Report (1 of 2); Appendix A) [APP-202], the nature and circumstances of the crash are known; however, the exact location of the crash is not. As stated in appendix D11-1, archaeological remains associated with the loss of the aircraft have not been confirmed at this location. In addition, no archaeological remains were identified in proximity to the site during geophysical survey (the results of which are incorporated in appendix D11-1) or archaeological trial trenching (appendix D11-2b) [APP-206] undertaken as part of the Wylfa Newydd DCO Project suggesting it is unlikely that any archaeological remains associated with the crash are present at this location within the WNDA.
- 17.5.77 While it is unlikely there are any associated archaeological remains within the WNDA associated with the Bristol Beaufighter crash site, the assessment of medium value, as presented in paragraph 11.3.39 of chapter D11 and paragraph 4.2.48 of appendix D11-1, reflects a precautionary assessment in consideration that any remains would be automatically designated a Protected Place under the Protection of Military Remains Act 1986, if identified.

Issue 10

- 17.5.78 In paragraph 4.3.29 (b) of chapter 17 IACC states that the implications of the parameter approach on Cestyll Garden should be clearly illustrated and explained, and clarity regarding exactly what is to be lost, how Cestyll Garden and its Essential Setting will be affected by the final design and the mitigation and restoration proposed within and around the garden.
- 17.5.79 Figures to illustrate potential effects on Cestyll Garden were provided to the Examining Authority at Deadline 2 (4 December 2018) in response to Q6.0.17 [REP2-002].
- 17.5.80 Assessing the worst-case scenario used in chapter D11 (cultural heritage) [APP-130] is consistent with the 'Rochdale Envelope' or parameter approach used in ES. Please refer to chapter B1 (Introduction to the assessment process) [APP-066] for more information on this approach. This approach is also consistent with that identified in the Environmental Impact Assessment Scoping Report and Addendum [APP-060]. No other assessment is therefore required.

Issue 11

- 17.5.81 In paragraph 4.3.35 of chapter 17, IACC states that sections 11.7.12 and 11.7.13 of chapter D11 (cultural heritage) [APP-130] of the ES references substantial harm being made anticipated to arise at Cestyll Garden, but there is no statement regarding less than substantial harm to other designated heritage assets.
- 17.5.82 As presented in paragraph 11.7.11 of chapter D11 (cultural heritage) [APP-130] the major adverse residual effect on Cestyll Garden (HLT 2) during construction has been assessed to constitute substantial harm as described by NPS EN-1 as this would result in a permanent and substantial loss of the value (significance) of this heritage asset.
- 17.5.83 As identified in paragraphs 11.7.12 and 11.7.13 of chapter D11 [APP-130], no other effects have been assessed to constitute substantial harm.
- 17.5.84 The test of less than substantial harm with regard to designated assets is it is not identified in NPS EN-1, nor is it identified in Technical Advice Note 24: The Historic Environment or Planning Policy Wales. In addition, stated in paragraph 4.1.5 of NPS EN-1 and noted in paragraph 5.3.10 of the Planning Statement [APP-406], the NPS prevails for the purposes of decision making in relation to a DCO application, and Horizon therefore considers that the test of less than substantial harm is not a relevant test in this case.
- 17.5.85 Paragraph 5.8.15 of NPS EN-1 states that any harmful impacts on the significance of designated heritage assets should be "...weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset the greater the justification will be needed for any loss". Where the application would lead to substantial harm or total loss of significance of a designated heritage asset the decision maker should "refuse consent unless it can be demonstrated that the substantial harm to or loss of significance is necessary in order to deliver substantial public benefits that outweigh that loss or harm".
- 17.5.86 Please refer to Issue 4 for the justification for substantial harm to Cestyll Garden.

Issue 12

- 17.5.87 In paragraphs 4.4.1, 4.4.8 and 4.4.13 of chapter 17 IACC states that the Written Scheme of Investigation (WSI) for archaeological mitigation fieldwork and recording of historic buildings is required in advance of the determination of the DCO.
- 17.5.88 As identified in chapter D11 (cultural heritage) [APP-130] mitigation would be undertaken in accordance with relevant guidance provided by the *Chartered Institute for Archaeologists and WSIs* which would be agreed with Gwynedd Archaeological Planning Service (GAPS). In addition, all archaeological recording would include a programme of assessment, reporting, analysis, publication and dissemination commensurate with the value of the terrestrial archaeological remains removed, submission of reports to the Historic

Environment Record and National Monument Record of Wales, and the preparation of an ordered archive which would be submitted to an appropriate repository.

- 17.5.89 The mitigation (which as identified in chapter D11 of the ES [APP-202] includes a programme of assessment, reporting, analysis, publication and dissemination) and the obligation to agree a WSI in respect of specific heritage assets prior to investigations or excavation commencing is included in section 12 of the Main Power Station Site sub-CoCP [REP2-032], compliance with which is secured through requirements in the Draft DCO [REP2-020].
- 17.5.90 For fieldwork and recording undertaken to date WSIs have been produced in accordance with relevant guidance provided by the Chartered Institute for Archaeologists and submitted to GAPS for approval.
- 17.5.91 Like the WSIs that have been agreed with GAPS to date information to be included in the WSIs would be based on the relevant standard and guidance from the Chartered Institute for Archaeologist and other information as required by GAPS.
- 17.5.92 While agreed WSIs would need to be in place before the start of the archaeological investigations, Horizon does not agree that these are required in advance of the determination of the DCO.

Issue 13

- 17.5.93 In paragraph 4.4.9 of chapter 17 IACC has stated that any engagement scheme should be considered at a project level to allow integration with other mitigation and offsetting measures, and that the delivery of the engagement strategy should be secured through inclusion on a scheme to be approved under a requirement and funding for this would be secured through a financial obligation (paragraph 4.4.12).
- 17.5.94 Horizon has undertaken engagement activities including community excavations and presentation of results of excavations for which GAPS have acted as advisers.
- 17.5.95 As identified in paragraphs 11.6.6 and 11.6.12 of the chapter D11 (cultural heritage) of the ES [APP-130] archaeological recording and historic buildings survey would be undertaken in accordance with relevant guidance provided by the Chartered Institute for Archaeologists (CIfA) and WSIs which would be agreed with GAPS. This would include a programme of assessment, reporting, analysis, publication and dissemination commensurate with the value of heritage assets, submission of reports to the Historic Environment Record and National Monument Record of Wales, and the preparation of an ordered archive which would be submitted to an appropriate repository.
- 17.5.96 In accordance with CIfA's standards and guidance, including that for archaeological excavation (CIfA 2014, Standard and guidance for archaeological excavation; paragraph 3.2.14), WSI will 'set out how public benefits may be achieved by means of engagement, participation and/or

dissemination of the results both during and after the project, as appropriate to the scale, nature and circumstances of the work’.

- 17.5.97 The requirement to agree a WSI and undertake works in accordance with the identified standards and guidance is included in section 12 of the Main Power Station Site sub-CoCP [REP2-032]. As engagement would form part of any agreed WSI's Horizon does not agree that a separate engagement strategy is required.

Issue 14

- 17.5.98 The IACC has stated that the assessment of the cumulative effects of the Wylfa Newydd DCO Project and NGET projects on Dame Sylvia Crowe Landscape (ES appendix I5-1, 6.9.12) does not appear to have fully taken into account the likely extent of the loss of woodland on these mounds (Q6.0.2 vi).
- 17.5.99 As identified in paragraphs 11.5.41 to 11.5.42 of chapter D11 (cultural heritage) of the ES [APP-130], construction of the WNDA Development would result in the removal of areas of woodland located to the south-east of the southern landscape mound of Dame Sylvia Crowe's Landscaping Area (HLT 3; medium value) and to the south of Existing Power Station. The magnitude of these permanent effects has been assessed to be medium and the significance of effect has been assessed to be moderate adverse. The measures to mitigate the effects on Dame Sylvia Crowe's landscaping are presented in section 11.6 of chapter D11 (cultural heritage). The mitigation for Dame Sylvia Crowe's landscaping comprise a Level 2 Historic Landscape survey and photographic survey secured through the Main Power Station Site sub-CoCP [REP2-032]. After mitigation, the residual significance of this effect was assessed to be minor adverse.
- 17.5.100 As presented in appendix I5-1 (Inter-project cumulative effects) of the ES [APP-395], the potential for the additional removal of landscape elements of Dame Sylvia Crowe's Landscaping Area due to construction of the North Wales Connection Project was acknowledged. Based on the alignment of the preferred route corridor (which broadly followed the existing line of the overhead lines as presented on an available map of the route) and professional judgement the significance of this effect was predicted to be minor adverse. In combination the permanent removal of elements of Dame Sylvia Crowe's Landscaping Area would result in a negative interproject effect.
- 17.5.101 No additional mitigation was proposed beyond the review of programmes to avoid, where feasible, the overlap in major construction activities. Given the cumulative effect on Dame Sylvia Crowe's Landscaping Area was assessed to be no more significant than the individual effects from each project, the measures outlined in section 11.6 in chapter D11 of the ES [APP-130] combined with good practice mitigation that it is assumed will be adopted by third parties to manage the effects of their projects, were considered adequate to manage cumulative effects (paragraphs 5.2.78, chapter I5). Therefore, as stated in appendix I5-1, the significance of residual cumulative effect was assessed to be minor adverse.

- 17.5.102 For these reasons, Horizon considers that the assessment of the cumulative effects of the Wylfa Newydd DCO Project and NGET projects on Dame Sylvia Crowe Landscape (ES appendix I5-1, 6.9.12 – [APP-235]) fully takes into account the likely extent of the loss of woodland on these mounds.

17.6 Ecology

- 17.6.1 Horizon acknowledges that, in general, IACC supports the baseline information and associated ecological impact assessment undertaken and presented within chapter D9 Terrestrial and Freshwater Ecology [APP-128] (see paragraph 5.2.1 – 5.2.5 of chapter 17). However, IACC does make specific points about a number of the receptors assessed and these are addressed below.
- 17.6.2 In paragraph 5.2.8 of chapter 17, IACC raises a concern regarding the lack of provision of ponds as part of the LHMS [REP2-039]. Horizon has now committed to providing nine new ponds as part of the LHMS which will be designed and managed to maximise biodiversity benefit throughout the operation of the Power Station. This is in addition to attenuation ponds, ephemeral pools and permanently damp hollows proposed within the LHMS. Although the provision of these ponds would be on a like-for-like basis in terms of the number lost during construction, it is considered that their design and long-term management commitment would result in a greater biodiversity value than is currently provided by the existing ponds. The revised LHMS which includes this provision will be submitted at Deadline 4 (17 January 2019).
- 17.6.3 This commitment to pond provision is considered to address the concern IACC raises in paragraph 5.2.12 relating to great crested newt and common toad, and their ability to colonise the site post-construction.
- 17.6.4 IACC recognises, in paragraph 5.2.10 of chapter 17, the potential the draft LHMS, has to result in a net positive effect on some biodiversity receptors and provide biodiversity enhancements more generally compared to the baseline. However, more measurable commitments need to be made to ensure that the conclusions of the ES can be verified through future monitoring of the LHMS [REP2-039].
- 17.6.5 Horizon has drafted habitat management schemes which cover designated sites and habitats created by the provisions of the LHMS, which have been circulated to stakeholders for comment and will be submitted for approval through a requirement of the Draft DCO [REP2-020]. These will include monitoring proposals relevant for each management scheme and, together, these will provide the level of detail and commitment IACC has requested. These will be secured through the provisions of the LHMS [REP2-039], a revised version of which will be submitted at Deadline 4 (17 January 2019).
- 17.6.6 In paragraphs 5.2.14 and 5.2.15 of chapter 17, IACC identifies the omission of Trwyn Pencarreg Wildlife Site from the assessment presented in chapter D9 in the ES, in relation to effects from changes in air quality. Horizon accepts this was an omission from the submission.

- 17.6.7 Horizon has reviewed its air quality assessment for the Main Power Station Site as a result of its commitment to applying the additional mitigation to control NOx emissions from construction plant and machinery as proposed in the DCO application (see section 5.6 of chapter D5 Air quality (excluding emissions from traffic) [APP-124], and section 7.5 (Emissions from plant and machinery) of the Main Power Station Site sub-CoCP [APP-415]).
- 17.6.8 The conclusions of this assessment are that the predicted changes in air quality no longer meet the criteria to warrant further ecological consideration of Trwyn Pencarreg Wildlife Site. This revised assessment will be submitted at Deadline 3 (18 December 2018).
- 17.6.9 Regarding the assessment of effects to reptiles, IACC raises concerns over the approach to assessment (paragraph 5.2.17), and the mitigation proposed (paragraph 5.2.18). Horizon is confident that the conclusions of its assessment for reptiles are robust and adequate account for the concerns raised by IACC.
- 17.6.10 Translocation of the extant reptile population on the Main Power Station Site will be to a suitably managed receptor site (the Reptile Receptor Site) which provides optimum habitat quality, and links into the wider landscape which consists of habitats of equal structure and quality to those used by reptiles on the Main Power Station Site. It is considered that this will be effective in terms of avoiding killing / injury of individuals during Site Preparation and Clearance, and Main Construction, and in supporting a viable source population of reptiles which will be able to recolonise the Main Power Station Site once the LHMS has become established. The requirement to manage the Reptile Receptor Site in accordance with a management scheme is secured through a DCO Requirement [REP2-020].
- 17.6.11 Details of the mitigation strategy, including capture effort, will be provided following pre-construction surveys and will form part of the Main Power Station Site sub-CoCP [REP2-032]. The Reptile Receptor Site has been under appropriate management since late 2017 and will remain under said management throughout the 15-year lease period. The LHMS [REP2-039] commits that monitoring will be undertaken of species translocations to assess the efficacy of mitigation provided. This information would feed into reviews of the management schemes to ensure their objectives, and the commitments of the LHMS, were being met.
- 17.6.12 In paragraph 5.4.5 of chapter 17, IACC requests further detail on the reptile surveys undertaken to support the assessment presented in chapter D9 of the ES [APP-128]. In response to this request, Horizon acknowledges that the full extent of the WNDA was not surveyed annually for four years. Surveys focused on good quality habitats for reptile foraging / shelter across the site and therefore provide robust data on presence, species composition and population size. Horizon will provide IACC with any relevant raw data available in relation to reptile surveys referred to in the reptile technical summary report [APP-117] by Deadline 4 (17 January 2019).
- 17.6.13 Paragraphs 5.2.21 to 5.2.23 of chapter 17 identify concerns IACC has regarding chough, notably the loss and provision of foraging habitat and the

potential disturbance issues relating to the workforce. IACC identifies the provision as part of the LHMS commitments of 100 ha of coarse sward grassland as being of limited value to chough.

- 17.6.14 Horizon considers its assessment of effects both pre and post additional mitigation to be robust. To support this, management of Wylfa Head since winter 2017, including mechanical removal of scrub and the reintroduction of sheep grazing, has been seen during the 2018 chough surveys to have led to the use of Field 146 for foraging reducing significantly, with a reversion back to Wylfa Head and the areas closest to the nest sites. The chough survey report for 2018 will be submitted for review at Deadline 3 (18 December 2018).
- 17.6.15 In terms of habitat provision, in addition to the 100ha of coarse-sward species-rich grassland (updated to 120ha within the revised LHMS submitted at Deadline 2 [REP2-039]), section 4.1 of the LHMS includes a design principle for the provision of 20ha of close sward species rich grassland (updated to 25ha in the revised LHMS submitted at Deadline 2 [REP2-039]), which would be suitable for foraging chough. A further LHMS design principle states that "A net increase in the abundance of suitable chough foraging habitat should be provided, in particular within 300m of existing nest locations and potential future nest locations along the coast to the east of Wylfa Head." In combination, these design principles will ensure that 25ha of suitable chough foraging habitat is provided, primarily within 300m of chough nest locations.
- 17.6.16 In relation to worker pressures on Arfordir Mynydd y Wylfa – Trwyn Penrhyn Wildlife Site and the chough which nest and forage in this area, the Workforce Management Strategy [APP-413], will provide approaches to minimise effects from worker pressure on Wylfa Head and chough through preventing direct access onto the area from the Site Campus (the only access would then be a 4.7km walk from the Site Campus to the site, a round trip of over 10km); information on the site and the species' sensitivities, together with signage during key sensitive breeding periods; and, monitoring of the area by the Ecological Clerk of Works (ECoW) during key sensitive breeding periods. A revised version of the Workforce Management Strategy will be submitted at Deadline 4 (17 January 2019). These principles will form the content of the Code of Conduct that all workforce will be required to comply with. Funding of a warden to monitor Wylfa Head will also be provided through the Draft DCO s.106 Agreement submitted at Deadline 3 (18 December 2018).
- 17.6.17 Effects on the ecology of the Arfordir Mynydd y Wylfa – Trwyn Penrhyn Wildlife Site and the chough population will be monitored as part of the management scheme for the site, which will be secured through the provisions of the LHMS [REP2-039]. Engagement Sub-Groups, as part of the Workforce Management Strategy will also monitor use of Arfordir Mynydd y Wylfa – Trwyn Penrhyn Wildlife Site, which will then enable additional or targeted information to be provided to the workforce and will inform the actions of the ECoW.
- 17.6.18 The public access and recreation baseline report from 2015 provides some data on the use of the WCP around Wylfa Head [APP-138]. It is considered that the provision of interpretation boards to educate the public; signage/way markers to indicate preferred footpath routes; and fencing to limit access to

the most sensitive areas will mitigate visitor pressure on this area. These measures are secured through the principles in the LHMS. Monitoring of the area by the ECoW during key sensitive breeding periods for chough would also mitigate potential disturbance effects from visitor. The employment of an ECoW is secured through the Wylfa Newydd CoCP, and the Main Power Station Site sub-CoCP [REP2-031 and REP2-032 respectively].

- 17.6.19 In paragraphs 5.2.25 and 5.2.27 of chapter 17 IACC identifies a number of concerns relating to red squirrel, principally concerning an extant population within Dame Sylvia Crowe's Mound. The retained woodland within Dame Sylvia Crowe's Mound is approximately 10.5ha in size, and the baseline population of red squirrel within this area is considered small. Additional measures proposed within chapter D9 of the ES [APP-128], to mitigate disturbance effects to red squirrel from construction noise are designed to provide an adequate resource of food and nesting opportunity throughout the retained woodland, in areas which will be screened from potential construction disturbance. These are secured through the Main Power Station Site sub-CoCP [REP2-032]. As such, the assessment conclusion of minor adverse, and therefore not significant, is considered accurate.
- 17.6.20 The potential effects as a result of the NGET North Wales Connection Project would result in the removal of a narrow belt of trees within Dame Sylvia Crowe's Mound. The extent of this loss is not considered to significantly reduce the overall area of retained woodland resource, and is not considered to represent a fragmentation of woodland habitat given the narrow corridor cleared, and the scrub habitat which would establish within this corridor. Any wind thrown trees would be replaced as part of the management of Dame Sylvia Crowe's Mound which is presented as additional mitigation within chapter D9 of the ES and secured through the Main Power Station Site sub-CoCP [REP2-032] and the provisions of the LHMS [REP2-039]. Furthermore, the landscaping principles in the LHMS would create an additional 25ha of woodland planting and strong linear features (hedgerows and cloddiau), which would connect the habitats within the WNDA with the wider landscape. This would support the expansion of the red squirrel population.
- 17.6.21 Cumulative effects are considered within volume I of the ES. Chapter I3 Cumulative effects [APP-386], provides the methodology for this assessment, and chapter I5 [APP-388], addressed inter-project cumulative effects which includes an assessment of the NGET North Wales Connection Project.
- 17.6.22 Concerns regarding the mitigation provision for bats are detailed by IACC in paragraphs 5.2.28 – 5.2.32 of chapter 17, principally relating to the potential loss of roosting opportunities for the extant bat population and measures to mitigate this effect. Comments on the adequacy of survey effort are also provided in paragraphs 5.4.6 – 5.4.9.
- 17.6.23 Regarding survey methodology, transects were undertaken 40 minutes after sunset with the objective of recording the most representative species composition possible throughout the transect route. Earlier starts could have missed late emerging species and the transect surveys were not aimed at

identifying roosts, as every structure was subject to separate targeted survey effort.

- 17.6.24 It is considered that the methodologies employed provided an equal chance of recording all species using all areas of the site and would pick up presence of any species not detected during emergence surveys, thus giving an accurate assessment of species composition across the site. Horizon therefore believes the data regarding bats, collected during a number of years' survey within the WND, provides a robust baseline against which to assess and propose appropriate mitigation for effects on the extant bat population. This is supported by NRW in its Written Representation submitted at Deadline 2 (4 December 2018) [REP2-325] – see paragraphs 7.7.1 – 7.17.4, in which NRW states they are satisfied with the baseline information collected to inform the impact assessment for bats, great crested newt, otter, water vole, red squirrel and Schedule 1 listed birds.
- 17.6.25 In agreement with NRW, the decision was taken to approach mitigation for bats in a holistic fashion to ensure there is no detriment to the maintenance of the favourable conservation status of the population in its natural range, rather than taking a piecemeal approach to offset each potential or confirmed roost feature. A draft European Protected Species (EPS) mitigation licence application has been provided [APP-187], which details mitigation and compensation measures for all of the known roost structures, and for the loss of potential roost sites in trees incurred as part of the Wylfa Newydd Development. This includes the provision of new roost opportunities in the form of three bespoke bat barns, one wildlife tower and a minimum of 40 bat boxes which will be erected in retained woodland and telegraph poles across the WND.
- 17.6.26 The use of trees as roosts will be determined through pre-construction survey work secured by the Main Power Station Site sub-CoCP [REP2-032]. The provision of both bat boxes and four bespoke structures with the potential to support high numbers of the range of species recorded on site, as secured in the Main Power Station Site sub-CoCP [REP2-032], is considered adequate to mitigate the loss low status roosts and one maternity roost recorded within the WND. All mitigation requirements within the EPS mitigation licences are secured through the Wylfa Newydd CoCP [REP2-031]. It is therefore considered the assessment conclusion is robust.
- 17.6.27 In paragraph 5.4.4 of chapter 17, IACC requests that more detail in relation to priority habitats listed in section 7 of the Environment (Wales) Act, 2016, is provided by Horizon. Horizon will provide this additional information at Deadline 4 (17 January 2019).
- 17.6.28 In paragraphs 5.4.12 – 5.4.14 of chapter 17, IACC questions the valuation of breeding birds as a receptor. A full justification for the valuation of this receptor and the studies used to inform this valuation is given in the Breeding bird technical summary report [APP-178].

- 17.6.29 Paragraph 5.6.1 of chapter 17 states that “Horizon has identified significant residual effects for the following receptors: Tre'r Gof SSSI; Arfordir Mynydd y Wylfa – Trwyn Penrhyn Wildlife Site; ancient woodland; fungi; and, chough.”
- 17.6.30 Horizon disagrees with this statement. The assessment of effects presented in chapter D9 of the ES [APP-128], provides a summary of effects table (Table D9-13), which identifies the following receptors as incurring potentially significant residual effects during construction after embedded, good practice and additional mitigation measures have been applied: Tre'r Gof SSSI; and, ancient woodland.
- 17.6.31 The remaining receptors identified by IACC in paragraph 5.6.1 (Arfordir Mynydd y Wylfa – Trwyn Penrhyn Wildlife Site; fungi; and, chough), are assessed in chapter D9 of the ES [APP-128], as incurring minor adverse effects which are judged as not significant.

17.7 Hydrology and groundwater

Surface water drainage design

- 17.7.1 IACC's assessment concludes that, in the absence of further detail relating to the proposed drainage schemes (construction and operation phases), it is unable to agree with Horizon's assessment as it needs to be satisfied that the mitigation as proposed is likely to be sufficient to reduce impacts related to changes in water quantity and increased suspended sediment in run off to minor/moderate adverse.
- 17.7.2 While providing further information post-DCO at the detailed design stage for drainage scheme may be acceptable in other circumstances, IACC notes that, in this case the potential for impacts on the SSSI and the national and local policy support afforded to it mean that potential approaches to mitigate should be confirmed in advance of consent, such that suitable land-take is confirmed as available within the application area for any required water management mitigations. Should the Examining Authority take a different approach, IACC has asked that a requirement is included in the Draft DCO such that the details of the additional design work are submitted to and approved by IACC prior to commencement of development at the main site (including the site campus).
- 17.7.3 Horizon can confirm that, with respect to water availability and quality (including suspended sediment in runoff), the chapter D8 surface water and Groundwater of the ES [APP-127] and supporting documents identifies the following residual impacts:

Construction

- Tre'r Gof Water Availability – Moderate Adverse;
- Tre'r Gof Water Quality – Moderate Adverse;
- Tre'r Gof Suspended Sediment – Minor Adverse; and
- Afon Cafnan Suspended Sediment – Minor Adverse.

Operation

- Tre'r Gof Water Availability – Major Adverse;
- Afon Cafnan Water Availability – Moderate Adverse;
- Nant Cemaes Water Availability – Moderate Adverse; and
- Nant Cemlyn Water Availability – Moderate Adverse.

- 17.7.4 In its response to FWQ2.0.11 [REP2-002], Horizon committed to including a requirement within the Draft DCO relating to surface water drainage design during construction. Drainage design would also be controlled through the drainage principles in the LHMS [REP2-039] which applies during construction and operation (refer to Requirements WN8 and WN9 of the Draft DCO [REP2-020]).
- 17.7.5 To minimise any effects of the development on sensitive receptors, Horizon has designed the drainage system to mimic as closely as possible the baseline hydrological regime with respect to both low and high flows and in relation to water quality, including turbidity and suspended sediment content. ES Volume D - WNDA Development App D8-8 - Summary of preliminary design for construction surface water drainage [APP-167] presents Horizon's conceptual drainage design which as far as practicable recreate the processes that are present in the catchments around the Wylfa Newydd DCO Project area, including restriction of runoff rates, attenuation of excess runoff, provision for seepage through soils to recreate natural groundwater seepages, facility for overland flow from drainage ditches, capture of suspended sediment in ditches and sedimentation lagoons and the facility to dose runoff where suspended sediment content is considered high relative to an agreed level defined through an appropriate Environmental Permit.
- 17.7.6 The nature of the landform changes within some catchments has resulted in unavoidable but generally small changes in catchment area which could have an effect on predicted flows. Chapter 8.5 of ES Volume D - WNDA Development D8 - Surface water and groundwater [APP-127] presents the scale of any changes, based on hydraulic modelling, and concludes that the magnitude of change is small, particularly on catchments draining to Tre'r Gof.
- 17.7.7 The system will match baseline conditions as closely as practicable, in agreement with the regulator as part of the final landform design. However, Horizon fully recognises that there remains uncertainty over how successful the proposed drainage system will be in matching the baseline water environment in terms of water availability and water quality, hence, additional monitoring is proposed to assess the actual effectiveness of the scheme and, if required, the drainage system would be modified to address any deficiencies. Any modifications would be undertaken within the Order limits and agreed parameters. The Main Power Station Site sub-CoCP [REP2-032] includes a range of controls relating to drainage and surface water runoff.
- 17.7.8 Furthermore, Horizon acknowledges that, given this uncertainty, there remains the potential for an impact on the local water environment and on Tre'r Gof SSSI. Horizon has therefore committed to the provision of SSSI

Compensation sites, as described in ES Volume D appendix D1-2 Ecological Compensation Sites Assessment of Environmental Effects [APP-137] and supporting information in SSSI Compensation Strategy Volume 1 [APP-190] and Volume 2 [APP-191], in advance of determining whether or not the drainage design is successful at mimicking the baseline hydrological regime. Consequently, should the drainage design prove successful, either immediately or following further modifications, then the outcome would be the beneficial provision of compensation sites. Should the drainage prove unsuccessful then the outcome would be the provision of compensation sites to compensate for the effects on the SSSI, in addition to a more detailed understanding of Tre'r Gof and the opportunity to minimise further impacts and optimise the residual value of its natural resource.

Off-site flood risk

- 17.7.9 The issue of flood risk impacts on receptors on the Nant Cemaes is addressed in Horizon's response to Natural Resources Wales in comments on Written Representations [REP2-325]. In summary, the WNDA Development FCA [APP-150 to APP-157] concluded that there was a high risk of flooding from both fluvial and pluvial sources to the properties (and land) upstream of Cemaes village.
- 17.7.10 The conclusion in the FCA was reached on the basis of hydrological analysis and hydraulic modelling of both sources of flooding, without presentation of how the flood risk could be avoided, mitigated or managed. The FCA stated that mitigation would include modifications to the drainage design and re-modelling to show that this increased risk was mitigated. These modifications would be undertaken at the detailed design stage, as it was not possible to complete the detailed design stage prior to the time the DCO application was submitted to PINS.
- 17.7.11 Subsequent analysis has been undertaken to define the exact cause of the increased flood risk at Cemaes, principally, at this stage, in order to understand what mitigation might be effective in reducing the impact on flood risk that is currently shown.
- 17.7.12 This analysis shows that the increase in flood level on Nant Cemaes was the result of a backwater effect from a small increase in discharge rate from Mound A, which reduces culvert conveyance beneath the A5015. This small increase in discharge rate is the product of minor changes in catchment area (up to 2ha) draining to the Nant Cemaes downstream of the A5025 and increases in the average slope of land and an assumed reduction in permeability. These combine to increase the rate and volume of runoff from the catchment, which results in a slightly increase in flow of between 0.1m³/s in the 50% to 1% AEP events and 0.2m³/s in the 0.1% AEP event.
- 17.7.13 In discussion with NRW on 14 September 2018 the above mechanisms were presented, and a discussion was had on the criteria that must be met (no increase in flow from the site to the Nant Cemaes) to show that no increase in flood risk could occur.

- 17.7.14 Horizon is committed to revising the preliminary drainage design at the detailed design stage and therefore will propose a requirement as part of an updated draft DCO to be submitted at Deadline 4 (17 January 2019) which will require Horizon to submit, for approval, a surface water drainage design for construction works.

Compensation site monitoring and conceptual site model

- 17.7.15 In response to IACC's comments regarding the ecological compensation sites, a monitoring network of 11 boreholes, 130 dipwells, 32 stage boards, a rain gauge, and an ultrasonic flow meter was installed in July/August 2018 for two of the ecological compensation sites (Cors Gwawr and Cae Canol-dydd). This monitoring network is designed to collect groundwater and surface water level, quality, and flow data over a period of 12 months, with the aims of creating detailed conceptual models for the two sites, as well as carrying out an optioneering assessment for engineering designs to create and/or enhance fen habitat. Two comprehensive soil investigations were also carried out in January and August 2018, which will feed into the conceptual models developed for Cors Gwawr and Cae Canol-dydd.
- 17.7.16 The third site (Ty du) is located much closer to Tre'r Gof SSSI, at Llanbadrig Head. Whilst this site does form part of the overall compensation package, only fen enhancement measures are proposed here, such as shrub clearance, grazing etc. to offset the potential significant impacts to Tre'r Gof SSSI in the interim period, before fen creation commences at Cors Gwawr and Cae Canol-dydd. There are no planned changes to the hydrology of Ty du, and hence no hydrological monitoring was deemed necessary. This decision was made in an early Technical Advisory Group meeting which includes NRW.
- 17.7.17 An interpretive report will be submitted at Deadline 4 (17 January 2019), capturing 4-5 months' worth of monitoring data, and discussing the detailed conceptual models. Ongoing monitoring data will then be used to refine the conceptual models and option designs produced and will later feed into the overarching adaptive management strategy created for the three SSSI ecological compensation sites.
- 17.7.18 Horizon is confident that, with additional data informing the application of a gradual, phased, adaptive approach to the design and implementation of the compensation works, the proposals will result in the establishment of high quality habitat to adequately compensate for the predicted effects on Tre'r Gof SSSI.

17.8 Land contamination

- 17.8.1 Paragraph 7.4.1 of chapter 17 raises two information gaps related to the assessment of effects presented in chapter D7 – Soils and geology [APP-126], these are: potentially negative effects of remediation have not been considered and no investigation is available for land at APC16 Tregele petrol station.
- 17.8.2 Paragraphs 7.4.2–7.4.5 provide comments on appendix D7-2 – Land Contamination Risk Assessment and Remediation Strategy [APP-144], with a

number of issues raised regarding the risk assessment and remediation actions identified within the report.

17.8.3 Paragraphs 7.4.6 and 7.4.7 of chapter 17 state that a detailed methodology for the remediation and further details on the management of unexpected contamination should be provided in the Wylfa Newydd CoCP [REP2-031] and Main Power Station Site Sub-CoCP [REP2-032].

17.8.4 Key issues in this response are:

- Issue 1 – potential negative effects of remediation.
- Issue 2 – ground investigation at Tregle Petrol Station.
- Issue 3 – gaps identified by IACC identified in the Conceptual Site Model (CSM).
- Issue 4 – gaps identified by IACC in the risk assessment.
- Issue 5 –IACC’s request for a detailed methodology for remediation to be included in the Wylfa Newydd CoCP.
- Issue 6 –IACC’s request for further details on the management of unexpected contamination to be set out in the Wylfa Newydd CoCP.

Issue 1

17.8.5 Paragraphs 7.5.17 and 7.5.18 of chapter D7 – Soils and geology [APP-126] of the ES considers the potential for negative effects to occur during remediation works and notes that appropriate health and safety measures would be implemented to protect remediation workers, which would also protect adjacent land users. Horizon therefore considers that this effect has been considered and appropriately assessed.

Issue 2

17.8.6 Groundwater monitoring at a nearby borehole (RMBH6) has not identified any significant groundwater contamination in the area close to Tregle petrol station and therefore risks from this potential source are considered to be generally low.

Issue 3

17.8.7 Horizon considers that the CSM considers all viable receptors that currently or will in the future use the WNDA.

17.8.8 With regards to specific issues raised by IACC, the following comments are made:

- The key ecologically important receptors, Tre'r Gof and Cae Gwyn SSSI, are primarily groundwater-based and therefore the groundwater risk assessment is considered protective of these areas;
- Risks from asbestos fibres are considered in the pathways relevant to dust; and,

- Historical groundwater monitoring indicated that non-aqueous phase liquids were no longer present in this area and concentrations of organic contaminants were reducing significantly over time; therefore, vapours were not considered to be relevant to the CSM.

Issue 4

- 17.8.9 Horizon considers that the risk assessments presented in the Land Contamination Risk Assessment and Remediation Strategy are comprehensive and suitably protective of current and future users of the WNDA. Many of the issues raised by IACC e.g. asbestos analysis methodology and consideration of additive effects of TPH, would not make a significant difference to the outcomes of the risk assessment and thus would not affect the remediation strategy presented.
- 17.8.10 With regards to ground gas, monitoring is ongoing as part of the continued investigations on the WNDA.
- 17.8.11 With regards to the previous site investigation factual reports; these reports have extremely large file sizes and it was not possible to submit them electronically. If IACC wishes to review these documents, access to them can be arranged electronically via the Horizon file sharing site.

Issue 5

- 17.8.12 Horizon has already submitted a proactive revision of the Main Power Station Site sub-CoCP [REP2-032] at Deadline 2 (4 December 2018) which includes further detail regarding remediation actions to be completed on site – refer to section 9 of the Main Power Station Site sub-CoCP for details.
- 17.8.13 A remediation verification plan will be prepared prior to remediation works commencing. This document will be prepared by the contractor undertaking the remediation works. This requirement is secured in section 9.4 of the Wylfa Newydd CoCP [REP-031] which states that Horizon will assess and manage land contamination in accordance with the Model Procedures for Land Contamination.

Issue 6

- 17.8.14 Horizon considers that the management strategies set out in section 9.4 of the Wylfa Newydd CoCP [REP2-031] contain sufficient detail to secure the mitigation required to appropriately mitigate the risks from unexpected contamination in accordance with the relevant guidance. For this reason, a DCO requirement that a revised sub-CoCP must be submitted to IACC for approval is not necessary or justified.

17.9 Soils and geology

- 17.9.1 In paragraph 8.41 of chapter 17, IACC stated that it considers that there are gaps in the assessment of effects on soils and identified these in turn. In paragraph 8.51 of chapter 17, IACC stated it would wish to see an updated

Wylfa Newydd CoCP [REP2-031] and Main Power Station Site sub-CoCP [REP2-032] submitted during the examination, setting out information addressing these gaps.

17.9.2 Following consideration of IACC's comments, an updated Wylfa Newydd CoCP will be provided at Deadline 4 to include additional information on how soils would be managed during construction. The issues raised by IACC are identified below and addressed in the subsections that follow:

- Issue 1 –IACC would wish to see identification of the location of the areas to be stripped of topsoil and subsoil and stockpiles.
- Issue 2 –IACC considers that the CoCPs should provide a definition of the suitably qualified and experienced personnel that are to be employed to supervise the management of soil resources.
- Issue 3 –IACC considers that the CoCPs should provide specifications for the soil resource surveys to be undertaken prior to earthworks commencing.
- Issue 4 –IACC considers that the CoCPs should include a requirement to produce soil management plans, and the proposed contents of these.
- Issue 5 –IACC considers that the CoCPs should set out the principles to be used to characterise the soil moisture limits which will define when works cease.
- Issue 6 –IACC considers that the CoCPs should set out the principles of traffic management and soil stripping and placement.
- Issue 7 –IACC considers that the CoCPs should define a proposed storage time limit for stripped soil.

Issue 1

17.9.3 Paragraph 9.55 of the Wylfa Newydd CoCP [REP2-031] states that topsoil and subsoil (where necessary) will be stripped from all areas of the WNDA, Off-Site Power Station Facilities and Associated Development where development is taking place, with the exception of environmental buffer areas. In addition, the Wylfa Newydd CoCP will be updated at Deadline 4 to specify that maps will be produced prior to construction showing existing topsoil and subsoil types, the areas to be stripped and left in situ and the location of stockpiles and their anticipated contents.

Issue 2

17.9.4 The Wylfa Newydd CoCP will be updated at Deadline 4 to provide a definition of the suitably qualified and experienced personnel that are to be employed to supervise the management of soil resources.

Issue 3

- 17.9.5 The Wylfa Newydd CoCP will be updated at Deadline 4 to specify more clearly that the soil resource surveys will be undertaken in accordance with the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (Defra, 2009), which provides specifications for soil resource surveys.

Issue 4

- 17.9.6 The Wylfa Newydd CoCP will be updated at Deadline 4 to specify with greater clarity that the fundamental requirements of Soil Resource Plans, as set out within the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (Defra, 2009), will be fulfilled prior to construction. These include the production of maps showing existing topsoil and subsoil types, the areas of soil to be stripped and left in situ, the location of stockpiles and their anticipated contents, the location of haul routes, and the expected reuse for all stripped soils. The methods for stripping, stockpiling, respreading and decompacting will also be set out prior to construction.

Issue 5

- 17.9.7 The Wylfa Newydd CoCP will be updated at Deadline 4 to set out the principles to be used to characterise the soil moisture limits which will define when works cease.

Issue 6

- 17.9.8 As IACC's comments in paragraph 8.4.1 related to the assessment of soils and geology, it is not considered that the principles of traffic management bear relevance to the assessment of effects on soils. The principles of soil stripping and placement will be captured by the general controls on soil management within the updated Wylfa Newydd CoCP to be provided at Deadline 4.

Issue 7

- 17.9.9 It is not considered necessary to define a maximum duration of soil storage within the Wylfa Newydd CoCP but chapter D1 – Proposed Development [APP-120] states that the maximum duration for the WNDA would be approximately eight years, and this is what has been assessed within chapter D7. This is a realistic worst-case scenario and the duration of soil storage is likely to be much shorter for the majority of the soils stripped.

17.10 DCO requirements and s106 obligations

DCO requirements

- 17.10.1 The Main Power Station Site sub-CoCP [REP2-032] secures a range of Horizon's commitments for mitigating the construction-related environmental effects of the WNDA Development. Horizon considers that the management strategies in the sub-CoCP (along with the mitigation secured elsewhere in other control documents, including in the Wylfa Newydd CoCP [REP2-031])

contain sufficient detail to secure the mitigation required to appropriately mitigate the adverse environmental effects of the construction of the WNDA Development, as identified and assessed in Volume D of the ES. For this reason, a DCO requirement that a revised sub-CoCP must be submitted to IACC for approval is not necessary or justified.

17.10.2 Horizon continues to engage with IACC and other stakeholders on these matters, and engagement to date has led to additional detail being added to the CoCP and sub-CoCPs submitted at Deadline 2 [REP2-031 to REP2-036 and REP2-373]. Horizon has also made further commitments, as noted in Horizon's responses to First Written Question [REP2-002] and in other Deadline 3 responses, to add additional detail in the revised CoCP and sub-CoCPs to be submitted at Deadline 4 (17 January 2018). Horizon acknowledges that further refinement of the Wylfa Newydd CoCP and sub-CoCPs will occur throughout the course of the Examination.

17.10.3 In respect of the specific requests for requirements made by IACC in this LIR chapter, either:

- These are addressed in the topic specific sections of this response above; or
- Horizon is continuing to consider the request.

Planning obligations

17.10.4 In respect of paragraph 2.6, 2.7.9, and 3.6.4 of chapter 17, Horizon does not agree an environmental fund is required to fund the offsite measures set out; appropriate onsite controls are provided in the relevant sub-COCP. As such the need for a 20-year fund to separately undertake off-site works and planting over and above the mitigation secured in the sub-COCP (including as may be updated) is not considered necessary or proportionate.

17.10.5 In respect of the request for funding at paragraph 2.6.1(b)(vi), Horizon notes that the draft DCO s.106 Agreement commits £300,000 to delivery of new and upgraded PRow, and their maintenance.

17.10.6 The purposes of the rural skills programme referred to by IACC at paragraph 2.6.1(b)(vii) is not clear to Horizon; however, this is a matter which can be discussed between the parties as to whether it should form part of the Jobs and Skills Implementation Plan under discussion between Horizon and IACC.

17.10.7 In respect of paragraph 4.49, Horizon notes that a £90,000 heritage and archaeology contribution has been agreed in the agreed draft agreed site preparation and clearance s.106 agreement. Given that the site preparation and clearance works are the first works on the WNDA, it was agreed that it was appropriate to fund this aspect of mitigation alongside those work; however, it is not agreed that a further contribution is required for the DCO development. Horizon notes that the site preparation and clearance s.106 Agreement would apply to the site preparation and clearance works whether undertaken under a planning permission pursuant to the Town and Country

Planning Act 1990 or Work No 12 of the Draft DCO [REP2-020]. That contribution has been agreed to fund (among other things):

- The provision of bilingual interpretation boards and signage which deal with the cultural, archaeological and heritage significance of the Site;
- The provision of a web presence which shall include online interpretation material including (if the Council considers it appropriate the use of augmented reality / digital experiences and Social Media);
- The provision of a public exhibition explaining the historical significance of the Site; and
- Encouraging school visits to North Anglesey and providing educational resourcing to schools and to the wider community giving them the opportunity to view the interpretation materials.

17.10.8 In respect of paragraph 4.19 and 4.20, the draft DCO s.106 Agreement committed £750,000 to delivery of Cestyll Garden mitigation via the Nuclear Decommissioning Authority ("NDA") (as landowner of Cestyll Garden). However, Horizon notes that it and the NDA are in the process of agreeing heads of terms for acquisition of a number of land interests which include Cestyll Gardens, although it is currently subject to contract.

18 Local Impact Report – Site Campus

18.1 Introduction

- 18.1.1 Horizon has reviewed chapter 18: Site Campus of the IACC LIR. This section responds to the key issues presented within chapter 18, with reference to the corresponding paragraph numbers in the LIR chapter where appropriate.
- 18.1.2 Key issues in this response are:
- Planning policy;
 - Recreation, including leisure facilities;
 - Tourism, including visitor pressure;
 - Health, including healthcare facilities for the construction workforce;
 - Design; and
 - Development Consent Order (“DCO”) requirements and section 106 (“s.106”) planning obligations.

18.2 Planning policy

- 18.2.1 National Policy Statement (“NPS”) EN-1 and NPS EN-6 remain important and relevant matters which should carry significant weight in the determination of nuclear energy NSIPs that will deploy after 2025. They continue to represent the primary policy basis for a decision made by the Secretary of State (“SoS”) on this DCO application. Notwithstanding this, relevant local planning policy and guidance, including the Wylfa Newydd Supplementary Planning Guidance (2018) and the Anglesey and Gwynedd Joint Local Development Plan (2017), have been considered by Horizon in preparing the DCO application and in formulating this response.
- 18.2.2 Please refer to the Planning Statement [APP-406] for further detail in respect of the status of the NPSs and the planning policy considered by Horizon.
- 18.2.3 Part 3 of NPS EN-1 defines and sets out the need that exists for nationally significant energy infrastructure, including new nuclear power stations. Paragraph 3.1.1 states that the UK needs all the types of energy infrastructure covered by the NPS in order to achieve energy security at the same time as dramatically reducing greenhouse gas emissions. Paragraph 3.1.2 goes on to state that it is for industry to propose new energy infrastructure and that the UK Government does not consider it appropriate for planning policy to set targets for or limits on different technologies.
- 18.2.4 The urgency of the need for new electricity generating capacity is underlined by projections within NPS EN-1 that indicate up to 22 gigawatts (“GW”) of existing capacity will close over the period to 2020 in part due to the Industrial Emissions Direction but also as a result of some power stations reaching the end of their operational lives (paragraph 3.3.7). In response to this, NPS EN-1 identifies a minimum need for 59 GW of new generating capacity over the period to 2025 (paragraph 3.3.23). Please also refer to Appendix 11-2 of the

Statement of Reasons [APP-032] which provides further evidence of the urgent need for new nuclear power.

- 18.2.5 Section 2.2 of NPS EN-6 deals specifically with the need for new nuclear power stations. Paragraph 2.2.3 states that a failure to develop new nuclear power stations significantly earlier than the end of 2025 would increase the risk of the UK being locked into a higher carbon energy mix for a longer period of time than is consistent with the Government's ambitions to decarbonise electricity supply. As a result, it would become more difficult and expensive to meet the Government's targets for significant and urgent decarbonisation of the economy and enhanced security of supply (see Part 3 of NPS EN-1).
- 18.2.6 The Site Campus forms a key part of the Wylfa Newydd DCO Project and will be instrumental in assisting Horizon to meet the need for new energy infrastructure identified in the NPSs. The key driver of demand for the Site Campus is the number of workers at the peak of construction; many of which (especially specialist workers) may not be local and will require temporary accommodation. For assessment purposes, the Environmental Statement assumed 9,000 construction workers at peak. Peak construction (in terms of workforce numbers reaching 9,000) is anticipated to occur in Q4 Year 7 (refer to Figure C1-4 in Chapter C1 Socio-economics [APP-088]).
- 18.2.7 Assuming 2,000 home based workers, the Wylfa Newydd DCO Project will need up to 7,000 bed spaces for Non-Home Based ("NHB") workers. These bed spaces will be accommodated through:
- 4,000 bed spaces on the Site Campus (purpose built Temporary Workers Accommodation (TWA) on-site); and
 - The use of 3,000 bed spaces in existing accommodation across Anglesey and parts of the mainland.
- 18.2.8 The site selection process [APP-439] was carried out on the basis of requiring up to 4,000 bed spaces. Further information on the way in which Horizon has calculated the need for TWA is set out in the Workforce Accommodation Strategy [APP-412].
- 18.2.9 Section 5 of NPS EN-1 sets out 'generic impacts' relevant to all energy NSIPs. This is followed by detailed guidance on a topic-by-topic basis to guide the applicants as well as the decision maker in their detailed approach to NSIPs, informing their design, assessment and mitigation. These are listed in table 3-2 in the Planning Statement [APP-406]. In addition to the generic impacts set out in NPS EN-1, NPS EN-6 sets out a list of "Nuclear Impacts" that are considered particularly relevant to the development of new nuclear power stations (paragraph 3.4.3, NPS EN-6). This is followed by detailed guidance on these topics informing their design, assessment and mitigation (paragraphs 3.6-3.12).
- 18.2.10 These Nuclear Impacts are:
- Flood risk;
 - Water quality and resources;

- Coastal change;
- Biodiversity and geological conservation;
- Landscape and visual impacts;
- Socio-economic; and
- Human health and well-being.

18.2.11 The Wylfa Newydd DCO Project is assessed relative to the generic impacts and each of the Nuclear Impacts in the Planning Statement [APP-406], including consideration of compliance with both national and local planning policy.

18.2.12 Paragraph 4.1.3 of NPS EN-1 states that in considering any proposed NSIP the decision maker should take into account:

- Its potential benefits, including in addition to its contribution to meeting the need for energy, its contribution to job creation and any long-term or wider benefits; and
- Its potential adverse impacts, including any long term and cumulative adverse impacts as well as any measures to avoid, reduce or compensate for any adverse impacts.

18.2.13 In summary, the Wylfa Newydd DCO Project will deliver significant benefits including a major contribution to meeting the pressing, and increasing, need for nuclear power by 2035 and significant benefits to the local economy. Whilst potential adverse impacts arise from the Wylfa Newydd DCO Project, subject to appropriate mitigation, it would not have impacts on the local or the wider area which are sufficient to override the overall presumption in favour, or to warrant refusal of the DCO. Please refer to the Planning Statement [APP-406] and Horizon's Written Representation [REP2-003] for more detail.

18.3 Recreation

18.3.1 Regarding concerns in relation to on-site facilities and provision of services at the Site Campus, it should be noted that the current submitted scheme in the DCO application is illustrative; however, the design and construction of the Site Campus must be within the defined parameters (as detailed in Schedule 3 of the draft DCO [REP2-020]) and the design principles set out in the Design and Access Statement [REP2-029 and REP2-030]. Horizon will consult with IACC as it develops the final design of the Site Campus prior to these designs being submitted for approval in accordance with Requirement WN19. The final design will also need to reflect environmental parameters and constructability.

18.3.2 In respect of on-site facilities and services, the Site Campus will include an amenity building (with a cafeteria, café, gym, bar, shop and other social spaces) and areas of outdoor recreation, including two multi-use games areas. These features are secured through the design principles in the Design and Access Statement. In addition, Requirement WN18 also requires Horizon to submit details of the Site Campus Health Facility which will be located within

one of the accommodation blocks and will provide GP and pharmacy services, primary care and occupational healthcare and hygiene services and facilities.

18.3.3 In terms of off-site mitigation, as outlined in schedule 2 of the draft DCO s.106 Agreement, contributions totalling £3.86 million will be made by Horizon to fund upgrades to indoor sports halls, outdoor facilities and swimming facilities within the local community.

18.3.4 The Indoor Sports Halls contribution will be used by the Council to:

- Upgrade the existing indoor sports facilities at the Amlwch Leisure Centre and the Holyhead Leisure Centre within 18 months of receipt of the Leisure (Indoor Sports Halls) Contribution;
- Improve and expand the car parking facilities at Amlwch Leisure Centre within 18 months of receipt of the Leisure (Indoor Sports Halls) Contribution; and
- From Implementation monitor usage of the indoor sports facilities at the Leisure Centres.

18.3.5 The Leisure (Outdoor Facilities) contribution will be used by the Council to:

- Upgrade the existing outdoor multi use games areas at Amlwch Leisure Centre [and Holyhead Leisure Centre] to provide additional 3G standard pitches within 18 months of receipt of the Leisure (Outdoor Facilities) Contribution; and
- From Implementation monitor usage of the outdoor multi use games areas at Amlwch Leisure Centre [and Holyhead Leisure Centre] to enable the provision of data which sets out the usage profile of these leisure centres.

18.3.6 The Leisure (Swimming Facilities) contribution will be used by the Council to:

- Undertake alterations to improve, remodel and/or expand the changing facilities at Amlwch Leisure Centre within 18 months of receipt of the Leisure (Swimming Facilities) Contribution; and
- From Implementation monitor usage of the swimming facilities at Amlwch Leisure Centre to enable the provision of data which sets out the usage profile of these facilities.

18.4 Tourism

18.4.1 The key issues presented within the Site Campus chapter of the IACC Local Impact Report relate to visitor pressure.

18.4.2 Chapter 18 cites the purported inadequacy of the assessment of potential effects on Tourism, particularly in respect of an alleged lack of consideration of increased visitor pressure and associated disturbance on ecological receptors, including foraging chough at Wylfa Head, the Trwyn Pen Carreg Wildlife Site and other sites locally (including Cemlyn Bay SAC and Anglesey Terns SPA).

- 18.4.3 While the aforementioned sites and their availability of access during the construction and operational phases of the Wylfa Newydd DCO Project are not explicitly considered within the Public Access and Recreation chapter of Volume D (Chapter D4) [APP-123], they are considered within the context of the residual effects reported regarding the Wales Coastal Path in that Chapter of the Environmental Statement, which is anticipated to be significantly impacted along its route during both the construction and operational phases.
- 18.4.4 Furthermore, while access to the Wales Coastal Path will be available from the Site Campus during its operation, there will be no direct access from the Site Campus. Updated drawings will be submitted into Examination which demonstrate the removal of access points from around the perimeter of the Site Campus. This means that workers would have to walk some distance before they can join the section of the Wales Coastal Path from Cemaes to Wylfa Head. Provision of direct access to the Wales Coastal Path and ecological sensitive sites to the south of the Wylfa Newydd Development Area will not be provided. In order to access these sites, residents of the Site Campus would need to travel eastwards along the Wales Coastal Path towards Cemaes before turning south and travelling at least 4km along the boundary of the WNDA.
- 18.4.5 Given the extensive diversion, the lack of motorised transport from the Site Campus, the provision of on-site recreational and leisure amenities, the shift-work patterns which workers would be required to adhere to, restricted access to Cemlyn Bay and its ecological sensitive sites from the Site Campus, the idea that such sites will be inundated by workers/residents of the Site Campus is not considered realistic. Furthermore, the Wylfa section of the Wales Coastal Path is sparsely used at present as shown within Appendix D4-1 (Public Access and Recreation Baseline Report) of the ES [APP-138]. This Baseline Report is informed by a user survey of the Wylfa Section of the Wales Coastal Path that was undertaken on two consecutive days in both August and November 2014. This survey shows that over the course of two days in August 2014 (representative of the height of the summer tourist season), there were only 83 users of the Wales Coastal Path while in November 2014, there were only 31 users over the 2 days.
- 18.4.6 While IACC perceive the statement in regard to control measures within the Workforce Management Strategy [APP-413] as 'weak', Horizon disagrees. The principles within the Workforce Management Strategy will form the basis of the Code of Conduct that members of the construction workforce will be required to adhere to during their time working on the Project (refer to Requirement PW8 of the draft DCO [REP2-020]). The Workforce Management Strategy includes a number of principles relating to Wylfa Head and other ecologically sensitive areas, treatment of tourism accommodation, and behaviour which will be monitored and enforced through the Code of Conduct, with those in breach of such conditions being disciplined accordingly.
- 18.4.7 Furthermore, and as outlined within the draft DCO s.106 agreement, Horizon has proposed a range of measures to help assist further with the protection of these ecological sensitive sites, including, but not limited to the following:

- Providing £300,000 in funding for providing new and upgraded public rights of way, and their maintenance;
- Funding of an Environmental Officer. (As per responses to other chapters of this LIR, it is agreed to expand this role to a full time role); and
- Part funding of a Tern Warden.

18.4.8 The Environmental Officer will be funded by Horizon and its role would be to monitor Horizon and its contracted partners' compliance with the relevant ecological mitigation and monitoring plans committed to under the DCO. The expanded role would see this officer take on an environmental health oversight role, working with the ecological clerk of works as committed to in Wylfa Newydd COCP [REP2-031] at paragraph 11.2.1. There will also be funding assistance of a Tern Warden, to monitor the annual Tern breeding season throughout the construction phase and to minimise any disruption associated with the Wylfa Newydd DCO Project workforce at the Anglesey SPA Tern colony.

18.4.9 The creation of these roles and mechanisms within the draft DCO section 106 agreement are in addition to the 'Environment and Built Heritage' engagement sub-group that will be formed and responsible for the monitoring of unforeseen potential impacts in respect to the local environment and built heritage, particularly ecologically sensitive sites.

18.5 Health

18.5.1 This section responds to paragraph 1.4.31 of Chapter 18: Site Campus.

18.5.2 The provision of health care facilities for the construction workforce is being addressed with Betsi Cadwaladr University Health Board (BCUHB); Public Health Wales (PHW) and the Welsh Ambulance NHS Trust (WAST) through the Statement of Common Ground process. Welsh Government (WG) are present at the meetings. Item 0112 of the Mitigation Route Map (APP-422) states that Horizon has committed to a process for agreeing Health Services. Horizon is currently working through the steps in this process with BCUHB, WAST, PHW and WG.

18.5.3 The IACC makes two points about healthcare.

- The provision of on-site medical services ; and
- The timing/phasing of the services.

18.5.4 These points are addressed below.

The provision of services

18.5.5 Horizon would operate two on-site healthcare facilities: a Construction Site Clinic (a facility within the construction security fence on the Power Station Site and a Site Campus Medical Centre (a medical centre on the Site Campus. At the start of the Construction Period, the clinic will be staffed initially by a nurse, with resources progressively increases as worker activities increase (e.g. to include paramedics, OCC Health Nurses, OCC Health

Physicians). The Construction Site Clinic will be operational for the full construction period and staffing will scale up and down in proportion to the number of workers on site and demand

18.5.6 Contrary to IACC's suggestion, Horizon does not state that the Site Campus would only require first-aid facilities. Item 0612 of the Mitigation Route Map [APP-422] provides detail about the on-site health facility. It states that the Site Campus Medical Centre will include appropriately equipped space and facilities for:

- Primary Care services, including GP services, specialised clinics, out-of-hours care and pharmaceutical services.
- Occupational Health services, including medicals and screening of workers where required.
- Administrative functions, including medical records and health surveillance systems.
- Occupational Hygiene facilities and resources, which would then be deployed across the Wylfa Newydd Development Area.

18.5.7 Requirement WN18 states that Horizon must submit details of the Site Campus Medical Centre to IACC for approval which have been prepared in consultation with the nominated local health service provided and applicable guidance and include the services outlined above.

The timing/phasing of the services

18.5.8 The IACC requests further detail on the timing of the delivery of the on-site medical facility. The IACC states that Horizon must ensure that this facility is available before the occupation of the site campus commences and that provision is made for out of hours demand.

18.5.9 In response to stakeholders, Horizon has committed to phasing of the Site Campus (across three phases) which will be submitted as part of an updated Phasing Strategy at Deadline 4 (17 January 2019).

18.5.10 Phase 1 of the Site Campus would be fully operational before the number of non-home based workers exceeds 3,000 in the community. Phase 1 would deliver first 1,000 beds and the Site Campus Medical Facility on or before Q8 post DCO grant , ensuring that delivery remains within the parameters of the ES. Further detail on phasing is set out in Horizon's Deadline 3 comments on IACC's response to the Examining Authority's first written questions Q4.0.107.

18.5.11 The phasing of the health services for the construction workforce continues to be a topic of discussion between Horizon and BCUHB.

18.5.12 A discussion document was shared with BCUHB, Welsh Government and the WAST on 21 August 2018. This considers the timing of the services (in relation to the arrival of non-home-based workers, the occupation of the Site Campus and out-of-hours services). Appropriate timing includes ensuring that the staff and equipment are in place and that the facilities are appropriately registered. The Construction Site Clinic would be in place first. This would be followed by

the Site Campus Medical Centre. There would be appropriate contributions to BCUHB for use of off-site NHS services by the construction workforce (and dependants). For this reason, Horizon does not consider that the requirement for the Site Campus Medical Facility can, or needs to, be operational prior to the occupation of the Site Campus.

18.5.13 Horizon is currently discussing the provision of an initial payment to the National Health Service to deal with workforce health requirements in the initial years of construction (in addition to the mobile emergency services on the Power Station Site) until sufficient construction workers are residing on site for the on-site health facility to be provided. The health facility will be designed in phases and staffing will scale up or down in size in response to resident numbers on the Site Campus.

18.5.14 To date, discussions with BCUHB and local service providers have been positive and constructive. Horizon is continuing these discussions as part of the Statement of Common Ground process.

18.6 Design

18.6.1 IACC has raised concerns in respect of the design of the Site Campus, including the acceptability of the recreation and amenity facilities, and the quality of the accommodation and its ability to attract workers. The acceptability of the recreation and amenity facilities has been dealt with in part earlier in this report.

18.6.2 As set out in Volume 1 of the Design and Access Statement (“DAS”) [APP-409], the Planning Act 2008 places significant importance on good design. Policy relating to good design for energy infrastructure is set out in NPS EN-1 and policy relating to good design specifically for nuclear power generation is set out in NPS EN-6. These policies are set out in detail in the Planning Statement [REP2-029]. While there is no hierarchy in the principles of good design, both NPS EN-1 and NPS EN-6 recognise that the achievement of good design goes beyond, for example, visual aesthetics, and that the functionality of infrastructure is of significant importance. In this respect, the Secretary of State needs to be satisfied that energy developments are functional and sustainable, and having regard to regulatory and other constraints, are as attractive, durable and adaptable as possible.

18.6.3 Horizon has formulated a set of design principles, which the design of the Site Campus has followed, including the accommodation, and recreation and amenity facilities. The main principles are as follows:

- The Site Campus will provide safe and good quality single bedroom accommodation to meet accommodation standards for single living accommodation with good access to the construction site.
- The amenity building will provide facilities that meet workers’ needs, including facilities for good quality food and relaxation on-site.
- The Site Campus density will provide the required number of beds to meet the forecast demand.

- The proposed development will limit the potential impact of the buildings and connect the site visually and physically to the scale and pattern of the surrounding landscape.
- The proposals will seek to reduce the overall visual impact of the site, using the site contours and natural levels of the site to locate the accommodation buildings.
- The development will make use of simple building forms, with off-site modular construction adopted as appropriate. Accommodation and amenity buildings will be designed to provide scalability and to allow its construction and decommissioning in phases.
- The development will include a pedestrian network connecting it to the Power Station Site and surrounding network. A simple and natural palette of materials and colours will be adopted.
- The Site Campus will provide accommodation and facilities of sufficient quality to attract the temporary workers to stay on the site.
- As many existing features will be retained as possible, including mature trees and woodland, the bat barn, hedgerows; boundary features; stone walls and rock outcrops.

18.6.4 The detail of what is proposed, from a design perspective, is set out in more detail in Volume 3 of the Design and Access Statement [REP2-030].

18.7 DCO requirements and planning obligations

18.7.1 For the reasons set out above, Horizon does not consider the DCO requirements and planning obligations requested by IACC are necessary or justified. In respect of the specific requests:

- **Occupancy / bed spaces:** Please see Horizon's Deadline 3 comments on IACC's response to Examining Authority's first written questions Q4.0.107 for Horizon's position in respect of delivery of bed spaces and maintaining high occupancy.
- **Detailed design:** Please see Requirement WN19, which provides that no construction of the Site Campus may commence in respect of a building or other structure identified in Requirement WN20 until plans and written details of the design have been submitted to IACC for approval.
- **Phasing Plan:** As noted above, Horizon has committed to phasing of the Site Campus (across three phases) which will be submitted as part of an updated Phasing Strategy at Deadline 4 (17 January 2019).
- **Restoration / Re-instatement Plan:** Restoration works are adequately provided for and secured by Requirement WN23. Decommissioning of the Site Campus must not commence until a decommissioning strategy (including restoration works) has been submitted to IACC for approval.

- **Nightly Rate:** Providing IACC with the ability to set a price-cap for occupancy in the Site Campus is entirely unjustified, and a requirement of this nature would be unprecedented so far as Horizon is aware. As noted above, Horizon has a strong incentive to ensure high occupancy.
- **Worker Accommodation Management Service:** The Workforce Management Strategy [APP-413] already requires all personnel to register with the Workforce Accommodation Management Service. All non-home-based personnel should seek to use the Workforce Accommodation Management Service to identify and secure accommodation in the first instance, before using other accommodation services. The Workforce Accommodation Management Service will also enable Horizon to direct workers towards certain areas or accommodation types in order to ensure a local balance. Monitoring of accommodation selection will be undertaken through the Workforce Accommodation Management Service to ensure that impacts on local housing stocks are managed appropriately. Where monitoring shows adverse impacts, or forecasts adverse impacts, then the Contingency Fund for accommodation effects, provided under the draft DCO s.106 agreement can be accessed.
- **Leisure facilities:** In response to paragraph 1.6 of the Site Campus chapter of IACC's LIR, in addition to the facilities provided on-site, Horizon notes that schedule 2 of the draft DCO s.106 agreement issued to IACC on 30 November states that Horizon will provide the following funding to mitigate the effects of the workforce:
 - £2,100,000 funding for indoor sports hall upgrades;
 - £260,000 for outdoor leisure facility upgrades
 - £1,500,000 for swimming pool upgrades,

19 Local Impact Report – Dalar Hir

19.1 Introduction

19.1.1 Horizon has reviewed chapter 19: Dalar Hir of IACC's LIR. This document responds to the key issues presented within chapter 19, with reference to the corresponding paragraph numbers in the LIR chapter where appropriate.

19.1.2 Key issues in this response are:

- Planning policy;
- Landscape and visual;
- Hydrology and groundwater;
- Traffic;
- Development Consent Order (“DCO”) requirements and section 106 (“s.106”) planning obligations; and
- Other matters, including phasing, decommissioning and reinstatement.

19.2 Planning policy

19.2.1 National Policy Statements (“NPS”) EN-1 and EN-6 remain important and relevant matters which should carry significant weight in the determination of nuclear energy nationally significant infrastructure projects (“NSIPs”) that will deploy after 2025. They continue to represent the primary policy basis for a decision made by the Secretary of State on this DCO application. Notwithstanding this, relevant local planning policy and guidance, including the Wylfa Newydd Supplementary Planning Guidance (2018) and the Anglesey and Gwynedd Joint Local Development Plan (2017), have been considered by Horizon in preparing the DCO application and in formulating this response.

19.2.2 Please refer to the Planning Statement [APP-406] for further detail in respect of the status of the NPSs and the planning policy considered by Horizon.

19.2.3 Part 3 of NPS EN-1 defines and sets out the need that exists for NSIPs, including new nuclear power stations. Paragraph 3.1.1 states that the UK needs all the types of energy infrastructure covered by the NPS in order to achieve energy security at the same time as dramatically reducing greenhouse gas emissions. Paragraph 3.1.2 goes on to state that it is for industry to propose new energy infrastructure and that the UK Government does not consider it appropriate for planning policy to set targets for or limits on different technologies.

19.2.4 The urgency of the need for new electricity generating capacity is underlined by projections within NPS EN-1 that indicate up to 22 gigawatts (‘GW’) of existing capacity will close over the period to 2020 in part due to the Industrial Emissions Direction but also as a result of some power station reaching the end of their operational lives (paragraph 3.3.7). In response to this, NPS EN-1 identifies a minimum need for 59 GW of new generating capacity over

the period to 2025 (paragraph 3.3.23). Please also refer to Appendix 11-2 of the Statement of Reasons [APP-032] which provides further evidence of the urgent need for new nuclear power.

- 19.2.5 Section 2.2 of NPS EN-6 deals specifically with the need for new nuclear power stations. Paragraph 2.2.3 states that a failure to develop new nuclear power stations significantly earlier than the end of 2025 would increase the risk of the UK being locked into a higher carbon energy mix for a longer period of time than is consistent with the Government's ambitions to decarbonise electricity supply. As a result, it would become more difficult and expensive to meet the Government's targets for significant and urgent decarbonisation of the economy and enhanced security of supply (see Part 3 of NPS EN-1).
- 19.2.6 The Dalar Hir site forms a key part of the Wylfa Newydd DCO Project and will be instrumental in assisting Horizon to meet the need for new energy infrastructure identified in the NPSs. The Park and Ride facility is classed as 'Associated Development' for the purposes of the DCO application.
- 19.2.7 The Integrated Traffic and Transport Strategy (ITTS) [APP-107] sets out Horizon's proposals for transporting construction workers and materials to the Power Station site and plans for improvements to the local road network. A key component of the ITTS is the provision of a Park and Ride facility as part of an integrated package of improvements for the transportation of construction workers. The facility is intended to reduce the number of vehicles using minor roads and control the number using the A5025.
- 19.2.8 Based on further assessment and modelling undertaken following the Stage Two Pre-Application Consultation (PAC2), Horizon has identified a requirement for a Park and Ride facility to accommodate up to 1,900 cars. The need for a single park and ride facility to accommodate up to 1,900 cars located on the Isle of Anglesey is accurate and justifiable. Further information is provided in the Transport Assessment [APP-101] and ITTS [APP-107].
- 19.2.9 Section 5 of NPS EN-1 sets out 'generic impacts' relevant to all energy NSIPs. This is followed by detailed guidance on a topic by topic basis to guide the applicants as well as the decision maker in their detailed approach to NSIPs, informing their design, assessment and mitigation. These are listed in table 3-2 in the Planning Statement [APP-406]. In addition to the generic impacts set out in NPS EN-1, NPS EN-6 sets out a list of "Nuclear Impacts" that are considered particularly relevant to the development of new nuclear power stations (paragraph 3.4.3, NPS EN-6). This is followed by detailed guidance on these topics informing their design, assessment and mitigation (paragraphs 3.6-3.12).
- 19.2.10 These Nuclear Impacts are:
- Flood risk;
 - Water quality and resources;
 - Coastal change;
 - Biodiversity and geological conservation;

- Landscape and visual impacts;
- Socio-economic; and
- Human health and well-being.

19.2.11 The Wylfa Newydd DCO Project is assessed relative to the generic impacts and each of the Nuclear Impacts in the Planning Statement [APP-406], including consideration of compliance with both national and local planning policy.

19.2.12 Paragraph 4.1.3 of NPS EN-1 states that in considering any proposed NSIP the decision maker should take into account:

- Its potential benefits, including in addition to its contribution to meeting the need for energy, its contribution to job creation and any long term or wider benefits; and
- Its potential adverse impacts, including any long term and cumulative adverse impacts as well as any measures to avoid, reduce or compensate for any adverse impacts.

19.2.13 In summary, the Wylfa Newydd DCO Project will deliver significant benefits including a major contribution to meeting the pressing, and increasing, need for nuclear power by 2035 and significant benefits to the local economy. Whilst potential adverse impacts arise from the Wylfa Newydd DCO Project subject to appropriate mitigation, it would not have impacts on the local or the wider area which are sufficient to override the overall presumption in favour, as to warrant refusal of the DCO. Please refer to the Planning Statement [APP-406] and Horizon's Written Representation submitted at Deadline 2 (4 December 2018) [REP2-002] for more detail.

19.3 Landscape and visual

19.3.1 The key issues raised by IACC in relation to landscape and visual impacts, and corresponding paragraph numbers in the LIR, are as follows:

- Detailed lighting scheme: 1.2.22;
- Assessment of visual effects 1.2.23, 1.2.24, 1.2.25;
- Assessment of residential views 1.2.26, 1.2.27, 1.4.10;
- Assessment of effects on Gwyddfor Residential Home 1.2.26;
- Requirement for additional on-site planting and off-site planting 1.2.28, 1.2.29;
- Update of Extended Phase 1 Habitat Survey figures 1.4.5, 1.4.6, 1.4.7;
- Important hedgerows 1.4.8;
- Fencing and other security measures 1.4.9; and
- Decommissioning and post-operation strategy 1.4.11.

19.3.2 These are dealt with in turn below and on the following pages.

Detailed lighting scheme

- 19.3.3 In relation to IACC statement in paragraph 1.2.22 of chapter 19 that “a *detailed lighting scheme that avoids light spill onto surrounding buildings including nearby residential properties and care home, watercourses and boundary features needs to be agreed with IACC*”, Horizon will be providing a detailed lighting strategy which will be contained in the updated Wylfa Newydd CoCP [REP2-031] and Park and Ride sub-CoCP [REP2-035] that it is proposed will be submitted at Deadline 4 (17 January 2019).
- 19.3.4 The Park and Ride sub-CoCP requires lighting of the Park and Ride to be kept to a minimum lux level and the Wylfa Newydd CoCP requires that lighting designs will be developed to reduce light spill onto sensitive receptors (including ecological receptors) to below thresholds where significant effects are predicted where practicable. As pedestrian safety would be a priority, a Central Lighting Management System (CLMS) would be used on site to allow lighting throughout the site to be controlled, either through dimming or turning off when not in use as secured by Wylfa Newydd CoCP.

Assessment of visual effects

- 19.3.5 The IACC statement in paragraph 1.2.23 of chapter 19 “*that IACC concludes that there are in addition, a small number of visual receptors where the magnitude of visual change should be assessed as being higher than that which has been reported within Table 1-1 Visual Effects, Appendix F10-3*”, is addressed below in relation to the Representative Viewpoint concerned.
- 19.3.6 The reasoning in IACC’s statement in paragraph 1.2.24 of chapter 19 that, “*IACC’s assessment has identified additional significant adverse visual effects resulting in increased negative impacts at Viewpoint 1 (representative view from a minor road to the north of the Park and Ride)*” is not clear. Horizon does not agree with IACC’s assessment that there would be a moderate adverse effect on transient receptors (Viewpoint 1) and has assessed the effects as minor adverse for the following reasons. Transient receptors would have oblique views of the operational Park and Ride, partially screened by topography and partially filtered by intervening vegetation. The significance of effect would be minor adverse during winter year 1 and summer year 5 of operation.
- 19.3.7 Chapter 19 paragraph 1.2.25: “*IACC has also identified significant adverse visual effects at Viewpoint 6 (representative view north from the A5 Holyhead Road) for construction and for Year 1 of the operation period because receptors will sustain negative impact*”. Horizon does not agree with IACC’s assessment that there would be a moderate adverse significance of visual effect for transient receptors on the A5. As noted in appendix F10-3 (visual effects schedule) [APP-294] views into the Park and Ride from Viewpoint 6 during the construction and operational phases would be partially filtered by the existing 10m wide woodland belt and views would be most notable at the existing A5 junction 4 interchange, with effects diminishing immediately passing the Park and Ride. The significance of effect would therefore be minor adverse during construction and winter year 1 of operation. By summer year

5 of operation the proposed mitigation planting adjacent to the A5 would reduce views from the A5 to the Park and Ride. As such, the magnitude of change and significance of effect would reduce to negligible adverse for transient receptors on the A5. Horizon considers the assessment of magnitude of visual change and significance of effect for construction and year 1 operational stages to be correct.

Assessment of residential views

- 19.3.8 Chapter 19 paragraphs 1.2.26 and 1.2.27: *“IACC has identified potential residential visual receptors [including Castell, paragraph 1.2.27] at properties in the Zone of Theoretical visibility that are located outside the three communities which are identified and incorporated within Horizon’s visual assessment”*. As stated in the methodology in chapter B10 (landscape and visual) [APP-075], table B10-4 Key issues raised through scoping, *“Visual effects on views from individual private residential properties are not assessed in chapter D10 of this Environmental Statement. Instead, the effects on the visual amenity of local communities have been assessed. This approach was set out in the methodology document provided to IACC and discussed during the stakeholder meeting on LVIA methodology held on 1 April 2016 where IACC expressed support for a community views approach to the Assessment”*. The assessment of visual effects in chapter F10 (landscape and visual) of the ES [APP-275] and appendix F10-3 [APP-294] has been aligned with this approach and an assessment of effects on community receptors is therefore included, while individual residential properties are not considered.

Assessment of effects on Gwyddfor Residential Home

- 19.3.9 Chapter 19 paragraph 1.2.26: *“Gwyddfor Residential Home residents would experience a medium magnitude of change in the construction period”*. As noted in appendix F10-3 (visual effects schedule) [APP-294] views from Gwyddfor Residential Home would be oblique and slightly elevated from a very limited south-western facing aspect of the large residential home, partially filtered and focused by surrounding vegetation. The magnitude of visual change has been assessed small because the receptors’ views would only be from a single aspect softened by intervening mature vegetation within the curtilage of the Gwyddfor Residential Home and tall hedgerows beyond. Therefore, the significance of effect would be minor adverse.

Requirement for additional on-site planting and off-site planting

- 19.3.10 Chapter 19 paragraph 1.2.28: *“IACC submits that additional use of screen planting both on and off-site is required” and identifies “an opportunity to plant a proportion of larger trees alongside the existing northern and eastern boundary” and identifies an opportunity for “similar planting on the proposed roundabout”*. As the development is temporary, proposed planting would not provide effective mitigation, given the length of time required for establishment. As explained in chapter F10 of the ES [APP-275] the site would be restored at the end of operation.

- 19.3.11 IACC has not made clear if “larger trees” mean larger species or planting larger nursery stock. Larger trees are not typical of the local landscape character and are rare along the existing hedgerows within the landscape of LCA 5: North West Anglesey and LCA 17: West Central Anglesey. Mature trees tend to exist in groups where some protection from harsh weather conditions is provided to allow establishment. Only the transient receptors at Viewpoint 2 (west and north-west of the Park and Ride) would be affected by views towards the northern boundary. However, the visual impact from this location would not be significant during the construction, operational and decommissioning phases.
- 19.3.12 Due to requirements for maintaining visibility splays, planting cannot be proposed on the proposed roundabout.
- 19.3.13 Chapter 19 paragraph 1.2.29: “...*Mitigation for the negative impacts likely to be sustained by residents of Gwyddfor Residential Home would be via off-site planting along its western boundary*”. Off-site planting is not considered necessary as the Park and Ride would be temporary; planting mitigation would take time to establish.
- 19.3.14 Chapter 19 paragraph 1.2.29: “*Other opportunities for off-site planting to reduce negative impacts would be in the form of the field boundary hedgerows or cloddiau located to the north and north-east of the site*” and that “*receptors at Castell and those travelling along the adjacent minor road would benefit from field boundary reinforcement*”. As the significance of effect on views from the minor road (Viewpoint 1) would not be significant, additional mitigation to reduce effects on views from this receptor is not considered necessary.

Update of Extended Phase 1 Habitat Survey figures

- 19.3.15 In relation to IACC's statement in paragraph 1.4.5 of chapter 19 that “*figures 2 and 3 in App F9-1 Dalar Hir Extended Phase 1 Habitat Survey and HIS Survey should be updated to illustrate the locations of all the hedgerows numbered in Table 3 in Appendix C (of App F9-1)*”, Horizon acknowledges that there are a small number of hedgerows listed in table 3 of appendix A of the Dalar Hir Extended Phase 1 Habitat Survey and HIS Survey [APP-282] which are not annotated on figures 2 and 3. Horizon will review these figures and submit updated versions into Examination.
- 19.3.16 In relation to IACC's statement in paragraph 1.4.6 of chapter 19 that, “*DAS Figure 17 (Volume 3, Appendix 1-3) is not consistent with the Habitat Survey (as currently presented) and should be updated to reflect the updated Habitat Survey (as and when updated)*”, and IACC statement in paragraph 1.4.7 of chapter 19 that, “*IACC requires the updated survey information in order to fully understand the impacts of the proposed development ... and also to inform the detailed design of the site*”, the Dalar Hir Extended Phase 1 Habitat Survey and HIS Survey [APP-282] correctly identifies Hedgerow H16 as species rich hedge bank with a defunct hedge with trees in table 3 of appendix C (hedgerows). Horizon acknowledge that this hedge is incorrectly identified as species poor on Figure 17 (key findings from habitat survey) of volume 3 of the Design and Access Statement, appendix 1-3 [APP-410].

19.3.17 Figures 2 and 3 in the Dalar Hir Extended Phase 1 Habitat Survey and HIS Survey [APP-282] should be referred to for information on habitat survey.

Important hedgerows

19.3.18 Chapter 19 paragraph 1.4.8: *“The DAS (Volume 3, Appendix 1-3)17 does not refer to Chapter F11 (para 11.3.22) or Figure F11-1 and it would appear that the design of the Park & Ride Facility has not been informed by the need to retain as much as possible of the important hedgerows” and “the value and importance of the hedgerows and field pattern on the site are evidenced in Horizon’s own documents and supported by LANDMAP data”.*

19.3.19 Horizon confirms that the design has been led by the requirement to maintain important hedgerows where operationally feasible. The Park and Ride design acknowledges the historic LANDMAP Fieldscape Central East Môn in paragraph 2.1.18 the DAS appendix 1-3 (Park and Ride Facility at Dalar Hir) of the Design and Access Statement [REP2-030].

19.3.20 Appendix A Facility Environmental Design Objectives (Page 92) of volume 3 of the Design and Access Statement, Appendix 1-3 (Park and Ride Facility at Dalar Hir) states in Ref. EDO3 that the *“Design has taken cognisance of existing landscaping and preserves the landscape character of the area where possible. The environmentally significant features have been retained with buffer zones agreed (e.g. hedges, streams and wet ditches).”*

19.3.21 As stated in paragraph 2.1.38 of volume 3 of the Design and Access Statement appendix 1-3 (Park and Ride Facility at Dalar Hir), *“there are a number of environmental constraints (figure 13) on the site which are relevant to the development of a masterplan for the Park and Ride. These constraints include: Hedgerows along the northern boundary and within the site. The design has taken cognisance of existing field boundaries and boundary wall. Existing hedges are to be retained where possible.”* There is therefore no oversight as stated by IACC in paragraph 1.4.8 of chapter 19 (*“This oversight can be addressed by a DCO requirement for a modified detailed design for the Park & Ride Facility, to be submitted and approved by IACC”*) and no need for a modified detailed design.

19.3.22 As stated in paragraph 4.2.14 of volume 3 of the Design and Access Statement appendix 1-3 (Park and Ride Facility at Dalar Hir), *“the existing hedgerows, wildlife corridors and areas of plantation identified would be protected and, where appropriate, bolstered to gap up hedgerows, replace areas of unsuccessful plantation and improve biodiversity throughout the site.”*

Fencing and other security measures

19.3.23 Chapter 19 paragraph 1.4.9: *“IACC ... considers there to be a lack of information on the security measures proposed. These are currently described as “sensitive and appropriate” (DAS Volume 3, Appendix 1-320, page 49)”. Within the approved drawing [WM902-HZDCO-ADV-DRG-00033] Horizon has provided a proposed fence elevation which illustrates security measures*

that would be implemented, but most security measures are sensitive due to the nature of the development.

19.3.24 Chapter 19 paragraph 1.4.9: *“Measures should be proposed to minimise the presence and visibility of this fence, such as the use of recessive colours, routing alongside existing ...”*. Paragraph 6.1.4 of volume 3 of the Design and Access Statement, appendix 1-3 (Park and Ride Facility at Dalar Hir) states that: *“Consideration has been given to meeting the dual aims of security and minimising visual impact in the selection of the perimeter fencing system. Wired mesh / Paladin type fencing (1.8m high) is proposed to the perimeter of the parking areas. The site perimeter is to be a combination of banking (approximately a one in three slope) and trees and hedges utilised to reduce the visual impact.”* The fencing alignments closely follow the boundaries of the car parks to minimise the development footprint.

19.3.25 Chapter 19 paragraph 1.4.9: *“These measures could also be addressed by DCO requirements for the modified detailed design and the hard and soft landscape schemes”*

19.3.26 The proposed security fencing around the Park and Ride will be finished using a visually recessive colour to mitigate potential adverse visual impact, for example, inappropriate visual contrast with the elements within and beyond the site in views from the surrounding area. No modification of the detailed hard and soft landscape design is therefore considered necessary. These details will be secured in the updated Park and Ride CoCP that is to be submitted for Deadline 4.

Decommissioning and post-operation strategy

19.3.27 Chapter 19 paragraph 1.4.11: *“Clarification needs to be provided on the composition and responsibility for the implementation of the long-term management strategy.”* Figure 43 of volume 3 of the Design and Access Statement appendix 1-3 (Park and Ride Facility at Dalar Hir) shows the proposed restoration post-operation. The details will be prepared following the landscape design principles set out in Appendix B, Meeting the Design Principles of volume 3 of the Design and Access Statement, appendix 1-3 (Park and Ride Facility at Dalar Hir) page 96, and including those set out in paragraph 4.2.34 and paragraph 4.2.35 of volume 3 of the Design and Access Statement appendix 1-3 (APP-410) on Landscape Maintenance that, *“Horizon will undertake quarterly landscape site inspections for a 5-year period, followed by annual inspection for a second 5-year period”* and that *“the site would be reinstated to its current agricultural use and “that the long-term objective would be to create a sustainable landscape that would see this temporary site return to its natural state.”*

19.3.28 Chapter 19 paragraph 1.4.11: *“It is also not clear from Section 9 or from the Reinstatement Plan in Figure F1-524 which, if any, of the sections of new hedgerow planting will be cloddiau or hedge banks. Consideration should be given to ensuring that a proportion of the new hedgerow section planting consist of cloddiau.”* There are no cloddiau or hedgebanks on the existing site. Upon decommissioning, the landscape features removed during the

construction phase would be reinstated to restore the existing characteristics of the Park and Ride site prior to construction.

19.4 Hydrology and groundwater

Approach to the management of construction activities

- 19.4.1 Chapter 19 paragraph 1.3.17: *“Additional information on the approach to the management of construction activities together with further information on the means to address issues of potential waterborne pollution need to be provided, most appropriately within a revised and significantly more detailed sub-CoCP.”*
- 19.4.2 The Wylfa Newydd CoCP [REP2-031], and the Park and Ride sub-CoCP [REP2-035] secure Horizon’s commitment to mitigating construction-related environmental effects, including means to address issues of potential waterborne pollution, demonstrating that Horizon will control the potential impacts of the Wylfa Newydd DCO Project on people, businesses and the natural and historical environment. It is Horizon’s view that the Wylfa Newydd CoCP and the sub-CoCPs ‘management strategies’ contain sufficient detail to demonstrate that the mitigation described in the Environmental Statement and other assessments will be secured.
- 19.4.3 However, Horizon acknowledges that these documents may be further refined during the Examination period, in response to comments from the Examining Authority and other interested parties and stakeholders, such as IACC. It is Horizon’s opinion that by the close of the DCO examination period, the Wylfa Newydd CoCP and sub-CoCPs, will contain the necessary details and these documents will be secured as approved documents. Horizon considers that as these documents will be subject to rigorous scrutiny by the Examining Authority during the Examination, subsequent approvals should only be required from IACC (in consultation NRW where applicable) where Horizon is seeking amendments to the approved documents following grant of the DCO.

Flood risk at Dalar Hir

- 19.4.4 IACC raises flood risk and associated issues at paragraphs 1.2.14 – 1.2.19, 1.4.12, 1.6.3 and 1.6.4 of chapter 19.
- 19.4.5 At paragraph 1.4.12 IACC states that it requires *“more detail on the additional flood risk mitigation for the park and ride facility itself. This should include for the consideration of the wider implications of part of the facility not being available during its operational phase, and how the movement of workers would be managed during a flood event and the scale and location of alternative parking provision”*.
- 19.4.6 As set out in Horizon’s response to Q8.0.24 of the Examining Authority’s First Written Questions submitted at Deadline 2 (4 December 2018) [REP2-002], the flood risk to the proposed Park and Ride at Dalar Hir is identified in Appendix F8-1 Dalar Hir Park and Ride Flood Consequences Assessment (FCA) [APP-281].

- 19.4.7 Hydraulic modelling results presented and discussed in the FCA indicates that the floodplain of Nant Dalar Hir extends across part of the Park and Ride and reaches depths greater than 2m at the 0.1% Annual Exceedance Probability event. The surface water flood risk is broadly similar in both extent and flood depth to that from fluvial flooding.
- 19.4.8 The FCA concluded that there was a high risk of flooding from both fluvial and pluvial sources to the Park and Ride site as well as to the A5 and A55 to the south of the site and to agricultural land to the north. The conclusion in the FCA was reached on the basis of conservative hydrological analysis and hydraulic modelling of both sources of flooding, without presentation of how the flood risk could be avoided, mitigated or managed. As only the baseline risk was assessed, no indication of any increase or decrease in risk elsewhere was presented.
- 19.4.9 The risk from other sources of flooding was considered low. Whilst not explicitly stated in the FCA, because of the fluvial and pluvial risk to the Park and Ride site, the development would be considered non-compliant with TAN15 Development and Flood Risk.
- 19.4.10 Additional assessment has since been undertaken to review and update the conservative approach presented in the Dalar Hir Park and Ride. Further details of the flood attenuation design for Dalar Hir have been developed in order to mitigate potential flooding effects. This detailed design is shown in [WN0902-HZDCO-ADV-DRG-00038] and is described in the updated Design and Access Statement for the Park and Ride. These have all been submitted at Deadline 2 (4 December 2018).
- 19.4.11 The proposed design mitigation includes:
- Two north eastern fields lowered to a level of 15.03m above Ordnance Datum (AOD) to provide flood storage.
 - Construction levels of car park 1, car park 5 as defined in the CAD model supplied (ref to: 60PO8081-JACCIV-MOD-00024.dwg)
 - The spine road refined to be set at a level of 16.3m AOD.
 - Stream crossing under the spine road defined as a culvert with an appropriate capacity and a cover of 0.5m above the soffit.
- 19.4.12 Further flood modelling has been undertaken by Horizon based on this more detailed design. The results of this are presented in the Park and Ride - Addendum to Flood Consequence Assessment, which has also been submitted at Deadline 2 (4 December 2018) [REP2-372]. Overall, the proposed design mitigation, by introducing flood storage, raising car park levels to avoid impacts and incorporating structural changes at the crossing of the Nant Dalar Hir on the Park and Ride site reduces the flood risk to the development and to the A5 downstream. This will ensure that the site is free from flooding for events up to the 1% flood event with an allowance for climate change and that betterment is available to nearby vulnerable receptors.
- 19.4.13 As a result of the mitigation identified in the aforementioned Addendum, there would be no loss of access to the facility and no effect on its operation during

its operational phase. Consequently, there would be no negative impact on the movement of workers during a flood event and no requirement for alternative parking provision.

Application of SuDS and water quality

- 19.4.14 IACC at paragraph 1.4.13 of chapter 19 has requested further information about the inclusion of suitable design measures to manage flood risk.
- 19.4.15 In addition to the above, IACC at paragraph 1.2.20 of chapter 19 also "*wishes to receive confirmation regarding the SuDS management train measures so that it can be satisfied that mitigations proposed will be sufficiently robust to ensure no impact on downstream SSSI/SAC. Consideration needs to be given to measures which should include the provision of a swale or similar feature before the final outlet for the drainage of impermeable areas (roads/busways/hardstanding) as this would provide a further step to manage water quality (storage, bio-processing, capture of contaminants). The approach for car-parking appears compliant with CIRIA C753 (Tables 26.2 and 26.3), but that for the impermeable (roads/busways/hardstanding) is, in the view of IACC, likely need another stage to protect downstream water quality*".
- 19.4.16 At paragraph 1.4.13 of chapter 19, IACC seeks "*further detail on the SuDS management train should be provided to confirm impacts on water quality can be managed*".
- 19.4.17 As detailed above, further assessment and refinement of Horizon's understanding of the flood risk at Dalar Hir has been undertaken and flood mitigation measures have been identified that ensure that the site is free from flooding for events up to the 1% flood event with an allowance for climate change and that betterment is available to nearby vulnerable receptors.
- 19.4.18 IACC's request for additional information on the management of exceedance flows in relation to the surface water drainage system is noted. The proposed drainage strategy is presented within section 4.3 of the Dalar Hir Flood Consequences Assessment [APP-281] indicating that the drainage system would be designed to meet the requirements of Sewers for Adoption and as if it were to be adopted by sewerage undertaker in accordance with Section 104 of the Water Industry Act 1991. The design will restrict runoff rates to greenfield rates and provide attenuation for runoff up to and including the 100 year event plus a 20% allowance for climate change. This will be secured in the updated Park and Ride CoCP that is to be submitted for Deadline 4 (17 January 2019).
- 19.4.19 In the event of an exceedance event causing water to surcharge from the surface water drainage system, site levels are set such that the surcharged water would flow southwards, if surcharging took place within the western half of the site, towards the southern boundary of the site either as shallow overland flow or via the environmental buffer zones, where it would ultimately enter a small drain that passes beneath the A5 and A55. Surcharging that took place in the eastern half of the site would drain as shallow overland flow

towards the Nant Dalar Hir or southwards towards the southern boundary where it would again drain towards the small drain in the centre of the site that passes beneath the A5 and A55.

- 19.4.20 IACC has noted that the approach to the management and treatment of runoff for car-parking appears compliant with CIRIA C753 (tables 26.2 and 26.3), but that for the impermeable (roads/busways/hardstanding) is, in the view of IACC, likely to need another stage to protect downstream water quality. It is not clear why IACC considers there to be a need for difference in the treatment of car parking and other areas of hard standing.
- 19.4.21 Referring back to table 26.2 of CIRIA C753, the proposals at the Dalar Hir Park and Ride are not consistent with the description of a site with heavy pollution due to haulage, lorries, presence within an industrial estate, chemicals, fuels or trunk roads. Under the guidance in table 26.2 of CIRIA C753, sites with non-residential parking land uses, all roads (except low traffic roads and trunk roads/motorways) and commercial yard/delivery areas all share the same degree of pollution hazard level (Medium) and other hazard indices. Consequently, it is Horizon's position that if the approach to the management of car parking is compliant with CIRIA C753 (Tables 26.2 and 26.3) then so too is the approach to the other land uses within the site.

Llynau y Fali - Valley Lakes SSSI / Llyn Dinam SAC

- 19.4.22 At paragraph 1.4.14 of chapter 19, IACC states: *"Given the sensitivity of nearby protected sites and the importance placed on their protection by development plan policy IACC would also wish to see an assessment of potential impacts on the 'Llynau y Fali – Valley Lakes' Site of Special Scientific Interest (SSSI)/Llyn Dinam SAC whilst further information to justify an assessment conclusion of no significant impact on the existing well within the Park and Ride site should also be provided".*
- 19.4.23 The Design and Access Statement for Dalar Hir, Design and Access Statement - Volume 3 (Part 2 of 2) (Rev 1.0) [REP2-030] indicates that a small proportion of the Park and Ride site, at the western end to the west of the demolished buildings, drains westwards to a ditch associated with the road to the west. This was confirmed by site visit. This ditch drains southwards towards the A55 and then eastwards where it discharges to the Nant Dalar Hir. This pathway to Nant Dalar Hir means that there is no pathway for runoff from this portion of the site to reach the Llynau y Fali – Valley Lakes' Site of Special Scientific Interest (SSSI)/Llyn Dinam SAC.
- 19.4.24 A total of 10 sources of likely significant effects (LSEs) were considered in the Shadow Habitat Regulations Assessment Report [APP-050 and APP-051], including changes in surface and groundwater hydrology, for all European Designated Sites that were scoped in to the Shadow HRA, which was principally based on a source-pathway receptor model. The only category in which Llyn Dinam SAC was screened in to the assessment was air quality. This is consistent with the understanding of the drainage system highlighted above.

Package treatment plant

- 19.4.25 IACC notes at paragraphs 1.2.8 and 1.4.15 of chapter 19 that the proposed package plant discharge will automatically shut down should treated water quality be unacceptable. Further information is required about the level of storage to be provided to handle flows whilst plant discharge is shut as well as the trigger for shut-down.
- 19.4.26 ES Volume F - Park and Ride F8 - Surface water and groundwater [APP-273] presents information on the proposed sewage treatment facilities at the Park and Ride development. The assessment states that the on-site sewage treatment plant would, in addition to management and maintenance procedures for the treatment plant:
- Be designed to treat water to appropriate standards set out in the consenting conditions (bespoke for the Nant Dalar Hir and downstream receptors, including Llyn Traffwll) of the Environmental Permit and agreed with NRW;
 - Would be fitted with monitoring and controls to check discharge quality; and
 - If necessary prevent discharge of water that does not meet the limits of the Environmental Permit.
- 19.4.27 The requirement for further information is noted, however, the detailed design of the package sewage treatment plant has not yet been undertaken. Horizon will provide further details once further design information is available informed by appropriately set conditions within an Environmental Permit, developed in partnership with NRW, taking into account the specific requirements of Nant Dalar Hir and Llyn Traffwll and supported by appropriate monitoring and controls.

Existing Well within Park and Ride site

- 19.4.28 IACC states at paragraph 1.4.14 of chapter 19 that further information to justify an assessment conclusion of no significant impact on the existing well within the Park and Ride site should also be provided.
- 19.4.29 Although ES Volume F - Park and Ride F8 - Surface water and groundwater [APP-266] noted that Ordnance Survey mapping shows the potential presence of a well located within the proposed Park and Ride boundary, immediately south of the Dalar Hir farmhouse (figure F8-1, APP-303), this well is not recorded by IACC. Under the Private Water Supplies (Wales) Regulations 2010, IACC as the local authority has a duty to monitor private water supplies ("PWS") and to make and maintain records for every water supply in its area used for potable purposes. It is therefore considered likely to be redundant and not currently used for potable purposes, although it could be used for agricultural purposes.
- 19.4.30 However, current regulations do not require the local authority to monitor PWSs to an individual dwelling and hence this well is considered to be a potential PWS receptor.

- 19.4.31 There are no construction details or use details available for this well nor whether it relied upon groundwater for its water source. Given the uncertainty as to its use and construction, the value of the well within the proposed Park and Ride is assessed as low for the groundwater assessment.
- 19.4.32 The soils within the Park and Ride are defined by the Cranfield Soil and Water Institute as 'slowly permeable seasonally wet acid loamy and clayey soils. Available engineering logs and the British Geological Survey 1:50,000 scale maps suggest the presence of glacial till comprising stiff brownish-grey silty clay. This suggests limited infiltration potential and low groundwater recharge and yield rates.
- 19.4.33 The combination of low permeability soils and clay dominated superficial deposits at the proposed Park and Ride site also affords protection from any above-ground contaminant sources.
- 19.4.34 It is assumed that there would not be a requirement for dewatering as part of any construction activity and the impermeable areas created during construction would form only a very small proportion of any wider groundwater catchment.
- 19.4.35 Based on the above, and with the implementation of the mitigation measures, the magnitude of change and therefore the effect on the PWS receptor is assessed as small to negligible and not a significant effect.

19.5 Traffic and transport

- 19.5.1 The key issues associated with traffic and transport have been identified and responded to below.

Dalar Hir Junction – LIR Paragraph 1.2.31 - Modelling and Operation

- 19.5.2 Appendix A to this section (responding to chapter 19 of the LIR) provides the requested information for the Dalar Hir roundabout.
- 19.5.3 It should be noted that as part of the transport strategy for the Wylfa Newydd DCO Project, shift timings are proposed which help construction workers avoid travelling on the road network during typical peak hours for background traffic movements (i.e. 08:00-09:00 and 17:00-18:00). This means the vehicle movements to and from the Park and Ride facility are low (sometimes zero) during the peak hours to minimise impacts to other vehicles travelling on the highway network.
- 19.5.4 Given the Dalar Hir access roundabout is a new junction, Appendix A to this section provides Junctions 9 model outputs for the junction which show it has sufficient capacity for the expected traffic demand in all scenarios.

Dalar Hir Junction – LIR Paragraph 1.2.32 and 1.2.33– Traffic Flows

- 19.5.5 A discrepancy has been found in the Strategic Traffic Model relating to the construction worker night time car share occupancy assumptions. This has resulted in the traffic flows in and out of the Park and Ride Facility being underestimated in the Appendix C2-3 Traffic Flows document submitted as part of the DCO application. Table 1 presents revised traffic flows.

Table 1 – Daily Traffic Flows at Section 48 Dalar Hir Entrance (see Appendix C2.3) – Traffic Flows

Item	Wylfa Newydd Project 2020 Without Bypasses (two-way)	Wylfa Newydd Project 2020 With Bypasses (two-way)	Wylfa Newydd Project 2023 (two-way)
Total AADT Traffic Flows – DCO Submission	437	437	471
Revised Total AADT Traffic Flows	611	611	700
HGV AADT Flows – DCO Submission	56	56	0
Revised HGV AADT Flows	56	56	0
HDV AADT Flows – DCO Submission	103	103	59
Revised HDV AADT Flows	114	114	62

- 19.5.6 Note that the discrepancy does not affect the 2033 assessment year as no construction workers are present in this scenario.
- 19.5.7 The discrepancy does not affect the conclusions presented in the DCO Transport Assessment and the junction modelling results considered in this response reflect the changes made to correct the discrepancy.

Dalar Hir Junction – LIR Paragraph 1.2.34 1.2.35 – Design Issues

- 19.5.8 The design of the proposed Dalar Hir roundabout has been developed in consultation with IACC. A ‘departure from standards’ report is currently being prepared for submission at Deadline 4 (17 January 2019).

Junctions 3 and 4 – LIR Paragraph 1.2.36 - Traffic Flows

- 19.5.9 Appendix A to this section (responding to chapter 19 of the LIR) provides the requested turning traffic flows for AM and PM peak hour periods. Information is provided for:
- Junction 3
 - Junction 4
- 19.5.10 These turning traffic flows incorporate the changes required to correct the discrepancy described in the previous section.
- 19.5.11 It should be noted that as part of the transport strategy for the Wylfa Newydd DCO Project, shift timings are proposed which help construction workers avoid travelling on the road network during typical peak hours for background traffic movements (i.e. 08:00-09:00 and 17:00-18:00). This means the vehicle movements to and from the Park and Ride facility are low (sometimes zero) during the peak hours to minimise impacts to other vehicles travelling on the highway network.
- 19.5.12 As described above, Junctions 3 and 4 do not have sufficiently high traffic demand compared to capacity to require an assessment using Stage 2 of the methodology described in section 9.4 the DCO Transport Assessment [APP-101].

Monitoring of Travel Behaviour – LIR Paragraph 1.2.37

- 19.5.13 Section 5.10 of the Wylfa Newydd CoCP [REP2-031] provides information on the monitoring of travel arrangements. This section has been updated since the submission of the DCO application and the version 2 submitted at Deadline 2 (4 December 2018) now includes further details on how Horizon will manage, monitor and regulate car parking spaces and how vehicle occupancy will be monitored and reported. These arrangements include providing a quarterly report to the Transport Sub-Group which has access to funding for the implementation of additional mitigation measures if required.

Dalar Hir Bus Stop – LIR Paragraph 1.2.38

- 19.5.14 Arrangements for access by foot, cycle and public transport are shown in Volume 2: Plans, Sections and Drawings (Part 14/19) Park and Ride [APP-023].
- 19.5.15 A bus stop is proposed on the A5 directly adjacent to the Park and Ride facility and approximately 150 metres from the pick-up / drop-off point for the Park and Ride buses. A bus stop for public buses is not proposed within the Park

and Ride site given the inconvenience the additional journey time associated with travelling through the Park and Ride site would provide to passengers who do not wish to use the Park and Ride facility.

Dalar Hir – Impact of Flooding – LIR Paragraph 1.2.39

- 19.5.16 The design of the Park and Ride has been updated to mitigate the effect presented in the DCO application. Please see Horizon's response to Q8.0.24 of the Examining Authority's First Written Questions submitted at Deadline 2 (4 December 2018) [REP2-002]. As no car parking spaces would be flooded with the revised detailed design, no alternative car parking arrangements are required.

Flood Risk and Impact on Transport – LIR Paragraph 1.4.16

- 19.5.17 The design of the Park and Ride has been updated to mitigate the effect presented in Draft DCO application. Please see Horizon's response to Q8.0.24 of the Examining Authority's First Written Questions submitted at Deadline 2 (4 December 2018) [REP2-002]. As there will be no impact on traffic and transport with the revised detailed design, no alternative operational arrangements are required.

Capacity of Junction 3 and 4 – LIR Paragraph 1.4.17

- 19.5.18 The demand and capacity of Junctions 3 and 4 is presented in table 11-6 of the DCO Transport Assessment [APP-101]. This analysis shows that a detailed analysis of junction performance using Junctions 9 is not required as there is sufficient capacity to accommodate the predicted demand. This conclusion is not affected by the correction of the discrepancy described in a previous section.

Queuing at entrance to Park and Ride facility – LIR Paragraph 1.4.17 and 1.4.18 parts a), b) and c)

- 19.5.19 The potential impact of queuing at the entrance to Dalar Hir is addressed by Horizon in its response to question Q11.1.22 of the Examining Authority's First Written Questions submitted at Deadline 2 (4 December 2018) [REP2-002] and which is provided below.
- 19.5.20 Horizon can confirm that the proposal assumes a barrier entry and exit system. As illustrated on the site layout plan for the Park and Ride [WN0902-HZDCO-ADV-DRG-00033] [APP-023], which has been submitted for approval, all entrances and exits to the Park and Ride facility have a secure gate and barrier. In addition, the requirement for gated access to the site has been included as a key design principle for the Park and Ride facility in the Design and Access Statement (Volume 3) [REP2-029 and REP2-030].
- 19.5.21 In response to the question asked of IACC/Welsh Authority/Welsh Government on whether ANPR would preventing queuing on the public highway, Horizon would like to note that the roundabout solution proposed together with the road length of the access road up to the proposed entry

barrier has been designed to avoid queuing on the existing highway. Further information on queuing is provided in following sections.

- 19.5.22 The operational impact of the barriers at the Park and Ride facility has been assessed based on the parameters presented in Table 2. Horizon notes that shuttle buses serving the Park and Ride facility do not pass through the barriers.

Table 2: Operational Assessment of Barrier at Park and Ride facility

Parameter	Value
Queuing capacity per lane	Approximately 150 metres (Plans, Sections and Drawings: 2.11 Park and Ride (APP-023))
Number of lanes	2
Total queuing capacity	300 metres
Average vehicle length	5 metres
Total queuing capacity	60 vehicles
Estimated vehicle capacity per barrier per hour	450 vehicles
Total barrier capacity per hour	900 vehicles
Total barrier capacity per 15 minutes	225 vehicles
Worker demand for Park and Ride per shift stagger (i.e. per 30 mins) in peak year (Year 5)	280 workers (see Figure 7-3 of DCO Transport Assessment (APP-101))
Car demand per shift stagger (i.e. per 30 mins) in peak year (Year 5) (based on 1.5 workers per car)	186 cars
Assumed time period for vehicle arrivals	15 minutes
Demand over 15 minutes	186 cars
Ratio of demand to capacity over 15 minute period	0.83

- 19.5.23 This analysis demonstrates that the barriers have sufficient capacity to accommodate the traffic demand associated with the peak construction worker demand at the Park and Ride.
- 19.5.24 There is capacity for up to 60 cars to queue without blocking the public highway. In addition, buses are not required to pass through the barrier further reducing the risk of queuing.
- 19.5.25 Information on the barrier system is provided in Horizon's response to FWQ.11.1.22. It is assumed that 450 vehicles per hour can pass through each barrier i.e. one vehicle every eight seconds. In the event of a breakdown of a barrier vehicles would be able to use the other barrier and other measures

would be implemented to ensure vehicles do not queue back onto the public highway. Car parking spaces will be allocated so that those vehicles with the highest number of occupants are able to park closest to the shuttle bus stops. This will provide a further encouragement for car sharing.

Traffic Flows – LIR Paragraph 1.4.18 parts d) and e)

19.5.26 Appendix A to this section (responding to chapter 19 of the LIR) provides the requested turning traffic flows for AM and PM peak hour periods. Information is provided for:

- Junction 3
- Junction 4
- Dalar Hir Roundabout

19.5.27 These turning traffic flows incorporate the changes required to correct the discrepancy described in a previous section.

19.5.28 Junctions 3 and 4 do not have sufficiently high traffic demand compared to capacity to require an assessment using Stage 2 of the methodology described in the DCO Transport Assessment.

19.5.29 Appendix A provides Junctions 9 model outputs for the Dalar Hir roundabout which show it has sufficient capacity for the expected traffic demand in all scenarios.

Dalar Hir Roundabout – LIR paragraphs 1.4.19 and 1.4.20

19.5.30 The design of the proposed Dalar Hir roundabout has been developed in consultation with IACC. A 'departure from standards' report is currently being prepared for submission at Deadline 4 (17 January 2019).

19.6 DCO requirements and planning obligations

19.6.1 The Park and Ride sub-CoCP [REP2-035] secures a range of Horizon's commitments for mitigating the construction, operation, and decommissioning related environmental effects of the Park and Ride. Horizon considers that the management strategies in the sub-CoCP (along with the mitigation secured elsewhere in other control documents, including in the Wylfa Newydd CoCP [REP2-031]) contain sufficient detail to secure the mitigation required to appropriately mitigate the adverse environmental effects of the Park and Ride, as identified and assessed in volume F of the ES [APP-266 to APP-303]. For this reason, a DCO requirement that a revised sub-CoCP must be submitted to IACC for approval is not necessary or justified.

19.6.2 Horizon continues to engage with IACC and other stakeholders on these matters, and engagement to date has led to additional detail being added to the CoCP and sub-CoCPs submitted at Deadline 2 [REP2-031 to REP2-036]. Horizon has also made further commitments, as noted in responses to the Examining Authority's Written Questions [REP2-002] or in Deadline 3 responses, to add additional detail in the revised Wylfa Newydd CoCP and sub-CoCPs to be submitted at Deadline 4 (17 January 2019). Horizon

acknowledges that further refinement of the Wylfa Newydd CoCP and sub-CoCPs will occur throughout the course of the Examination.

19.6.3 In respect of the specific requests for requirements made by IACC in section 1.5 of chapter 19, these are either addressed above in the topic specific sections of this response, addressed below, or Horizon is considering them further.

19.6.4 Horizon does not consider that additional requirements in respect of the below matters raised by IACC are needed, for the following reasons:

- **Ecological receptors** (paragraph 1.5.1 (a)): Horizon considers sufficient measures to safeguard ecological receptors are provided in sections 11.1 and 11.2 of the Wylfa Newydd CoCP (which applies to all sites) [REP2-031].
- **Vermin** (paragraph 1.5.1 (a)): The waste management strategy described in section 9 of the Wylfa Newydd CoCP (which applies to all sites) will ensure a clean and tidy site that will not attract vermin [REP2-031].
- **Flood risk mitigation** (paragraph 1.5.2): IACC has requested that detail on flood risk mitigation for the Park and Ride is included in the Wylfa Newydd CoOP. As described above, this detail was provided at Deadline 2 (4 December 2018) illustrating the proposed flood mitigation measures on site. In parallel to this, Horizon also amended the design principles in volume 3 of the Design and Access Statement [REP2-029 and REP2-030] to ensure that flood mitigation is provided on any detailed design submitted under Requirement PR3 (i.e. where Horizon chose not to construct in accordance with the approved plans in Schedule 2 of the Draft DCO [REP2-020]). Further, as noted above, the operational phase of the Park and Ride is also covered by the Wylfa Newydd CoCP [REP2-031]. The Wylfa Newydd CoOP [REP2-037] only applies during the operational phase of the Power Station so would not apply because once the Power Station is operational, the Park and Ride facility would have been decommissioned.
- **Flood mitigation action plan** (paragraph 1.5.1 (b)): Paragraph 10.5.2 of the Wylfa Newydd CoCP [REP2-031] already requires the development of a documented flood mitigation action plan to ensure that in the event of flooding occurring on site, appropriate plans are in place to manage the risks and ensure that there is no increased risk to human health and that risks to property are managed appropriately. Further, it is the conclusion of the FCA Addendum submitted at Deadline 2 [REP2-372] that with the implementation of additional mitigation now proposed there will not be at flood risk at the site over its lifetime and the development will not increase flood risk elsewhere.

- **Invasive species** (paragraph 1.5.1 (e)): The Biosecurity Risk Assessment & Method Statement required by section 11.2 of the Wylfa Newydd CoCP [REP2-031] already covers control of invasive species (at all sites including the Park and Ride facility).
- **Light spill** (paragraph 1.5.7): Horizon is currently updating its lighting strategy which will be incorporated into the Wylfa Newydd CoCP [REP2-031] and the Park and Ride sub-CoCP [REP2-035] that will be revised and submitted at Deadline 4 (17 January 2019). The strategy will, as far as reasonably practical in accordance with operational and security constraints, aim to minimise light pollution to mitigate effects on Dark Sky Reserve Status if granted.
- **Lighting design** will also be controlled through the design principles in the Design and Access Statement [REP2-029] (which require the lighting designs to limit light spill). Operational lighting controls are set out in the Wylfa Newydd CoCP [REP2-031].
- **Archaeological investigation** (paragraph 1.5.8): Horizon does not agree that the implementation of an agreed scheme of archaeological investigation which should be the subject of a DCO requirement, as this is covered. Chapter 12 of the Wylfa Newydd CoCP [REP2-031] and chapter 12 of the Park and Ride sub-CoCP [REP2-035] require archaeological excavation, photographic survey, and Level 1 historic building recording for the Park and Ride. This mitigation would be undertaken in accordance with a Written Scheme of Investigation which would be agreed with GAPS.
- **Means of access** (paragraph 1.5.4): For the reasons set out above, Horizon does not consider changes to the means of access to the Park and Ride facility are required, and therefore Requirement PR2 should not allow for changes to the means of access to the Park and Ride.
- **Detailed design and landscaping** (paragraph 1.5.3 and 1.5.6): As part of the DCO application, Horizon submitted landscape plans for the Park and Ride (refer to [WN0902-HZDCO-ADV-DRG-00035]) [APP-023]. These plans are marked as for approval as part of the DCO application and show areas of retained areas of trees, shrubs, and hedgerow, new hedgerow, native tree and shrub and grassland planning and retained or new stone walls. Under Requirement PR2, Horizon must undertake construction of the Park and Ride facility in accordance with the detailed design drawings identified in Schedule 2 of the Draft DCO [REP2-020]. Horizon notes that updated plans have been submitted as part of Deadline 2 (4 December 2018) [WN0902-HZDCO-PAC-REP-00043] [REP2-019] to accommodate flood mitigation.
- **Minimum parking spaces** (paragraph 1.5.9): Please see Horizon's response to Q4.0.87 of the Examining Authority's First Written Questions submitted at Deadline 2 (4 December 2018) [REP2-002] as

to why a requirement for minimum carparking spaces is not required. In summary, the actual number of car parks provided at a given time will be phased according to the demand at that point of the construction timetable. As such, Horizon does not consider that minimum requirements are necessary, as it is directly in Horizon's interest in terms efficient construction delivery to ensure that there is adequate provision of parking at any point in time. Further, workers will be required to utilize transport facilities provided through the Wylfa Newydd DCO Project through the Workforce Management Strategy [APP-413] and associated Code of Conduct.

19.7 Other matters

- 19.7.1 IACC raises a number of other matters in paragraphs 1.6.1 to 1.6.6 of chapter 19 which are dealt with below.
- 19.7.2 The Phasing Strategy [APP-447] shows Dalar Hir as being delivered by the end of Q4, Year 2. Horizon is making some changes to the Phasing Strategy to provide more detailed triggers for key mitigation. Horizon considers that the key mitigation will be in place before significant effects take place. An updated Phasing Strategy will be submitted at Deadline 4 of the Examination (17 January 2019). Horizon is therefore committed to delivering the Park and Ride within the timeline requested by IACC.
- 19.7.3 Requirement PR6 in the Draft DCO [REP2-020] states that “*decommissioning of the park and ride facility must not commence until a decommissioning strategy has been approved by IACC*”, therefore IACC would have sufficient control to ensure that the decommissioning did not happen before the facility was no longer required. Horizon is aware that IACC has suggested that they may prefer that the Park and Ride is retained for future use and therefore this requirement also includes provisions in the event that IACC has granted or resolved to grant planning permission for its ongoing use.
- 19.7.4 Horizon is aware of IACC's position on the need for additional park and ride sites. It has indicated to IACC that it would be content to work with it to utilise these sites, in the event that they are available, but that it does not consider that additional sites are necessary. As detailed above, Horizon is ensuring that the design of Dalar Hir mitigates for incidents such as flooding and that there would be no loss of operational capacity as a result.
- 19.7.5 The geographical nature of the area, with the WNDA located on the north-western point of Anglesey, with almost all worker traffic coming from one direction – south, means that one park and ride facility has been proposed to intercept traffic on the A55 east of the WNDA. Horizon is also proposing a bus service to pick up workers making more localised trips. Horizon does not therefore consider that it is appropriate or necessary to build multiple facilities.
- 19.7.6 Horizon accepts that there may be unforeseen incidents, such as traffic incidents, which may affect access to the main network to the WNDA or the park and ride site. It has proposed measures within the Wylfa Newydd CoCP

[REP2-031] to set out how Horizon would work with emergency services in the event of an incident and is proposing to add further to detail this in the amended Wylfa Newydd CoCP to be submitted at Deadline 4 (17 January 2019).

- 19.7.7 The Design and Access Statement for Dalar Hir [REP2-029 and REP2-030] shows that the bus transport facility building will accommodate toilets, a drivers' and staff canteen and office space/waiting rooms. Horizon does therefore not believe the statement at paragraph 1.6.5 of chapter 19 to be correct.
- 19.7.8 As stated above, Horizon has included a requirement which would allow the facility to remain in the event that IACC had granted consent under the Town and Country Planning Act 1990 for its retention. It is not considered that this consent should be appropriately dealt with under a requirement for a post-operational scheme. This was considered by the Panel's Report on the Hinkley Point C examination which concluded that: *"However, we are not convinced that the DCO should make provision for these post-operational schemes. It is not wholly clear to us what would happen if a post-operational scheme was not approved, either by the local planning authority or on appeal... In our view, the use and development of the sites in question, following the completion of the Hinkley Point C construction works, should be resolved through normal development management procedures under the Town and Country Planning Act 1990"* (paragraph 315 of the Panel's Report to the Secretary of State).

[This page is intentionally blank]

Appendix A Dalar Hir Appendix

[This page is intentionally blank]

Appendix A 19-1 Turning Traffic Count Information for A55 Junction 3, A55 Junction 4 and Dalar Hir roundabout

19.1 The Wales Coast and Anglesey Coastal Path

Figure 19-1 A55 Junction 3

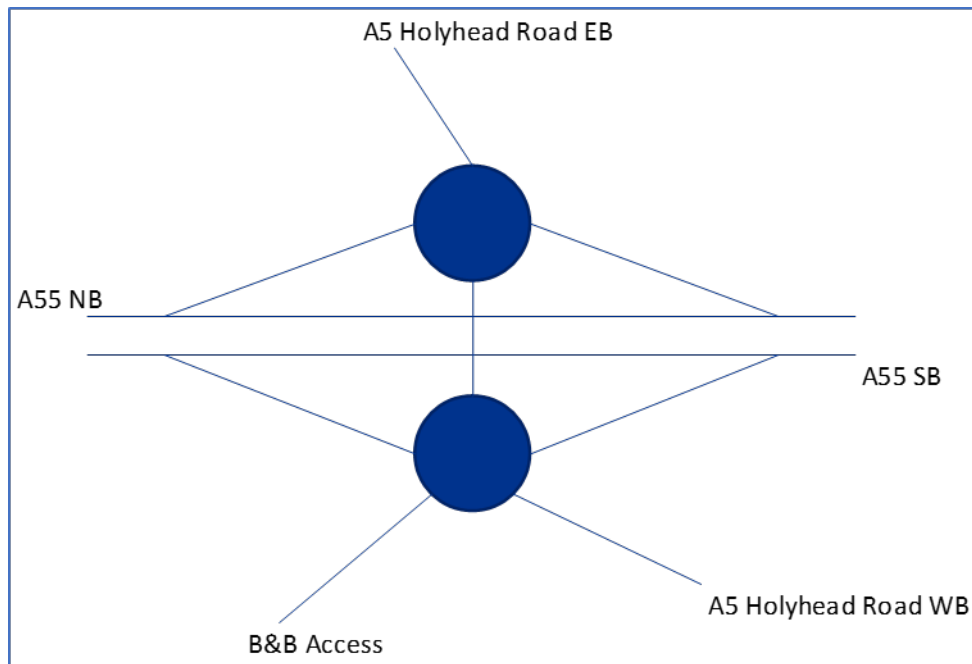
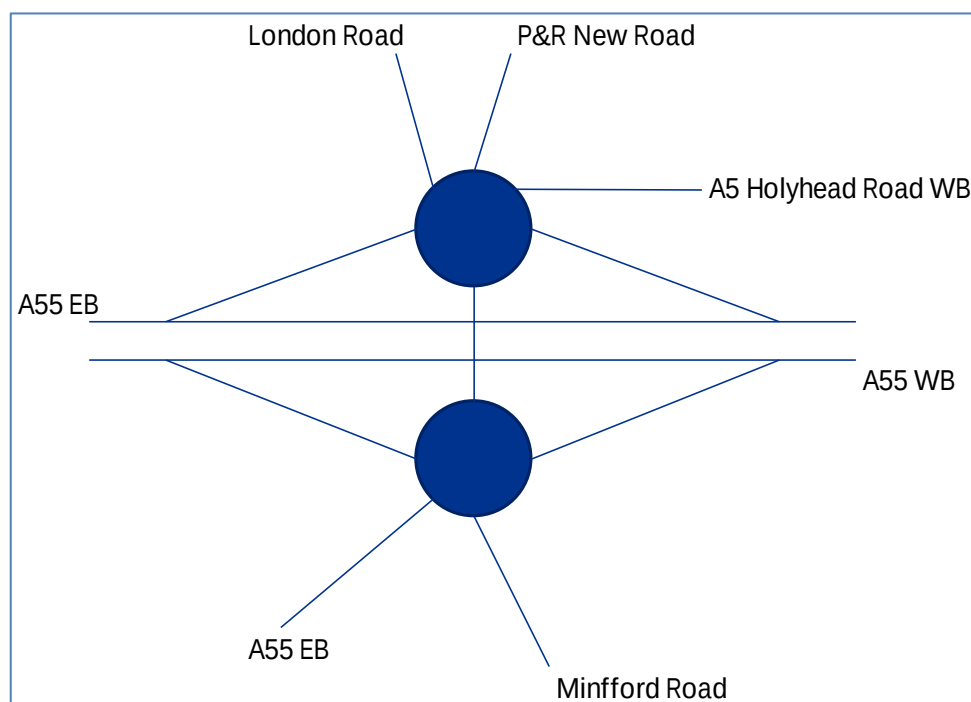


Figure 19-2 Turning Count Matrices (Passenger car units)

AM										PM									
2016																			
		A	B	C	D	E	F	G	Total			A	B	C	D	E	F	G	Total
A	A5 Holyhead Road WB	0	3	8	10	27	7	0	55	A	A5 Holyhead Road WB	1	1	17	15	25	7	0	66
B	A55 WB	1	2	70	10	699	27	0	810	B	A55 WB	3	4	52	13	737	47	0	856
C	Minfordd Road	8	48	0	7	31	14	0	109	C	Minfordd Road	16	93	0	14	53	31	0	207
D	A5 Holyhead Road EB	6	33	4	1	2	4	0	51	D	A5 Holyhead Road EB	10	9	12	0	0	5	0	37
E	A55 EB	16	696	27	0	1	29	0	767	E	A55 EB	28	822	35	0	0	33	0	918
F	London Road	12	67	26	6	28	0	0	139	F	London Road	9	34	14	5	14	0	0	76
G	P&R New Road	0	0	0	0	0	0	0	0	G	P&R New Road	0	0	0	0	0	0	0	0
	Total	44	849	135	35	788	80	0	1,931		Total	66	965	130	46	829	123	0	2,160
2020 Without Project																			
		A	B	C	D	E	F	G	Total			A	B	C	D	E	F	G	Total
A	A5 Holyhead Road WB	0	3	9	10	29	7	0	58	A	A5 Holyhead Road WB	1	2	18	18	30	7	0	76
B	A55 WB	1	2	74	11	733	29	0	851	B	A55 WB	6	5	57	13	849	51	0	982
C	Minfordd Road	9	51	0	7	32	15	0	115	C	Minfordd Road	16	100	0	15	56	34	0	221
D	A5 Holyhead Road EB	7	35	4	2	2	4	0	54	D	A5 Holyhead Road EB	11	10	14	0	0	6	0	41
E	A55 EB	17	745	28	0	1	30	0	820	E	A55 EB	29	869	38	0	0	36	0	972
F	London Road	12	71	27	6	30	0	0	146	F	London Road	10	38	17	5	15	0	0	86
G	P&R New Road	0	0	0	0	0	0	0	0	G	P&R New Road	0	0	0	0	0	0	0	0
	Total	46	907	143	37	826	84	0	2,043		Total	74	1,023	144	53	949	135	0	2,377
2020 With Project																			
		A	B	C	D	E	F	G	Total			A	B	C	D	E	F	G	Total
A	A5 Holyhead Road WB	0	3	9	10	29	7	0	58	A	A5 Holyhead Road WB	1	57	16	16	48	13	0	150
B	A55 WB	1	2	74	11	882	29	0	999	B	A55 WB	7	5	59	23	960	62	13	1,127
C	Minfordd Road	9	51	0	7	32	15	0	115	C	Minfordd Road	13	47	0	8	50	24	0	142
D	A5 Holyhead Road EB	7	35	4	2	2	4	0	54	D	A5 Holyhead Road EB	12	12	7	0	0	2	0	34
E	A55 EB	17	800	28	0	1	30	10	886	E	A55 EB	38	1,101	36	0	0	39	24	1,238
F	London Road	12	71	27	6	30	0	0	146	F	London Road	8	24	17	7	26	0	0	83
G	P&R New Road	0	0	0	0	0	0	0	0	G	P&R New Road	0	17	0	0	24	1	0	43
	Total	46	963	143	37	975	84	10	2,258		Total	79	1,263	134	54	1,108	141	37	2,816

AM										PM									
2023 Without Project																			
		A	B	C	D	E	F	G	Total			A	B	C	D	E	F	G	Total
A	A5 Holyhead Road WB	0	3	9	11	29	7	0	59	A	A5 Holyhead Road WB	1	2	18	19	30	7	0	77
B	A55 WB	1	2	76	11	747	30	0	869	B	A55 WB	6	5	59	14	888	52	0	1,004
C	Minfordd Road	9	53	1	8	33	15	0	118	C	Minfordd Road	17	102	0	16	57	35	0	226
D	A5 Holyhead Road EB	7	36	4	2	2	4	0	55	D	A5 Holyhead Road EB	11	10	14	0	0	6	0	42
E	A55 EB	17	762	29	0	1	31	0	839	E	A55 EB	30	888	39	0	0	37	0	993
F	London Road	13	72	28	6	31	0	0	150	F	London Road	10	39	17	6	15	1	0	88
G	P&R New Road	0	0	0	0	0	0	0	0	G	P&R New Road	0	0	0	0	0	0	0	0
	Total	47	929	147	37	844	87	0	2,090		Total	75	1,047	147	54	970	138	0	2,431
2023 With Project																			
		A	B	C	D	E	F	G	Total			A	B	C	D	E	F	G	Total
A	A5 Holyhead Road WB	0	3	9	11	29	7	0	59	A	A5 Holyhead Road WB	1	76	16	17	58	15	0	183
B	A55 WB	1	2	76	11	934	30	0	1,055	B	A55 WB	7	5	60	23	988	63	0	1,146
C	Minfordd Road	9	53	1	8	33	15	0	118	C	Minfordd Road	13	48	0	8	51	24	0	145
D	A5 Holyhead Road EB	7	36	4	2	2	4	0	55	D	A5 Holyhead Road EB	13	12	8	0	0	2	0	35
E	A55 EB	17	887	29	0	1	31	14	978	E	A55 EB	39	1,180	37	0	0	40	40	1,336
F	London Road	13	72	28	6	31	0	0	150	F	London Road	9	25	17	7	27	1	0	85
G	P&R New Road	0	0	0	0	0	0	0	0	G	P&R New Road	0	8	0	0	38	2	0	48
	Total	47	1,054	147	37	1,030	87	14	2,415		Total	81	1,354	137	55	1,162	148	40	2,977
2023 With Project Updated																			
		A	B	C	D	E	F	G	Total			A	B	C	D	E	F	G	Total
A	A5 Holyhead Road WB	0	3	9	11	29	7	0	59	A	A5 Holyhead Road WB	1	152	16	17	81	22	0	288
B	A55 WB	1	2	76	11	849	30	0	971	B	A55 WB	7	5	60	23	948	63	0	1,106
C	Minfordd Road	9	53	1	8	33	15	0	118	C	Minfordd Road	13	48	0	8	51	24	0	145
D	A5 Holyhead Road EB	7	36	4	2	2	4	0	55	D	A5 Holyhead Road EB	13	12	8	0	0	2	0	35
E	A55 EB	17	844	29	0	1	31	11	932	E	A55 EB	39	1,111	37	0	0	40	30	1,257
F	London Road	13	72	28	6	31	0	0	150	F	London Road	9	25	17	7	27	1	0	85
G	P&R New Road	0	0	0	0	0	0	0	0	G	P&R New Road	0	8	0	0	30	2	0	40
	Total	47	1,011	147	37	945	87	11	2,285		Total	81	1,360	137	55	1,137	155	30	2,955
2023 Without Project																			
		A	B	C	D	E	F	G	Total			A	B	C	D	E	F	G	Total
A	A5 Holyhead Road WB	0	3	10	11	32	8	0	64	A	A5 Holyhead Road WB	1	4	17	18	38	10	0	87
B	A55 WB	1	2	83	12	1,699	33	0	1,831	B	A55 WB	7	5	64	25	1,128	68	0	1,298
C	Minfordd Road	10	58	1	8	36	16	0	127	C	Minfordd Road	14	51	0	9	55	26	0	154
D	A5 Holyhead Road EB	7	40	4	2	2	4	0	60	D	A5 Holyhead Road EB	13	13	8	0	0	2	0	37
E	A55 EB	19	1,009	31	0	1	33	0	1,092	E	A55 EB	42	1,663	39	0	0	42	0	1,787
F	London Road	13	78	29	7	33	0	0	160	F	London Road	10	27	18	8	28	1	0	91
G	P&R New Road	0	0	0	0	0	0	0	0	G	P&R New Road	0	0	0	0	0	0	0	0
	Total	50	1,190	158	40	1,803	94	0	3,334		Total	87	1,764	147	59	1,249	149	0	3,454
2023 With Project																			
		A	B	C	D	E	F	G	Total			A	B	C	D	E	F	G	Total
A	A5 Holyhead Road WB	0	3	10	11	32	8	0	64	A	A5 Holyhead Road WB	1	2	19	20	33	8	0	83
B	A55 WB	1	2	83	12	1,731	33	0	1,863	B	A55 WB	6	6	63	15	1,084	56	0	1,230
C	Minfordd Road	10	58	1	8	36	16	0	127	C	Minfordd Road	17	110	0	17	60	38	0	242
D	A5 Holyhead Road EB	7	40	4	2	2	4	0	60	D	A5 Holyhead Road EB	12	12	15	0	0	7	0	46
E	A55 EB	19	1,019	31	0	1	33	0	1,102	E	A55 EB	32	1,705	42	0	0	40	0	1,820
F	London Road	13	78	29	7	33	0	0	160	F	London Road	11	43	19	6	16	1	0	96
G	P&R New Road	0	0	0	0	0	0	0	0	G	P&R New Road	0	0	0	0	0	0	0	0
	Total	50	1,200	158	40	1,835	94	0	3,377		Total	81	1,877	159	58	1,194	148	0	3,517

Figure 19-3 A55 Junction 4



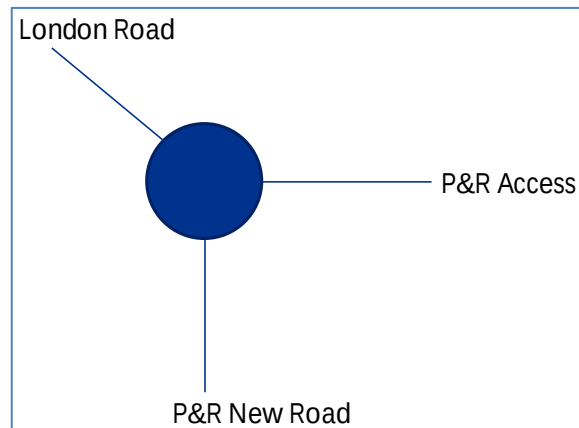
19.7.9 In the 'Without Project' scenarios and in all scenarios for 2033 all traffic shown on London Road will use the London Road exit onto the northern dumbbell. In the 'With Project' scenarios all traffic will use P&R New Road. This redistribution is undertaken in the Junctions 9 models used for assessment of this junction. The matrices are shown below, prior to redistribution, to help identify the traffic that is heading to and from the Park and Ride (using the P&R New Road) and other traffic that is shown heading to and from London Road.

Figure 19-4 Turning Count Matrices – (Passenger car units)

AM										PM									
2016																			
		A	B	C	D	E	F	G	Total			A	B	C	D	E	F	G	Total
A	A5 Holyhead Road WB	0	3	8	10	27	7	0	55	A	A5 Holyhead Road WB	1	1	17	15	25	7	0	66
B	A55 WB	1	2	70	10	699	27	0	810	B	A55 WB	3	4	52	13	737	47	0	866
C	Minifordd Road	8	48	0	7	31	14	0	109	C	Minifordd Road	16	93	0	14	53	31	0	207
D	A5 Holyhead Road EB	6	33	4	1	2	4	0	51	D	A5 Holyhead Road EB	10	9	12	0	0	5	0	37
E	A55 EB	16	696	27	0	1	29	0	767	E	A55 EB	28	822	35	0	0	33	0	918
F	London Road	12	67	26	6	28	0	0	139	F	London Road	9	34	14	5	14	0	0	76
G	P&R New Road	0	0	0	0	0	0	0	0	G	P&R New Road	0	0	0	0	0	0	0	0
Total		44	849	135	35	788	80	0	1,931	Total		66	965	130	46	829	123	0	2,160
2020 Without Project																			
		A	B	C	D	E	F	G	Total			A	B	C	D	E	F	G	Total
A	A5 Holyhead Road WB	0	3	9	10	29	7	0	58	A	A5 Holyhead Road WB	1	2	18	18	30	7	0	76
B	A55 WB	1	2	74	11	733	29	0	851	B	A55 WB	6	5	57	13	849	51	0	982
C	Minifordd Road	9	51	0	7	32	15	0	115	C	Minifordd Road	16	100	0	15	56	34	0	221
D	A5 Holyhead Road EB	7	35	4	2	2	4	0	54	D	A5 Holyhead Road EB	11	10	14	0	0	6	0	41
E	A55 EB	17	745	28	0	1	30	0	820	E	A55 EB	29	869	38	0	0	36	0	972
F	London Road	12	71	27	6	30	0	0	146	F	London Road	10	38	17	5	15	0	0	86
G	P&R New Road	0	0	0	0	0	0	0	0	G	P&R New Road	0	0	0	0	0	0	0	0
Total		46	907	143	37	826	84	0	2,043	Total		74	1,023	144	53	949	135	0	2,377
2020 With Project																			
		A	B	C	D	E	F	G	Total			A	B	C	D	E	F	G	Total
A	A5 Holyhead Road WB	0	3	9	10	29	7	0	58	A	A5 Holyhead Road WB	1	57	16	16	48	13	0	150
B	A55 WB	1	2	74	11	882	29	0	999	B	A55 WB	7	5	59	23	960	62	13	1,127
C	Minifordd Road	9	51	0	7	32	15	0	115	C	Minifordd Road	13	47	0	8	50	24	0	142
D	A5 Holyhead Road EB	7	35	4	2	2	4	0	54	D	A5 Holyhead Road EB	12	12	7	0	0	2	0	34
E	A55 EB	17	800	28	0	1	30	10	886	E	A55 EB	38	1,101	36	0	0	39	24	1,238
F	London Road	12	71	27	6	30	0	0	146	F	London Road	8	24	17	7	26	0	0	83
G	P&R New Road	0	0	0	0	0	0	0	0	G	P&R New Road	0	17	0	0	24	1	0	43
Total		46	963	143	37	975	84	10	2,258	Total		79	1,263	134	54	1,108	141	37	2,816
2023 Without Project																			
		A	B	C	D	E	F	G	Total			A	B	C	D	E	F	G	Total
A	A5 Holyhead Road WB	0	3	9	11	29	7	0	59	A	A5 Holyhead Road WB	1	2	18	19	30	7	0	77
B	A55 WB	1	2	76	11	747	30	0	869	B	A55 WB	6	5	59	14	868	52	0	1,004
C	Minifordd Road	9	53	1	8	33	15	0	118	C	Minifordd Road	17	102	0	16	57	35	0	226
D	A5 Holyhead Road EB	7	36	4	2	2	4	0	55	D	A5 Holyhead Road EB	11	10	14	0	0	6	0	42
E	A55 EB	17	762	29	0	1	31	14	839	E	A55 EB	30	888	39	0	0	37	0	993
F	London Road	13	72	28	6	31	0	0	150	F	London Road	10	39	17	6	15	1	0	88
G	P&R New Road	0	0	0	0	0	0	0	0	G	P&R New Road	0	0	0	0	0	0	0	0
Total		47	929	147	37	844	87	0	2,090	Total		75	1,047	147	54	970	138	0	2,431
2023 With Project																			
		A	B	C	D	E	F	G	Total			A	B	C	D	E	F	G	Total
A	A5 Holyhead Road WB	0	3	9	11	29	7	0	59	A	A5 Holyhead Road WB	1	76	16	17	58	15	0	183
B	A55 WB	1	2	76	11	934	30	0	1,055	B	A55 WB	7	5	60	23	988	63	0	1,146
C	Minifordd Road	9	53	1	8	33	15	0	118	C	Minifordd Road	13	48	0	8	51	24	0	145
D	A5 Holyhead Road EB	7	36	4	2	2	4	0	55	D	A5 Holyhead Road EB	13	12	8	0	0	2	0	35
E	A55 EB	17	887	29	0	1	31	14	978	E	A55 EB	39	1,180	37	0	0	40	40	1,336
F	London Road	13	72	28	6	31	0	0	150	F	London Road	9	25	17	7	27	1	0	85
G	P&R New Road	0	0	0	0	0	0	0	0	G	P&R New Road	0	8	0	0	38	2	0	48
Total		47	1,054	147	37	1,030	87	14	2,415	Total		81	1,354	137	55	1,162	148	40	2,977

AM										PM									
2023 With Project Updated																			
		A	B	C	D	E	F	G	Total			A	B	C	D	E	F	G	Total
A	A5 Holyhead Road WB	0	3	9	11	29	7	0	59	A	A5 Holyhead Road WB	1	152	16	17	81	22	0	288
B	A55 WB	1	2	76	11	849	30	0	971	B	A55 WB	7	5	60	23	948	63	0	1,106
C	Minfordd Road	9	53	1	8	33	15	0	118	C	Minfordd Road	13	48	0	8	51	24	0	145
D	A5 Holyhead Road EB	7	36	4	2	2	4	0	55	D	A5 Holyhead Road EB	13	12	8	0	0	2	0	35
E	A55 EB	17	844	29	0	1	31	11	932	E	A55 EB	39	1,111	37	0	0	40	30	1,257
F	London Road	13	72	28	6	31	0	0	150	F	London Road	9	25	17	7	27	1	0	85
G	P&R New Road	0	0	0	0	0	0	0	0	G	P&R New Road	0	8	0	0	30	2	0	40
	Total	47	1,011	147	37	945	87	11	2,285		Total	81	1,360	137	55	1,137	155	30	2,955
2023 Without Project																			
		A	B	C	D	E	F	G	Total			A	B	C	D	E	F	G	Total
A	A5 Holyhead Road WB	0	3	10	11	32	8	0	64	A	A5 Holyhead Road WB	1	4	17	18	38	10	0	87
B	A55 WB	1	2	83	12	1,699	33	0	1,831	B	A55 WB	7	5	64	25	1,128	68	0	1,298
C	Minfordd Road	10	58	1	8	36	16	0	127	C	Minfordd Road	14	51	0	9	55	26	0	154
D	A5 Holyhead Road EB	7	40	4	2	2	4	0	60	D	A5 Holyhead Road EB	13	13	8	0	0	2	0	37
E	A55 EB	19	1,009	31	0	1	33	0	1,092	E	A55 EB	42	1,663	39	0	0	42	0	1,787
F	London Road	13	78	29	7	33	0	0	160	F	London Road	10	27	18	8	28	1	0	91
G	P&R New Road	0	0	0	0	0	0	0	0	G	P&R New Road	0	0	0	0	0	0	0	0
	Total	50	1,190	158	40	1,803	94	0	3,334		Total	87	1,764	147	59	1,249	149	0	3,454
2023 With Project																			
		A	B	C	D	E	F	G	Total			A	B	C	D	E	F	G	Total
A	A5 Holyhead Road WB	0	3	10	11	32	8	0	64	A	A5 Holyhead Road WB	1	2	19	20	33	8	0	83
B	A55 WB	1	2	83	12	1,731	33	0	1,863	B	A55 WB	6	6	63	15	1,084	56	0	1,230
C	Minfordd Road	10	58	1	8	36	16	0	127	C	Minfordd Road	17	110	0	17	60	38	0	242
D	A5 Holyhead Road EB	7	40	4	2	2	4	0	60	D	A5 Holyhead Road EB	12	12	15	0	0	7	0	46
E	A55 EB	19	1,019	31	0	1	33	0	1,102	E	A55 EB	32	1,705	42	0	0	40	0	1,820
F	London Road	13	78	29	7	33	0	0	160	F	London Road	11	43	19	6	16	1	0	96
G	P&R New Road	0	0	0	0	0	0	0	0	G	P&R New Road	0	0	0	0	0	0	0	0
	Total	50	1,200	158	40	1,835	94	0	3,377		Total	81	1,877	159	58	1,194	148	0	3,517

Figure 19-5 Dalar Hir Junction Access



19.7.10 It is important to note that the DCO assessed Dalar Hir based on the peak junction throughput for the combined junction of the Dalar Hir roundabout and the northern roundabout of A55 Junction 4. In the updated numbers it is based on the peak hour for Dalar Hir roundabout, as this has a greater demand and therefore reflects the time at which the lowest spare capacity could be expected. This means that the matrices for each year are not directly comparable, nor are they directly comparable with A55 Junction 4 because different hours are used.

19.7.11 In practice this means that in the AM peak 07:00-08:00 is shown for the updated matrices, rather than 08:00-09:00. In the PM peak 16:00-17:00 is shown rather than 17:00-18:00.

19.7.12 Because the junction would not be present in the 'Without Project' scenarios or in 2033, matrices for these scenarios are not included.

Figure 19-6 Turning Count Matrices (Passenger car units)

AM						PM					
2020 With Project											
		A	B	C	Total			A	B	C	Total
A	London Road SB	0	0	146	146	A	London Road SB	0	0	83	83
B	P&R Access	0	0	0	0	B	P&R Access	0	0	0	0
C	P&R New Road	84	0	0	84	C	P&R New Road	141	0	0	141
	Total	84	0	146	231		Total	141	0	83	224
2020 With Project Updated											
		A	B	C	Total			A	B	C	Total
A	London Road SB	0	15	121	137	A	London Road SB	0	11	88	99
B	P&R Access	0	0	21	21	B	P&R Access	0	0	20	20
C	P&R New Road	38	195	0	233	C	P&R New Road	135	128	0	263
	Total	38	211	142	391		Total	135	139	108	381
2023 With Project											
		A	B	C	Total			A	B	C	Total
A	London Road SB	0	0	150	150	A	London Road SB	0	0	85	85
B	P&R Access	0	0	0	0	B	P&R Access	0	0	0	0
C	P&R New Road	87	0	0	87	C	P&R New Road	148	0	0	148
	Total	87	0	150	236		Total	148	0	85	233
2023 With Project Updated											
		A	B	C	Total			A	B	C	Total
A	London Road SB	0	15	121	137	A	London Road SB	0	11	88	99
B	P&R Access	0	0	21	21	B	P&R Access	0	0	20	20
C	P&R New Road	39	227	0	266	C	P&R New Road	138	172	0	310
	Total	39	243	142	424		Total	138	183	108	428

Appendix A 19-2 Dalar Hir Junctions 9 Outputs

Junctions 9			
ARCADY 9 - Roundabout Module			
Version: 9.0.1.4646 []			
© Copyright TRL Limited, 2018			
For sales and distribution information, program advice and maintenance, contact TRL:			
Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk			
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution			

Filename: WNP A55 Junction 4 ARCADY Assessment_Q_Rev2.j9

Path: V:\4. Project Work\2) DCO Main Site\09 Junction Modelling_2018 Models STM Night Occupancy\5_A55 jct 4

Report generation date: 22/11/2018 18:19:21

- » [WNP 2020 AM NightOcc, 08-09](#)
- » [WNP 2020 PM NightOcc, 17-18](#)
- » [WNP 2023 AM NightOcc, 08-09](#)
- » [WNP 2023 PM NightOcc, 17-18](#)
- » [WNP 2033 AM NightOcc, 08-09](#)
- » [WNP 2033 PM NightOcc, 17-18](#)

Figure 19-7 Summary of junction performance

	08-09				17-18			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
WNP 2020 AM NightOcc								
Junction North - Arm A1	0.1	3.10	0.05	A				
Junction North - Arm C1	0.1	3.02	0.12	A				
Junction North - Arm D1	0.1	2.96	0.07	A				
Junction North - Arm F1	0.1	1.34	0.06	A				
Junction South - Arm A2	0.1	3.15	0.12	A				
Junction South - Arm B2	0.1	2.54	0.08	A				
Junction South - Arm C2	0.1	2.78	0.09	A				
Junction South - Arm D2	0.0	2.83	0.04	A				
WNP 2020 PM NightOcc								
Junction North - Arm A1					0.2	3.55	0.19	A
Junction North - Arm C1					0.2	3.12	0.15	A
Junction North - Arm D1					0.1	3.18	0.12	A
Junction North - Arm F1					0.0	1.33	0.05	A
Junction South - Arm A2					0.2	3.38	0.18	A
Junction South - Arm B2					0.1	2.70	0.11	A
Junction South - Arm C2					0.1	2.98	0.11	A
Junction South - Arm D2					0.0	2.91	0.03	A
WNP 2023 AM NightOcc								

Junction North - Arm A1	0.1	3.10	0.05	A				
Junction North - Arm C1	0.1	3.03	0.13	A				
Junction North - Arm D1	0.1	2.97	0.07	A				
Junction North - Arm F1	0.1	1.34	0.06	A				
Junction South - Arm A2	0.1	3.16	0.12	A				
Junction South - Arm B2	0.1	2.55	0.09	A				
Junction South - Arm C2	0.1	2.79	0.09	A				
Junction South - Arm D2	0.0	2.84	0.05	A				
WNP 2023 PM NightOcc								
Junction North - Arm A1					0.3	3.86	0.25	A
Junction North - Arm C1					0.2	3.14	0.15	A
Junction North - Arm D1					0.1	3.20	0.13	A
Junction North - Arm F1					0.0	1.33	0.05	A
Junction South - Arm A2					0.2	3.45	0.20	A
Junction South - Arm B2					0.1	2.73	0.12	A
Junction South - Arm C2					0.1	3.01	0.12	A
Junction South - Arm D2					0.0	2.95	0.03	A
WNP 2023 AM NightOcc								
Junction North - Arm A1	0.1	3.13	0.06	A				
Junction North - Arm C1	0.2	3.07	0.14	A				
Junction North - Arm D1	0.1	2.98	0.07	A				
Junction North - Arm F1	0.1	1.35	0.06	A				
Junction South - Arm A2	0.1	3.18	0.13	A				
Junction South - Arm B2	0.1	2.58	0.09	A				
Junction South - Arm C2	0.1	2.82	0.10	A				
Junction South - Arm D2	0.1	2.87	0.05	A				
WNP 2023 PM NightOcc								
Junction North - Arm A1					0.1	3.19	0.07	A
Junction North - Arm C1					0.3	3.37	0.21	A
Junction North - Arm D1					0.1	3.19	0.10	A
Junction North - Arm F1					0.0	1.35	0.04	A
Junction South - Arm A2					0.2	3.26	0.15	A
Junction South - Arm B2					0.1	2.64	0.11	A
Junction South - Arm C2					0.2	3.18	0.19	A
Junction South - Arm D2					0.0	2.99	0.04	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

Figure 19-8 File summary

File Description

Title	A55 Junction 4 Assessment
Location	A55 Jct 4
Site number	M-5
Date	05/10/2018
Version	Rev1
Status	Existing
Identifier	HM
Client	Horizon
Jobnumber	60PO80AG
Enumerator	JEGINTL\MemeryH
Description	All WNP modelling - Inclusion of P&R exit arm. Including Night Occupancy 2023. U-turns have been removed.

Figure 19-9 Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Figure 19-10 Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Figure 19-11 Demand Set Summary

ID	Scenario name	Time Period name	Descript	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D_	WNP 2020 AM NightO cc	08-09	Q3	ONE HOUR	07:45	09:15	15	✓
D_	WNP 2020 PM NightO cc	17-18	Q3	ONE HOUR	16:45	18:15	15	✓
D_	WNP 2023 AM NightO cc	08-09	Q3	ONE HOUR	07:45	09:15	15	✓
D_	WNP 2023 PM NightO cc	17-18	Q3	ONE HOUR	16:45	18:15	15	✓
D_	WNP 2033 AM NightO cc	08-09	Q3	ONE HOUR	07:45	09:15	15	✓
D_	WNP 2033 PM NightO cc	17-18	Q3	ONE HOUR	16:45	18:15	15	✓

Figure 19-12 Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

WNP 2020 AM NightOcc, 08-09

Figure 19-13 Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction North - Arm C1	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction South - Arm A2	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Vehicle Mix	Junction North	HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.
Warning	Vehicle Mix	Junction South	HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Figure 19-14 Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
North	Junction 4 = M-5	Standard Roundabout	A1,B1,C1,D1,E1,F1	2.45	A
South	Junction 4= M-5	Standard Roundabout	A2,B2,C2,D2,E2	2.85	A

Figure 19-15 Junction Network Options

Driving side	Lighting
Left	Normal/unknown

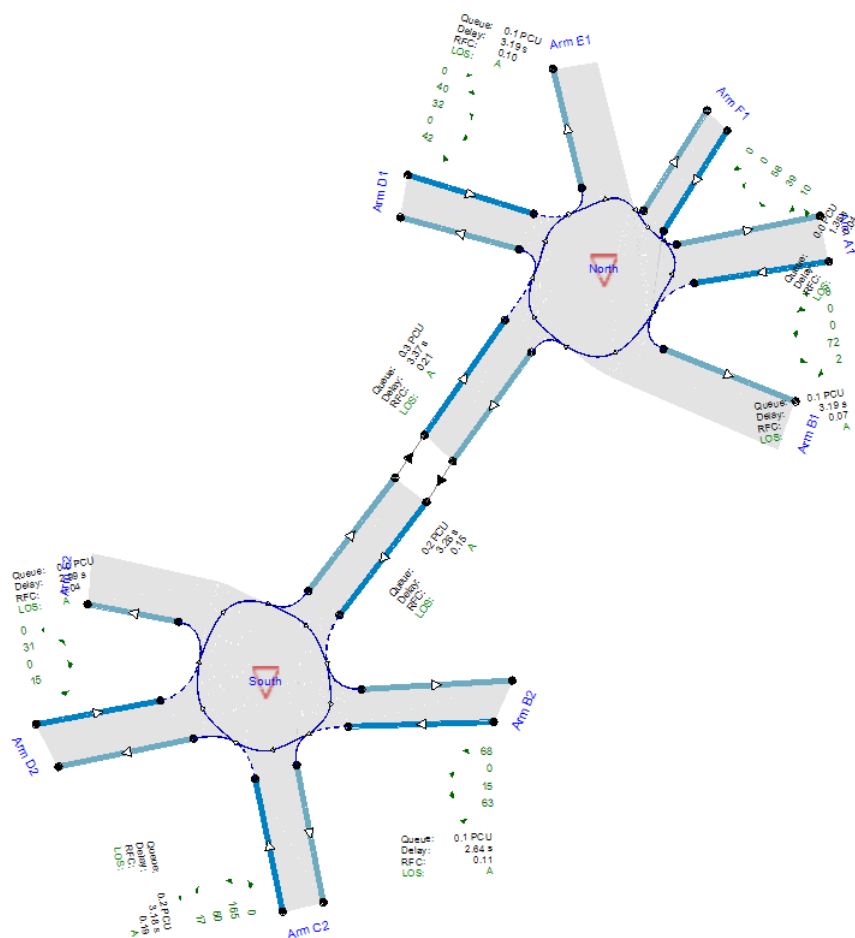
Arms

Figure 19-16 Arms

Junction	Arm	Name	Description
North	A1	A5 Holyhead Road WB	
	B1	A55 Onslip	
	C1	Overbridge	
	D1	A55 Offslip	
	E1	London Road	
	F1	P&R New Access Road	
South	A2	Overbridge	
	B2	A55 Offslip	
	C2	Minfford Road	
	D2	A5 Holyhead Road EB	
	E2	A55 EB	

Figure 19-17 Roundabout Geometry

Junctio	Ar	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	E
North	A1	4.20	4.50	4.4	19.3	69.2	28.0	
	B1							✓
	C1	3.70	4.90	5.1	17.4	69.2	20.0	
	D1	4.30	4.60	3.7	19.6	69.2	26.0	
	E1							✓
	F1	9.30	9.30	0.0	26.5	69.2	18.0	
South	A2	3.70	5.00	4.7	18.4	69.9	35.0	
	B2	4.50	6.10	4.3	21.9	69.9	24.0	
	C2	3.70	5.90	6.3	23.1	69.9	22.0	
	D2	4.70	4.70	0.0	20.6	69.9	29.0	
	E2							✓



Flows show original traffic demand (PCU/hr).

The junction diagram reflects the last run of Junctions.

Figure 19-18 Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Figure 19-19 Demand Set Summary

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D_01	WNP 2020 AM NightOcc	08-09	Q3	ONE HOUR	07:45	09:15	15	✓

D_02	WNP 2020 PM NightOcc	17-18	Q3	ONE HOUR	16:45	18:15	15	✓
D_03	WNP 2023 AM NightOcc	08-09	Q3	ONE HOUR	07:45	09:15	15	✓
D_04	WNP 2023 PM NightOcc	17-18	Q3	ONE HOUR	16:45	18:15	15	✓
D_05	WNP 2033 AM NightOcc	08-09	Q3	ONE HOUR	07:45	09:15	15	✓
D_06	WNP 2033 PM NightOcc	17-18	Q3	ONE HOUR	16:45	18:15	15	✓

Figure 19-20 Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

WNP 2020 AM NightOcc, 08-09

Figure 19-21 Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction North - Arm C1	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction South - Arm A2	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Vehicle Mix	Junction North	HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.
Warning	Vehicle Mix	Junction South	HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Figure 19-22 Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
North	Junction 4 = M-5	Standard Roundabout	A1,B1,C1,D1,E1,F1	2.45	A
South	Junction 4= M-5	Standard Roundabout	A2,B2,C2,D2,E2	2.85	A

Figure 19-23 Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Figure 19-24 Arms

Junction	Arm	Name	Description
North	A1	A5 Holyhead Road WB	
	B1	A55 Onslip	
	C1	Overbridge	
	D1	A55 Offslip	
	E1	London Road	
	F1	P&R New Access Road	
South	A2	Overbridge	
	B2	A55 Offslip	
	C2	Minford Road	
	D2	A5 Holyhead Road EB	
	E2	A55 EB	

Figure 19-25 Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
North	A1	4.20	4.50	4.4	19.3	69.2	28.0	
	B1							✓
	C1	3.70	4.90	5.1	17.4	69.2	20.0	
	D1	4.30	4.60	3.7	19.6	69.2	26.0	
	E1							✓
	F1	9.30	9.30	0.0	26.5	69.2	18.0	
South	A2	3.70	5.00	4.7	18.4	69.9	35.0	
	B2	4.50	6.10	4.3	21.9	69.9	24.0	
	C2	3.70	5.90	6.3	23.1	69.9	22.0	
	D2	4.70	4.70	0.0	20.6	69.9	29.0	
	E2							✓

Slope / Intercept / Capacity

Figure 19-26 Roundabout Slope and Intercept used in model

Junction	Arm	Final slope	Final intercept (PCU/hr)
North	A1	0.456	1354
	B1		
	C1	0.463	1365
	D1	0.464	1393

	E1		
	F1	0.723	2969
South	A2	0.438	1301
	B2	0.500	1625
	C2	0.480	1485
	D2	0.465	1431
	E2		

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Figure 19-27 Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D_01	WNP 2020 AM NightOcc	08-09	Q3	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Figure 19-28 Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
North	C1	South	A2	Simple (vertical queueing)	Normal	0	100.00	
South	A2	North	C1	Simple (vertical queueing)	Normal	0	100.00	

Figure 19-29 Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
North	A1		ONE HOUR	✓	58	100.000
	B1					
	C1	✓				
	D1		ONE HOUR	✓	87	100.000
	E1					
	F1		ONE HOUR	✓	150	100.000
South	A2	✓				
	B2		ONE HOUR	✓	117	100.000
	C2		ONE HOUR	✓	114	100.000
	D2		ONE HOUR	✓	54	100.000
	E2					

Figure 19-30 Origin-Destination Data

Demand (PCU/hr)

Junction North

	To						
		A1	B1	C1	D1	E1	F1
From	A1	0	3	48	0	0	7
	B1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	C1	17	89	0	0	0	47
	D1	17	0	29	0	0	41
	E1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	F1	13	72	65	0	0	0

Demand (PCU/hr)

Junction South

	To					
		A2	B2	C2	D2	E2
From	A2	0	0	64	17	60
	B2	32	0	74	11	0
	C2	75	0	0	7	32
	D2	46	0	4	2	2
	E2	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Figure 19-31 Vehicle Mix

Heavy Vehicle Percentages

Junction North

	To						
		A1	B1	C1	D1	E1	F1
From	A1	0	0	0	0	0	0
	B1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	C1	0	0	0	0	0	0
	D1	0	0	0	0	0	0
	E1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	F1	0	0	0	0	0	0

Heavy Vehicle Percentages

Junction South

	To					
From		A2	B2	C2	D2	E2
	A2	0	0	0	0	0
	B2	0	0	0	0	0
	C2	0	0	0	0	0
	D2	0	0	0	0	0
	E2	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Figure 19-32 Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
North	A1	0.05	3.10	0.1	A	53	80
	B1						
	C1	0.12	3.02	0.1	A	140	211
	D1	0.07	2.96	0.1	A	80	120
	E1						
	F1	0.06	1.34	0.1	A	138	206
South	A2	0.12	3.15	0.1	A	130	195
	B2	0.08	2.54	0.1	A	107	161
	C2	0.09	2.78	0.1	A	105	157
	D2	0.04	2.83	0.0	A	50	74
	E2						

Figure 19-33 Main Results for each time segment

07:45 - 08:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	44	11	191	1267	0.034	44	35	0.0	0.0	2.942	A
	B1			112				123				
	C1	115	29	5	1362	0.084	114	107	0.0	0.1	2.884	A
	D1	65	16	120	1337	0.049	65	0	0.0	0.1	2.830	A
	E1			185				0				
	F1	113	28	114	2887	0.039	113	71	0.0	0.0	1.297	A
South	A2	107	27	5	1299	0.082	106	115	0.0	0.1	3.017	A
	B2	88	22	111	1569	0.056	88	0	0.0	0.1	2.430	A
	C2	86	21	92	1441	0.060	86	107	0.0	0.1	2.655	A
	D2	41	10	150	1362	0.030	41	28	0.0	0.0	2.724	A
	E2			119				71				

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	52	13	229	1250	0.042	52	42	0.0	0.0	3.005	A
	B1			134				147				
	C1	137	34	6	1362	0.101	137	128	0.1	0.1	2.939	A
	D1	78	20	144	1326	0.059	78	0	0.1	0.1	2.884	A
	E1			222				0				
	F1	135	34	137	2870	0.047	135	85	0.0	0.0	1.315	A
South	A2	128	32	5	1299	0.098	128	137	0.1	0.1	3.072	A
	B2	105	26	133	1558	0.068	105	0	0.1	0.1	2.477	A
	C2	102	26	110	1432	0.072	102	128	0.1	0.1	2.706	A
	D2	49	12	179	1348	0.036	49	33	0.0	0.0	2.770	A
	E2			143				85				

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	64	16	281	1226	0.052	64	52	0.0	0.1	3.096	A
	B1			164				180				

	C1	168	42	8	1361	0.124	168	156	0.1	0.1	3.016	A
	D1	96	24	176	1311	0.073	96	0	0.1	0.1	2.961	A
	E1			272				0				
	F1	165	41	167	2848	0.058	165	104	0.0	0.1	1.341	A
South	A2	156	39	7	1298	0.120	156	168	0.1	0.1	3.151	A
	B2	129	32	163	1543	0.083	129	0	0.1	0.1	2.544	A
	C2	126	31	135	1420	0.088	125	157	0.1	0.1	2.779	A
	D2	59	15	219	1329	0.045	59	41	0.0	0.0	2.834	A
	E2			175				104				

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	64	16	281	1226	0.052	64	52	0.1	0.1	3.096	A
	B1			164				181				
	C1	168	42	8	1361	0.124	168	156	0.1	0.1	3.017	A
	D1	96	24	176	1311	0.073	96	0	0.1	0.1	2.961	A
	E1			272				0				
	F1	165	41	167	2848	0.058	165	105	0.1	0.1	1.341	A
South	A2	156	39	7	1298	0.120	156	168	0.1	0.1	3.151	A
	B2	129	32	163	1543	0.083	129	0	0.1	0.1	2.545	A
	C2	126	31	135	1420	0.088	126	157	0.1	0.1	2.779	A
	D2	59	15	220	1329	0.045	59	41	0.0	0.0	2.835	A
	E2			175				104				

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	52	13	229	1250	0.042	52	42	0.1	0.0	3.008	A
	B1			134				148				
	C1	138	34	6	1362	0.101	138	128	0.1	0.1	2.942	A
	D1	78	20	144	1326	0.059	78	0	0.1	0.1	2.884	A
	E1			222				0				
	F1	135	34	137	2870	0.047	135	86	0.1	0.0	1.315	A
South	A2	128	32	5	1299	0.098	128	138	0.1	0.1	3.073	A
	B2	105	26	133	1558	0.068	105	0	0.1	0.1	2.479	A
	C2	102	26	110	1432	0.072	103	128	0.1	0.1	2.709	A
	D2	49	12	179	1348	0.036	49	33	0.0	0.0	2.772	A

	E2			143				85				

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	44	11	192	1267	0.034	44	35	0.0	0.0	2.945	A
	B1			112				124				
	C1	115	29	5	1362	0.085	115	107	0.1	0.1	2.888	A
	D1	65	16	121	1337	0.049	66	0	0.1	0.1	2.831	A
	E1			186				0				
	F1	113	28	115	2886	0.039	113	72	0.0	0.0	1.299	A
South	A2	107	27	5	1299	0.082	107	115	0.1	0.1	3.018	A
	B2	88	22	112	1569	0.056	88	0	0.1	0.1	2.433	A
	C2	86	21	92	1441	0.060	86	107	0.1	0.1	2.656	A
	D2	41	10	150	1361	0.030	41	28	0.0	0.0	2.727	A
	E2			120				71				

WNP 2020 PM NightOcc, 17-18

Figure 19-34 Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction North - Arm C1	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction South - Arm A2	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Vehicle Mix	Junction North	HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.
Warning	Vehicle Mix	Junction South	HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Figure 19-35 Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
North	Junction 4 = M-5	Standard Roundabout	A1,B1,C1,D1,E1,F1	2.95	A
South	Junction 4= M-5	Standard Roundabout	A2,B2,C2,D2,E2	3.05	A

Figure 19-36 Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Figure 19-37 Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D_02	WNP 2020 PM NightOcc	17-18	Q3	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Figure 19-38 Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
North	C1	South	A2	Simple (vertical queueing)	Normal	0	100.00	
South	A2	North	C1	Simple (vertical queueing)	Normal	0	100.00	

Figure 19-39 Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
North	A1		ONE HOUR	✓	216	100.000
	B1					
	C1	✓				
	D1		ONE HOUR	✓	143	100.000
	E1					
	F1		ONE HOUR	✓	116	100.000
South	A2	✓				
	B2		ONE HOUR	✓	155	100.000
	C2		ONE HOUR	✓	141	100.000
	D2		ONE HOUR	✓	33	100.000
	E2					

Figure 19-40 Origin-Destination Data

Demand (PCU/hr)

Junction North

	To						
		A1	B1	C1	D1	E1	F1
From	A1	1	104	94	0	0	17
	B1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	C1	32	64	0	0	0	100
	D1	38	0	36	0	0	69
	E1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	F1	9	25	81	0	0	1

Demand (PCU/hr)

Junction South

	To					
From		A2	B2	C2	D2	E2
	A2	0	0	68	24	89
	B2	73	0	59	23	0
	C2	83	0	0	8	50
	D2	26	0	7	0	0
	E2	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Figure 19-41 Vehicle Mix

Heavy Vehicle Percentages

Junction North

	To						
		A1	B1	C1	D1	E1	F1
From	A1	0	0	0	0	0	0
	B1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	C1	0	0	0	0	0	0
	D1	0	0	0	0	0	0
	E1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	F1	0	0	0	0	0	0

Heavy Vehicle Percentages

		To				
		A2	B2	C2	D2	E2
Junction South	From	A2	0	0	0	0
		B2	0	0	0	0
		C2	0	0	0	0
		D2	0	0	0	0
		E2	Exit-only	Exit-only	Exit-only	Exit-only

Results

Figure 19-42 Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
North	A1	0.19	3.55	0.2	A	198	297
	B1						
	C1	0.15	3.12	0.2	A	167	250
	D1	0.12	3.18	0.1	A	131	197
	E1						
	F1	0.05	1.33	0.0	A	106	160
South	A2	0.18	3.38	0.2	A	194	290
	B2	0.11	2.70	0.1	A	142	213
	C2	0.11	2.98	0.1	A	129	194
	D2	0.03	2.91	0.0	A	30	45
	E2						

Figure 19-43 Main Results for each time segment

16:45 - 17:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	163	41	152	1285	0.127	162	58	0.0	0.1	3.204	A
	B1			173				141				
	C1	137	34	14	1358	0.101	136	158	0.0	0.1	2.946	A

	D1	108	27	150	1323	0.081	107	0	0.0	0.1	2.961	A
	E1			258				0				
	F1	87	22	123	2880	0.030	87	135	0.0	0.0	1.288	A
South	A2	158	40	5	1299	0.122	158	137	0.0	0.1	3.153	A
	B2	117	29	163	1543	0.076	116	0	0.0	0.1	2.523	A
	C2	106	27	171	1403	0.076	106	109	0.0	0.1	2.774	A
	D2	25	6	232	1323	0.019	25	44	0.0	0.0	2.772	A
	E2			142				115				

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	194	49	182	1271	0.153	194	70	0.1	0.2	3.341	A
	B1			207				169				
	C1	164	41	17	1357	0.121	163	190	0.1	0.1	3.015	A
	D1	129	32	180	1309	0.098	128	0	0.1	0.1	3.048	A
	E1			309				0				
	F1	104	26	147	2862	0.036	104	162	0.0	0.0	1.304	A
South	A2	190	47	6	1299	0.146	189	164	0.1	0.2	3.245	A
	B2	139	35	196	1527	0.091	139	0	0.1	0.1	2.594	A
	C2	127	32	205	1387	0.091	127	130	0.1	0.1	2.856	A
	D2	30	7	278	1302	0.023	30	53	0.0	0.0	2.829	A
	E2			170				138				

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	238	59	223	1253	0.190	238	85	0.2	0.2	3.546	A
	B1			253				207				
	C1	200	50	21	1355	0.148	200	232	0.1	0.2	3.116	A
	D1	157	39	221	1290	0.122	157	0	0.1	0.1	3.176	A
	E1			378				0				
	F1	128	32	181	2839	0.045	128	198	0.0	0.0	1.327	A
South	A2	232	58	8	1298	0.179	232	200	0.2	0.2	3.376	A
	B2	171	43	240	1505	0.113	171	0	0.1	0.1	2.698	A
	C2	155	39	250	1365	0.114	155	160	0.1	0.1	2.975	A
	D2	36	9	341	1273	0.029	36	65	0.0	0.0	2.911	A
	E2			208				169				

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	238	59	223	1253	0.190	238	86	0.2	0.2	3.546	A
	B1			253				207				
	C1	200	50	21	1355	0.148	200	232	0.2	0.2	3.116	A
	D1	157	39	221	1290	0.122	157	0	0.1	0.1	3.177	A
	E1			379				0				
	F1	128	32	181	2838	0.045	128	198	0.0	0.0	1.327	A
South	A2	232	58	8	1298	0.179	232	200	0.2	0.2	3.377	A
	B2	171	43	240	1504	0.113	171	0	0.1	0.1	2.698	A
	C2	155	39	251	1365	0.114	155	160	0.1	0.1	2.975	A
	D2	36	9	341	1273	0.029	36	65	0.0	0.0	2.911	A
	E2			208				169				

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	194	49	182	1271	0.153	194	70	0.2	0.2	3.345	A
	B1			207				170				
	C1	164	41	17	1357	0.121	164	190	0.2	0.1	3.019	A
	D1	129	32	181	1309	0.098	129	0	0.1	0.1	3.049	A
	E1			310				0				
	F1	104	26	148	2862	0.036	104	162	0.0	0.0	1.306	A
South	A2	190	47	6	1299	0.146	190	164	0.2	0.2	3.249	A
	B2	139	35	196	1526	0.091	139	0	0.1	0.1	2.595	A
	C2	127	32	205	1387	0.091	127	131	0.1	0.1	2.859	A
	D2	30	7	279	1301	0.023	30	53	0.0	0.0	2.830	A
	E2			170				138				

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	163	41	153	1285	0.127	163	59	0.2	0.1	3.208	A
	B1			173				142				
	C1	137	34	14	1358	0.101	137	159	0.1	0.1	2.947	A
	D1	108	27	152	1323	0.081	108	0	0.1	0.1	2.962	A

	E1			259				0				
	F1	87	22	124	2880	0.030	87	136	0.0	0.0	1.290	A
South	A2	159	40	5	1299	0.122	159	137	0.2	0.1	3.157	A
	B2	117	29	164	1542	0.076	117	0	0.1	0.1	2.526	A
	C2	106	27	172	1403	0.076	106	109	0.1	0.1	2.778	A
	D2	25	6	233	1323	0.019	25	44	0.0	0.0	2.773	A
	E2			142				116				

WNP 2023 AM NightOcc, 08-09

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction North - Arm C1	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction South - Arm A2	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Vehicle Mix	Junction North	HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.
Warning	Vehicle Mix	Junction South	HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Figure 19-44 Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
North	Junction 4 = M-5	Standard Roundabout	A1,B1,C1,D1,E1,F1	2.47	A
South	Junction 4= M-5	Standard Roundabout	A2,B2,C2,D2,E2	2.85	A

Figure 19-45 Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Figure 19-46 Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically

D_03	WNP 2023 AM NightOcc	08-09	Q3	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Figure 19-47 Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
North	C1	South	A2	Simple (vertical queueing)	Normal	0	100.00	
South	A2	North	C1	Simple (vertical queueing)	Normal	0	100.00	

Figure 19-48 Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
North	A1		ONE HOUR	✓	59	100.000
	B1					
	C1	✓				
	D1		ONE HOUR	✓	87	100.000
	E1					
	F1		ONE HOUR	✓	150	100.000
South	A2	✓				
	B2		ONE HOUR	✓	121	100.000
	C2		ONE HOUR	✓	119	100.000
	D2		ONE HOUR	✓	55	100.000
	E2					

Figure 19-49 Origin-Destination Data

Demand (PCU/hr)

Junction North

	To						
From		A1	B1	C1	D1	E1	F1
	A1	0	3	49	0	0	7
	B1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	C1	17	91	0	0	0	49
	D1	17	0	29	0	0	41
	E1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	F1	13	72	65	0	0	0

Demand (PCU/hr)

		To					
			A2	B2	C2	D2	E2
Junction South	From	A2	0	0	65	17	61
		B2	34	0	76	11	0
		C2	77	0	1	8	33
		D2	47	0	4	2	2
		E2	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Figure 19-50 Vehicle Mix

Heavy Vehicle Percentages

		To					
		A1	B1	C1	D1	E1	F1
Junction North	From	A1	0	0	0	0	0
		B1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		C1	0	0	0	0	0
		D1	0	0	0	0	0
		E1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		F1	0	0	0	0	0

Heavy Vehicle Percentages

		To				
		A2	B2	C2	D2	E2
Junction South	From	A2	0	0	0	0
		B2	0	0	0	0
		C2	0	0	0	0
		D2	0	0	0	0
		E2	Exit-only	Exit-only	Exit-only	Exit-only

Results

Figure 19-51 Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
North	A1	0.05	3.10	0.1	A	54	81
	B1						

	C1	0.13	3.03	0.1	A	145	217
	D1	0.07	2.97	0.1	A	80	120
	E1						
	F1	0.06	1.34	0.1	A	138	206
South	A2	0.12	3.16	0.1	A	131	197
	B2	0.09	2.55	0.1	A	111	167
	C2	0.09	2.79	0.1	A	109	164
	D2	0.05	2.84	0.0	A	50	76
	E2						

Figure 19-52 Main Results for each time segment

07:45 - 08:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	44	11	193	1266	0.035	44	35	0.0	0.0	2.946	A
	B1			113				125				
	C1	119	30	5	1362	0.087	118	107	0.0	0.1	2.893	A
	D1	65	16	123	1336	0.049	65	0	0.0	0.1	2.833	A
	E1			189				0				
	F1	113	28	116	2885	0.039	113	73	0.0	0.0	1.298	A
South	A2	107	27	5	1299	0.083	107	119	0.0	0.1	3.020	A
	B2	91	23	112	1568	0.058	91	0	0.0	0.1	2.436	A
	C2	90	22	94	1440	0.062	89	109	0.0	0.1	2.664	A
	D2	41	10	155	1359	0.030	41	28	0.0	0.0	2.731	A
	E2			124				72				

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	53	13	231	1249	0.042	53	42	0.0	0.0	3.010	A
	B1			135				150				
	C1	142	35	6	1362	0.104	142	128	0.1	0.1	2.950	A
	D1	78	20	148	1324	0.059	78	0	0.1	0.1	2.888	A
	E1			226				0				

	F1	135	34	139	2869	0.047	135	87	0.0	0.0	1.316	A
South	A2	128	32	6	1299	0.099	128	142	0.1	0.1	3.076	A
	B2	109	27	135	1557	0.070	109	0	0.1	0.1	2.485	A
	C2	107	27	112	1431	0.075	107	131	0.1	0.1	2.717	A
	D2	49	12	185	1345	0.037	49	34	0.0	0.0	2.778	A
	E2			148				86				

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	65	16	283	1225	0.053	65	52	0.0	0.1	3.102	A
	B1			165				183				
	C1	174	43	8	1361	0.128	174	157	0.1	0.1	3.030	A
	D1	96	24	181	1309	0.073	96	0	0.1	0.1	2.967	A
	E1			277				0				
	F1	165	41	170	2846	0.058	165	107	0.0	0.1	1.342	A
South	A2	157	39	8	1298	0.121	157	174	0.1	0.1	3.155	A
	B2	133	33	165	1542	0.086	133	0	0.1	0.1	2.554	A
	C2	131	33	137	1419	0.092	131	161	0.1	0.1	2.794	A
	D2	61	15	227	1326	0.046	61	42	0.0	0.0	2.844	A
	E2			182				106				

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	65	16	284	1225	0.053	65	52	0.1	0.1	3.102	A
	B1			165				183				
	C1	174	43	8	1361	0.128	174	157	0.1	0.1	3.031	A
	D1	96	24	182	1309	0.073	96	0	0.1	0.1	2.967	A
	E1			277				0				
	F1	165	41	170	2846	0.058	165	107	0.1	0.1	1.342	A
South	A2	157	39	8	1298	0.121	157	174	0.1	0.1	3.155	A
	B2	133	33	165	1542	0.086	133	0	0.1	0.1	2.555	A
	C2	131	33	138	1419	0.092	131	161	0.1	0.1	2.794	A
	D2	61	15	227	1326	0.046	61	42	0.0	0.0	2.845	A
	E2			182				106				

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	53	13	232	1249	0.042	53	42	0.1	0.0	3.010	A
	B1			135				150				
	C1	142	36	6	1362	0.104	142	129	0.1	0.1	2.953	A
	D1	78	20	149	1324	0.059	78	0	0.1	0.1	2.891	A
	E1			227				0				
	F1	135	34	139	2868	0.047	135	88	0.1	0.0	1.318	A
South	A2	129	32	6	1299	0.099	129	142	0.1	0.1	3.076	A
	B2	109	27	135	1557	0.070	109	0	0.1	0.1	2.485	A
	C2	107	27	113	1431	0.075	107	131	0.1	0.1	2.720	A
	D2	49	12	185	1345	0.037	49	34	0.0	0.0	2.780	A
	E2			148				86				

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	44	11	194	1266	0.035	44	35	0.0	0.0	2.949	A
	B1			113				126				
	C1	119	30	5	1362	0.087	119	108	0.1	0.1	2.894	A
	D1	65	16	124	1335	0.049	66	0	0.1	0.1	2.837	A
	E1			190				0				
	F1	113	28	117	2885	0.039	113	73	0.0	0.0	1.298	A
South	A2	108	27	5	1299	0.083	108	119	0.1	0.1	3.024	A
	B2	91	23	113	1568	0.058	91	0	0.1	0.1	2.439	A
	C2	90	22	94	1440	0.062	90	110	0.1	0.1	2.667	A
	D2	41	10	155	1359	0.030	41	29	0.0	0.0	2.731	A
	E2			124				72				

WNP 2023 PM NightOcc, 17-18

Figure 19-53 Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction North - Arm C1	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Warning	Linked Roundabout	Junction South - Arm A2	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Vehicle Mix	Junction North	HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.
Warning	Vehicle Mix	Junction South	HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Figure 19-54 Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
North	Junction 4 = M-5	Standard Roundabout	A1,B1,C1,D1,E1,F1	3.15	A
South	Junction 4= M-5	Standard Roundabout	A2,B2,C2,D2,E2	3.11	A

Figure 19-55 Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Figure 19-56 Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D_04	WNP 2023 PM NightOcc	17-18	Q3	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Figure 19-57 Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
North	C1	South	A2	Simple (vertical queueing)	Normal	0	100.00	
South	A2	North	C1	Simple (vertical queueing)	Normal	0	100.00	

Figure 19-58 Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)

North	A1		ONE HOUR	✓	288	100.000
	B1					
	C1	✓				
	D1		ONE HOUR	✓	146	100.000
	E1					
	F1		ONE HOUR	✓	116	100.000
South	A2	✓				
	B2		ONE HOUR	✓	158	100.000
	C2		ONE HOUR	✓	144	100.000
	D2		ONE HOUR	✓	35	100.000
	E2					

Figure 19-59 Origin-Destination Data

Demand (PCU/hr)

Junction North

	To						
		A1	B1	C1	D1	E1	F1
From	A1	1	152	113	0	0	22
	B1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	C1	32	65	0	0	0	90
	D1	39	0	37	0	0	70
	E1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	F1	9	25	81	0	0	1

Demand (PCU/hr)

Junction South

	To					
From		A2	B2	C2	D2	E2
	A2	0	0	70	24	107
	B2	75	0	60	23	0
	C2	85	0	0	8	51
	D2	27	0	8	0	0
	E2	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Figure 19-60 Vehicle Mix

Heavy Vehicle Percentages

		To					
		A1	B1	C1	D1	E1	F1
Junction North	From A1	0	0	0	0	0	0
	B1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	C1	0	0	0	0	0	0
	D1	0	0	0	0	0	0
	E1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	F1	0	0	0	0	0	0

Heavy Vehicle Percentages

		To				
		A2	B2	C2	D2	E2
Junction South	From A2	0	0	0	0	0
	B2	0	0	0	0	0
	C2	0	0	0	0	0
	D2	0	0	0	0	0
	E2	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Figure 19-61 Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
North	A1	0.25	3.86	0.3	A	264	396
	B1						
	C1	0.15	3.14	0.2	A	172	257
	D1	0.13	3.20	0.1	A	134	201
	E1						
	F1	0.05	1.33	0.0	A	106	160
South	A2	0.20	3.45	0.2	A	212	318
	B2	0.12	2.73	0.1	A	145	217
	C2	0.12	3.01	0.1	A	132	198
	D2	0.03	2.95	0.0	A	32	48
	E2						

Figure 19-62 Main Results for each time segment

16:45 - 17:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	217	54	157	1283	0.169	216	61	0.0	0.2	3.373	A
	B1			191				181				
	C1	140	35	18	1357	0.103	140	173	0.0	0.1	2.959	A
	D1	110	27	158	1320	0.083	110	0	0.0	0.1	2.975	A
	E1			267				0				
	F1	87	22	130	2875	0.030	87	137	0.0	0.0	1.290	A
South	A2	173	43	6	1299	0.134	173	140	0.0	0.2	3.195	A
	B2	119	30	179	1535	0.077	119	0	0.0	0.1	2.541	A
	C2	108	27	186	1396	0.078	108	111	0.0	0.1	2.795	A
	D2	26	7	250	1315	0.020	26	44	0.0	0.0	2.793	A
	E2			146				130				

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	259	65	188	1269	0.204	259	73	0.2	0.3	3.564	A
	B1			229				217				
	C1	168	42	22	1355	0.124	168	208	0.1	0.1	3.032	A
	D1	131	33	189	1305	0.101	131	0	0.1	0.1	3.066	A
	E1			321				0				
	F1	104	26	156	2856	0.037	104	164	0.0	0.0	1.307	A
South	A2	208	52	7	1298	0.160	207	168	0.2	0.2	3.300	A
	B2	142	36	215	1517	0.094	142	0	0.1	0.1	2.617	A
	C2	129	32	223	1378	0.094	129	133	0.1	0.1	2.882	A
	D2	31	8	300	1292	0.024	31	53	0.0	0.0	2.856	A
	E2			175				156				

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS

North	A1	317	79	230	1249	0.254	317	89	0.3	0.3	3.859	A
	B1			281				266				
	C1	206	51	26	1353	0.152	206	254	0.1	0.2	3.138	A
	D1	161	40	232	1285	0.125	161	0	0.1	0.1	3.200	A
	E1			393				0				
	F1	128	32	191	2831	0.045	128	201	0.0	0.0	1.331	A
South	A2	254	64	9	1297	0.196	254	206	0.2	0.2	3.449	A
	B2	174	43	263	1493	0.117	174	0	0.1	0.1	2.728	A
	C2	159	40	273	1354	0.117	158	163	0.1	0.1	3.011	A
	D2	39	10	367	1260	0.031	39	64	0.0	0.0	2.945	A
	E2			215				191				

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	317	79	230	1249	0.254	317	89	0.3	0.3	3.861	A
	B1			281				266				
	C1	206	51	26	1353	0.152	206	254	0.2	0.2	3.138	A
	D1	161	40	232	1285	0.125	161	0	0.1	0.1	3.201	A
	E1			393				0				
	F1	128	32	192	2831	0.045	128	201	0.0	0.0	1.331	A
South	A2	254	64	9	1297	0.196	254	206	0.2	0.2	3.450	A
	B2	174	43	263	1493	0.117	174	0	0.1	0.1	2.728	A
	C2	159	40	274	1354	0.117	159	163	0.1	0.1	3.011	A
	D2	39	10	368	1260	0.031	39	64	0.0	0.0	2.946	A
	E2			215				192				

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	259	65	188	1269	0.204	259	73	0.3	0.3	3.567	A
	B1			229				218				
	C1	168	42	22	1355	0.124	168	208	0.2	0.1	3.036	A
	D1	131	33	190	1305	0.101	131	0	0.1	0.1	3.070	A
	E1			321				0				
	F1	104	26	157	2856	0.037	104	165	0.0	0.0	1.307	A
South	A2	208	52	7	1298	0.160	208	168	0.2	0.2	3.304	A
	B2	142	36	215	1517	0.094	142	0	0.1	0.1	2.620	A

	C2	129	32	224	1378	0.094	130	134	0.1	0.1	2.886	A
	D2	31	8	301	1291	0.024	31	53	0.0	0.0	2.859	A
	E2			175				157				

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	217	54	157	1282	0.169	217	61	0.3	0.2	3.381	A
	B1			192				182				
	C1	141	35	18	1357	0.104	141	174	0.1	0.1	2.961	A
	D1	110	27	159	1319	0.083	110	0	0.1	0.1	2.979	A
	E1			269				0				
	F1	87	22	131	2874	0.030	87	138	0.0	0.0	1.293	A
South	A2	174	44	6	1299	0.134	174	141	0.2	0.2	3.201	A
	B2	119	30	180	1534	0.078	119	0	0.1	0.1	2.545	A
	C2	108	27	187	1395	0.078	108	112	0.1	0.1	2.797	A
	D2	26	7	252	1314	0.020	26	44	0.0	0.0	2.797	A
	E2			147				131				

WNP 2033 AM NightOcc, 08-09

Figure 19-63 Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction North - Arm C1	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction South - Arm A2	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Vehicle Mix	Junction North	HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.
Warning	Vehicle Mix	Junction South	HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Figure 19-64 Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
North	Junction 4 = M-5	Standard Roundabout	A1,B1,C1,D1,E1,F1	2.51	A
South	Junction 4= M-5	Standard Roundabout	A2,B2,C2,D2,E2	2.88	A

Figure 19-65 Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Figure 19-66 Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D_05	WNP 2033 AM NightOcc	08-09	Q3	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Figure 19-67 Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
North	C1	South	A2	Simple (vertical queueing)	Normal	0	100.00	
South	A2	North	C1	Simple (vertical queueing)	Normal	0	100.00	

Figure 19-68 Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
North	A1		ONE HOUR	✓	64	100.000
	B1					
	C1	✓				
	D1		ONE HOUR	✓	84	100.000
	E1					
	F1		ONE HOUR	✓	150	100.000
South	A2	✓				
	B2		ONE HOUR	✓	132	100.000
	C2		ONE HOUR	✓	128	100.000
	D2		ONE HOUR	✓	59	100.000
	E2					

Figure 19-69 Origin-Destination Data

Demand (PCU/hr)

Junction North		To						
	From		A1	B1	C1	D1	E1	F1
		A1	0	3	53	0	0	8
		B1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		C1	19	100	0	0	0	53
		D1	19	0	32	0	0	33
		E1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		F1	13	72	65	0	0	0

Demand (PCU/hr)

		To					
Junction South	From		A2	B2	C2	D2	E2
		A2	0	0	68	18	64
		B2	37	0	83	12	0
		C2	83	0	1	8	36
		D2	51	0	4	2	2
		E2	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Figure 19-70 Vehicle Mix

Heavy Vehicle Percentages

Junction North		To					
		A1	B1	C1	D1	E1	F1
	A1	0	0	0	0	0	0
	B1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	C1	0	0	0	0	0	0
	D1	0	0	0	0	0	0
	E1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	F1	0	0	0	0	0	0

Heavy Vehicle Percentages

Junction South	From	To				
		A2	B2	C2	D2	E2
		0	0	0	0	0
		0	0	0	0	0
		0	0	0	0	0
		0	0	0	0	0
	E2	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Figure 19-71 Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
North	A1	0.06	3.13	0.1	A	59	88
	B1						
	C1	0.14	3.07	0.2	A	157	235
	D1	0.07	2.98	0.1	A	77	116
	E1						
	F1	0.06	1.35	0.1	A	138	206
South	A2	0.13	3.18	0.1	A	138	206
	B2	0.09	2.58	0.1	A	121	182
	C2	0.10	2.82	0.1	A	117	176
	D2	0.05	2.87	0.1	A	54	81
	E2						

Figure 19-72 Main Results for each time segment

07:45 - 08:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	48	12	201	1262	0.038	48	38	0.0	0.0	2.964	A
	B1			119				131				
	C1	128	32	6	1362	0.094	128	113	0.0	0.1	2.917	A

	D1	63	16	134	1331	0.048	63	0	0.0	0.0	2.839	A
	E1			197				0				
	F1	113	28	127	2877	0.039	113	70	0.0	0.0	1.301	A
South	A2	113	28	5	1299	0.087	112	128	0.0	0.1	3.033	A
	B2	99	25	118	1566	0.063	99	0	0.0	0.1	2.454	A
	C2	96	24	100	1437	0.067	96	117	0.0	0.1	2.684	A
	D2	44	11	166	1354	0.033	44	30	0.0	0.0	2.748	A
	E2			134				76				

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	58	14	241	1244	0.046	57	46	0.0	0.0	3.032	A
	B1			142				157				
	C1	154	38	7	1362	0.113	154	135	0.1	0.1	2.979	A
	D1	76	19	161	1318	0.057	75	0	0.0	0.1	2.896	A
	E1			236				0				
	F1	135	34	152	2859	0.047	135	84	0.0	0.0	1.320	A
South	A2	135	34	6	1299	0.104	135	154	0.1	0.1	3.092	A
	B2	119	30	141	1554	0.076	119	0	0.1	0.1	2.507	A
	C2	115	29	119	1428	0.081	115	140	0.1	0.1	2.741	A
	D2	53	13	199	1339	0.040	53	36	0.0	0.0	2.799	A
	E2			160				92				

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	70	18	295	1220	0.058	70	56	0.0	0.1	3.131	A
	B1			174				192				
	C1	188	47	9	1361	0.138	188	165	0.1	0.2	3.069	A
	D1	92	23	197	1302	0.071	92	0	0.1	0.1	2.976	A
	E1			289				0				
	F1	165	41	186	2834	0.058	165	103	0.0	0.1	1.348	A
South	A2	165	41	8	1298	0.127	165	188	0.1	0.1	3.177	A
	B2	145	36	173	1538	0.094	145	0	0.1	0.1	2.584	A
	C2	141	35	146	1415	0.100	141	172	0.1	0.1	2.825	A
	D2	65	16	243	1318	0.049	65	44	0.0	0.1	2.872	A
	E2			196				112				

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	70	18	296	1220	0.058	70	56	0.1	0.1	3.132	A
	B1			174				192				
	C1	188	47	9	1361	0.138	188	165	0.2	0.2	3.069	A
	D1	92	23	197	1301	0.071	92	0	0.1	0.1	2.977	A
	E1			290				0				
	F1	165	41	186	2834	0.058	165	103	0.1	0.1	1.348	A
South	A2	165	41	8	1298	0.127	165	188	0.1	0.1	3.177	A
	B2	145	36	173	1538	0.094	145	0	0.1	0.1	2.584	A
	C2	141	35	146	1415	0.100	141	172	0.1	0.1	2.825	A
	D2	65	16	243	1318	0.049	65	44	0.1	0.1	2.872	A
	E2			196				112				

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	58	14	242	1244	0.046	58	46	0.1	0.0	3.033	A
	B1			142				157				
	C1	154	38	7	1362	0.113	154	135	0.2	0.1	2.983	A
	D1	76	19	161	1318	0.057	76	0	0.1	0.1	2.896	A
	E1			237				0				
	F1	135	34	152	2859	0.047	135	84	0.1	0.0	1.321	A
South	A2	135	34	6	1299	0.104	135	154	0.1	0.1	3.093	A
	B2	119	30	141	1554	0.076	119	0	0.1	0.1	2.508	A
	C2	115	29	120	1428	0.081	115	140	0.1	0.1	2.744	A
	D2	53	13	199	1339	0.040	53	36	0.1	0.0	2.799	A
	E2			160				92				

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	48	12	202	1262	0.038	48	38	0.0	0.0	2.967	A
	B1			119				131				
	C1	129	32	6	1362	0.095	129	113	0.1	0.1	2.918	A
	D1	63	16	135	1330	0.048	63	0	0.1	0.1	2.840	A

	E1			198				0				
	F1	113	28	128	2877	0.039	113	71	0.0	0.0	1.302	A
South	A2	113	28	5	1299	0.087	113	129	0.1	0.1	3.037	A
	B2	99	25	118	1565	0.063	99	0	0.1	0.1	2.455	A
	C2	96	24	100	1437	0.067	96	118	0.1	0.1	2.687	A
	D2	44	11	167	1354	0.033	44	30	0.0	0.0	2.749	A
	E2			134				77				

WNP 2033 PM NightOcc, 17-18

Figure 19-73 Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction North - Arm C1	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction South - Arm A2	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Vehicle Mix	Junction North	HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.
Warning	Vehicle Mix	Junction South	HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Figure 19-74 Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
North	Junction 4 = M-5	Standard Roundabout	A1,B1,C1,D1,E1,F1	2.92	A
South	Junction 4= M-5	Standard Roundabout	A2,B2,C2,D2,E2	3.06	A

Figure 19-75 Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Figure 19-76 Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically

D_06	WNP 2033 PM NightOcc	17-18	Q3	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Figure 19-77 Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
North	C1	South	A2	Simple (vertical queueing)	Normal	0	100.00	
South	A2	North	C1	Simple (vertical queueing)	Normal	0	100.00	

Figure 19-78 Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
North	A1		ONE HOUR	✓	83	100.000
	B1					
	C1	✓				
	D1		ONE HOUR	✓	114	100.000
	E1					
	F1		ONE HOUR	✓	108	100.000
South	A2	✓				
	B2		ONE HOUR	✓	146	100.000
	C2		ONE HOUR	✓	242	100.000
	D2		ONE HOUR	✓	46	100.000
	E2					

Origin-Destination Data

Demand (PCU/hr)

Junction North

	To						
		A1	B1	C1	D1	E1	F1
From	A1	1	2	72	0	0	8
	B1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	C1	36	127	0	0	0	100
	D1	32	0	42	0	0	40
	E1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	F1	10	39	58	0	0	1

Demand (PCU/hr)

Junction South		To					
	From		A2	B2	C2	D2	E2
		A2	0	0	79	25	48
		B2	68	0	63	15	0
		C2	165	0	0	17	60
		D2	31	0	15	0	0
		E2	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Vehicle Mix

Heavy Vehicle Percentages

		To					
		A1	B1	C1	D1	E1	F1
Junction North	From	A1	0	0	0	0	0
		B1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		C1	0	0	0	0	0
		D1	0	0	0	0	0
		E1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		F1	0	0	0	0	0

Heavy Vehicle Percentages

		To				
		A2	B2	C2	D2	E2
Junction South	From	A2	0	0	0	0
		B2	0	0	0	0
		C2	0	0	0	0
		D2	0	0	0	0
		E2	Exit-only	Exit-only	Exit-only	Exit-only

Results

Figure 19-79 Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)

North	A1	0.07	3.19	0.1	A	76	114
	B1						
	C1	0.21	3.37	0.3	A	242	363
	D1	0.10	3.19	0.1	A	105	157
	E1						
	F1	0.04	1.35	0.0	A	99	149
South	A2	0.15	3.26	0.2	A	158	237
	B2	0.11	2.64	0.1	A	134	201
	C2	0.19	3.18	0.2	A	222	333
	D2	0.04	2.99	0.0	A	42	63
	E2						

Figure 19-80 Main Results for each time segment

16:45 - 17:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	62	16	201	1263	0.049	62	59	0.0	0.1	2.998	A
	B1			137				126				
	C1	198	50	8	1361	0.146	197	129	0.0	0.2	3.091	A
	D1	86	21	205	1298	0.066	86	0	0.0	0.1	2.969	A
	E1			291				0				
	F1	81	20	179	2840	0.029	81	112	0.0	0.0	1.304	A
South	A2	129	32	11	1296	0.100	129	198	0.0	0.1	3.083	A
	B2	110	27	140	1555	0.071	110	0	0.0	0.1	2.491	A
	C2	182	46	124	1426	0.128	182	125	0.0	0.1	2.892	A
	D2	35	9	261	1310	0.026	35	45	0.0	0.0	2.822	A
	E2			209				86				

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	75	19	240	1245	0.060	75	71	0.1	0.1	3.075	A
	B1			164				151				
	C1	237	59	9	1361	0.174	237	155	0.2	0.2	3.203	A

	D1	102	26	246	1279	0.080	102	0	0.1	0.1	3.059	A
	E1			348				0				
	F1	97	24	214	2814	0.035	97	134	0.0	0.0	1.324	A
South	A2	155	39	13	1295	0.119	154	237	0.1	0.1	3.154	A
	B2	131	33	168	1541	0.085	131	0	0.1	0.1	2.553	A
	C2	218	54	149	1414	0.154	217	150	0.1	0.2	3.008	A
	D2	41	10	312	1286	0.032	41	54	0.0	0.0	2.891	A
	E2			251				103				

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	91	23	294	1220	0.075	91	87	0.1	0.1	3.188	A
	B1			200				185				
	C1	290	73	11	1360	0.214	290	189	0.2	0.3	3.365	A
	D1	126	31	301	1253	0.100	125	0	0.1	0.1	3.191	A
	E1			427				0				
	F1	119	30	262	2779	0.043	119	164	0.0	0.0	1.352	A
South	A2	189	47	17	1294	0.146	189	290	0.1	0.2	3.257	A
	B2	161	40	206	1522	0.106	161	0	0.1	0.1	2.644	A
	C2	266	67	182	1398	0.191	266	184	0.2	0.2	3.181	A
	D2	51	13	382	1253	0.040	51	66	0.0	0.0	2.992	A
	E2			307				126				

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	91	23	295	1220	0.075	91	87	0.1	0.1	3.189	A
	B1			200				186				
	C1	291	73	11	1360	0.214	291	189	0.3	0.3	3.366	A
	D1	126	31	302	1253	0.100	126	0	0.1	0.1	3.192	A
	E1			427				0				
	F1	119	30	263	2779	0.043	119	164	0.0	0.0	1.352	A
South	A2	189	47	17	1294	0.146	189	291	0.2	0.2	3.258	A
	B2	161	40	206	1522	0.106	161	0	0.1	0.1	2.644	A
	C2	266	67	182	1398	0.191	266	184	0.2	0.2	3.181	A
	D2	51	13	382	1253	0.040	51	66	0.0	0.0	2.992	A
	E2			307				126				

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	75	19	241	1244	0.060	75	71	0.1	0.1	3.076	A
	B1			164				152				
	C1	238	59	9	1361	0.175	238	155	0.3	0.2	3.205	A
	D1	102	26	247	1278	0.080	103	0	0.1	0.1	3.063	A
	E1			349				0				
	F1	97	24	215	2814	0.035	97	134	0.0	0.0	1.324	A
South	A2	155	39	13	1295	0.119	155	238	0.2	0.1	3.158	A
	B2	131	33	168	1540	0.085	131	0	0.1	0.1	2.554	A
	C2	218	54	149	1414	0.154	218	151	0.2	0.2	3.010	A
	D2	41	10	313	1286	0.032	41	54	0.0	0.0	2.892	A
	E2			251				103				

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
North	A1	62	16	202	1262	0.050	63	60	0.1	0.1	3.002	A
	B1			137				127				
	C1	199	50	8	1361	0.146	199	130	0.2	0.2	3.099	A
	D1	86	21	207	1297	0.066	86	0	0.1	0.1	2.971	A
	E1			292				0				
	F1	81	20	180	2839	0.029	81	113	0.0	0.0	1.304	A
South	A2	130	32	11	1296	0.100	130	199	0.1	0.1	3.087	A
	B2	110	27	141	1554	0.071	110	0	0.1	0.1	2.494	A
	C2	182	46	125	1425	0.128	182	126	0.2	0.1	2.898	A
	D2	35	9	262	1309	0.026	35	45	0.0	0.0	2.825	A
	E2			210				86				

20 Local Impact Report – Parc Cybi Logistics Centre

20.1 Introduction

20.1.1 Horizon has reviewed chapter 22: A5025 of the IACC LIR. This section responds to the key issues presented within that chapter in respect of the Logistics Centre, with reference to the corresponding paragraph numbers in the LIR chapter where appropriate.

20.1.2 The key issues identified in this response are:

- Planning policy;
- Landscape and visual;
- Historic environment;
- Traffic and transport;
- Hydrology and groundwater; and
- Development Consent Order (“DCO”) requirements and section 106 (“s106”) planning obligations.

20.2 Planning policy

20.2.1 National Policy Statement (“NPS”) EN-1 and NPS EN-6 remain important and relevant matters which should carry significant weight in the determination of nuclear energy NSIPs that will deploy after 2025. They continue to represent the primary policy basis for a decision made by the SoS on this DCO application. Notwithstanding this, relevant local planning policy and guidance, including the Wylfa Newydd Supplementary Planning Guidance (2018) and the Anglesey and Gwynedd Joint Local Development Plan (2017), have been considered by Horizon in preparing the DCO application and in formulating this response.

20.2.2 Please refer to the Planning Statement [APP-406] for further detail in respect of the status of the NPSs and the planning policy considered by Horizon.

20.2.3 Part 3 of NPS EN-1 defines and sets out the need that exists for nationally significant energy infrastructure, including new nuclear power stations. Paragraph 3.1.1 states that the UK needs all the types of energy infrastructure covered by the NPS in order to achieve energy security at the same time as dramatically reducing greenhouse gas emissions. Paragraph 3.1.2 goes on to state that it is for industry to propose new energy infrastructure and that the UK Government does not consider it appropriate for planning policy to set targets for or limits on different technologies.

20.2.4 The urgency of the need for new electricity generating capacity is underlined by projections within NPS EN-1 that indicate up to 22 gigawatts (“GW”) of existing capacity will close over the period to 2020 in part due to the Industrial Emissions Direction but also as a result of some power station reaching the

end of their operational lives (paragraph 3.3.7). In response to this, NPS EN-1 identifies a minimum need for 59 GW of new generating capacity over the period to 2025 (paragraph 3.3.23). Please also refer to Appendix 11-2 of the Statement of Reasons [APP-032] which provides further evidence of the urgent need for new nuclear power.

- 20.2.5 Section 2.2 of NPS EN-6 deals specifically with the need for new nuclear power stations. Paragraph 2.2.3 states that a failure to develop new nuclear power stations significantly earlier than the end of 2025 would increase the risk of the UK being locked into a higher carbon energy mix for a longer period of time than is consistent with the Government's ambitions to decarbonise electricity supply. As a result, it would become more difficult and expensive to meet the Government's targets for significant and urgent decarbonisation of the economy and enhanced security of supply (see Part 3 of NPS EN-1).
- 20.2.6 The Parc Cybi site forms a key part of the Wylfa Newydd DCO Project and will be instrumental in assisting Horizon to meet the need for new energy infrastructure identified in the NPSs. The Logistics Centre to be accommodated at the Parc Cybi site is classed as 'Associated Development' for the purposes of the DCO application. A key component of the Integrated Traffic and Transport Strategy ("ITTS") for the Wylfa Newydd DCO Project [APP-107] is to reduce heavy goods vehicle (HGV) movements on the A5025 and to manage the controlled flow of vehicles to the Power Station site and the inclusion of the Marine Off-Loading Facility (MOLF). This is explained further in the Transport Assessment [APP-101].
- 20.2.7 A single Logistics Centre is required to manage the road-based freight serving the Power Station site during the construction phase. The facility will control the timing of onward transport to the Power Station site along the A5025, in order to manage potential congestion, by holding HGVs at the logistics centre site until they are released at allocated times to the Power Station Site. This is particularly necessary at peak periods or in the event of an incident.
- 20.2.8 The other main component of the ITTS concerned with the movement of materials during the construction phase is the MOLF which will enable the delivery of construction materials by sea; reducing HGV trips on the road network. It is important that the Logistics Centre is located in close proximity to the strategic road network, but also where it can act as a holding facility for any goods coming to the site from sources other than the MOLF, such as the Port of Holyhead.
- 20.2.9 The facility will provide a stopping point for HGVs and will include a covered inspection bay. The minimum site size for the Logistics Centre is 3 hectares (ha) which is necessary in order to accommodate the following requirements:
- Up to 100 HGVs on-site at any one time;
 - 10 staff parking spaces (including disabled);
 - Welfare/security building and kiosks, covered inspection bay,
 - Laydown/storage areas and vehicle scanning equipment; and

- Security features, including paladin fencing with controlled access barriers and systems, CCTV and lighting.

20.2.10 Section 5 of NPS EN-1 sets out 'generic impacts' relevant to all energy NSIPs. This is followed by detailed guidance on a topic by topic basis to guide the applicants as well as the decision maker in their detailed approach to NSIPs, informing their design, assessment and mitigation. These are listed in table 3-2 in the Planning Statement [APP-406]. In addition to the generic impacts set out in NPS EN-1, NPS EN-6 sets out a list of "Nuclear Impacts" that are considered particularly relevant to the development of new nuclear power stations (paragraph 3.4.3, NPS EN-6). This is followed by detailed guidance on these topics informing their design, assessment and mitigation (paragraphs 3.6-3.12).

20.2.11 These Nuclear Impacts are:

- Flood risk;
- Water quality and resources;
- Coastal change;
- Biodiversity and geological conservation;
- Landscape and visual impacts;
- Socio-economic; and
- Human health and well-being.

20.2.12 The Wylfa Newydd DCO Project is assessed relative to the generic impacts and each of the Nuclear Impacts in the Planning Statement [APP-406], including consideration of compliance with both national and local planning policy.

20.2.13 Paragraph 4.1.3 of NPS EN-1 states that in considering any proposed NSIP the decision maker should take into account:

- Its potential benefits, including in addition to its contribution to meeting the need for energy, its contribution to job creation and any long term or wider benefits; and
- Its potential adverse impacts, including any long term and cumulative adverse impacts as well as any measures to avoid, reduce or compensate for any adverse impacts.

20.2.14 In summary, the Wylfa Newydd DCO Project will deliver significant benefits including a major contribution to meeting the pressing, and increasing, need for nuclear power by 2035 and significant benefits to the local economy. Whilst potential adverse impacts arise from the Wylfa Newydd DCO Project subject to appropriate mitigation, it would not have impacts on the local or the wider area which are sufficient to override the overall presumption in favour, as to warrant refusal of DCO. Please refer to the Planning Statement [APP-406] for more detail.

20.3 Landscape and visual

20.3.1 The key issues raised by IACC are as follows:

- The Isle of Anglesey AONB;
- Potential effects upon landscape elements;
- Enhanced planting and offsite planting;
- Structural planting in the wider Parc Cybi site; and
- Colour of fencing and other structures, and challenges of the requirement for 12m high lighting columns.

20.3.2 These are dealt with in turn below.

Effects on landscape fabric

20.3.3 Paragraph 1.2.21 states that the landscape and visual assessment for the Logistics Centre is contrary to NPS EN-1, paragraph 5.9.6, as it does not include an assessment of impacts on landscape fabric.

20.3.4 NPS EN-1 is not prescriptive on how the landscape assessment should be done, neither does it state that the effects on landscape components and landscape character should be assessed separately. As explained in chapter H10 of the ES (APP-364), section 10.3, the effects on constituent landscape elements such as trees, woodland or hedgerows would also have an effect on landscape character. As such the assessment of effects on landscape elements has been incorporated into the assessment of effects on landscape character, Appendix H10-2 of the Environmental Statement [APP-376] provides a detailed assessment of effects on the landscape fabric in relation to each landscape character receptor.

Enhanced planting

20.3.5 In paragraph 1.2.23, IACC has suggested two on-site locations for potential enhanced planting to screen and filter views. The two areas comprise the proposed hedgerow to the north-western boundary where the IACC would like to see tree species included, and planting within an 'irregular shaped area' beyond the hedgerow adjacent to the woodland copse to compensate for its partial removal.

20.3.6 The proposed hedgerow as detailed in the planting strategy in paragraph 4.2.17 of the Design and Access Statement – Volume 3 – Associated Developments and Off-Site Power Facilities, Appendix 1-4 (Logistics Centre) (Revision 2.0) [REP2-030] already includes tree species selected to be appropriate to the location and are representative of the surrounding area. Hedgerow planting along the northern boundary is secured through design principles in paragraph 3.4.26 in section 3.4 of the Design and Access Statement – Volume 3 – Associated Developments and Off-Site Power Facilities, Appendix 1-4 (Logistics Centre) (Revision 2.0) [REP2-030].

20.3.7 The exact location of the 'irregular shaped area' of land adjacent to the existing woodland copse referred to by the IACC is not clear. However, the irregular

shaped area of land shown within the Order Limits on figure 4, page 16 of the Design and Access Statement – Volume 3 – Associated Developments and Off-Site Power Facilities, Appendix 1-4 (Logistics Centre) (Revision 2.0) [REP2-030] is land to accommodate a discharge point and surface water manhole connection to the Parc Cybi attenuation pond as shown on Figure 35, section 5.4 of the design and access statement and consequently cannot be planted with woodland.

- 20.3.8 Paragraph 1.2.23, states the IACC would prefer the existing woodland to be retained and request that consideration be given to a non-material redesign of the facility with a view to its retention. The site layout has been developed to retain as many of the existing landscape features as possible driven by site constraints and the functional criteria of the number of vehicles, circulation requirements and turning circles. This balance between functionality and the retention of existing features is a key requirement contained in a number of design principles relating to the Logistics Centre in section 3.4 of Design and Access Statement – Volume 3 – Associated Developments and Off-Site Power Facilities, Appendix 1-4 (Logistics Centre) (Revision 2.0) [REP2-030]. A strip of existing woodland/scrub edge would be retained along the western boundary of the site, as shown on figure 20, (planting strategy) on page 42 of Design and Access Statement – Volume 3 – Associated Developments and Off-Site Power Facilities, Appendix 1-4 (Logistics Centre) (Revision 2.0) [REP2-030].

Structural planting in the wider Parc Cybi site

- 20.3.9 Paragraph 1.2.24 states that potential exists in the wider Parc Cybi for structural planting to support that already provided to some sections of the existing service road. It is not considered that off-site planting within the adjoining area would be appropriate given allocation of the wider Parc Cybi site in the Joint Local Development Plan and limited information on how the wider site will be developed in the future.

Colour of fencing and other structures, and height of lighting columns.

- 20.3.10 Paragraph 1.2.25 states that the IACC would wish to agree the colour of fencing, and other structures. Design principles for the Logistics Centre site are set out in section 3.4 of Design and Access Statement – Volume 3 – Associated Developments and Off-Site Power Facilities, Appendix 1-4 (Logistics Centre) (Revision 2.0) [REP2-030]. Paragraph 3.4.22 states that the architectural design of proposed buildings and structures will use simple building forms to recognise the function of the facility and its industrial location, whilst still complementing its surroundings and integrating with the landscape and reducing adverse visual effects.
- 20.3.11 Paragraph 1.2.25 questions the requirement for 12m high lighting columns and their visual prominence, for example, as seen from Viewpoint 1 Trefignath Burial Chamber. For site safety lighting columns located within the central part of the site have been specified at 12m high, to ensure the area where drivers

walk to and from their vehicles is well lit and visible to moving vehicles. The lighting columns are required to be higher than the large HGV's using the site to ensure no light is blocked by the HGVs which would create unsafe, shaded/unlit where drivers will be walking to and from their vehicles. Lighting design will be controlled by the design principles in the Design and Access Statement – Volume 3 – Associated Developments and Off-Site Power Facilities, Appendix 1-4 (Logistics Centre) (Revision 2.0) [REP2-030] and operational control secured through the Wylfa Newydd CoCP (Revision 2.0) [REP2-031].

20.4 Historic environment

20.4.1 The key issues raised by IACC with regard to the historic environment are as follows (with corresponding paragraph numbers, where necessary):

- Issue 1: The influence of increased vehicle movements and associated lighting on the visibility and perceptual experience of the winter solstice sunrise from Ty-Mawr should have been considered in the assessment and whilst mitigation may present a minor reduction in effect, there does not appear to be any way in which the effects on lighting upon inter-visibility could be mitigated.
- Issue 2: The proposed archaeological mitigation does not appear to accord with the conclusions reached in the Environmental Statement (ES) which state that archaeological remains have been previously identified and recorded. (Paragraph 1.2.30)
- Issue 3: Provision of enhanced interpretation materials at the two scheduled monuments to compensate some of the negative impacts of the scheme.

20.4.2 The issues are dealt with in turn below, with reference to the relevant paragraph numbers.

Issue 1

20.4.3 In paragraph 1.2.28 of chapter 20, LIR the IACC states that given that the winter solstice sunrise would fall within normal operating hours of this facility, the influence of increased vehicle movements and associated lighting on the visibility and perceptual experience of the winter solstice sunrise from Ty-Mawr should have been considered in the assessment. Paragraph 1.2.30 notes that whilst mitigation may present a minor reduction in effect, there does not appear to be any way in which the effects on lighting upon inter-visibility could be mitigated.

20.4.4 The value of these heritage assets, and the importance of the intervisibility between them, was considered during the design process (and clearly secured through design principles in the Design and Access Statement.

20.4.5 As identified in paragraphs 1.2.1 and 1.2.2 of the ES Volume H - Logistics Centre H1 - Proposed development [APP-355] the proposed Logistics Centre site is within the Parc Cybi employment area, an area of existing and planned

industrial and retail development which is a strategic employment 56ha development for north-west Wales, facilitated by the Welsh Government.

- 20.4.6 The maintenance of the view between the Ty Mawr Standing Stone and the Trefignath Burial Chamber across the southern corner of the site was embedded into the design of the proposed Logistics Centre (and the design principles), along with the need for the lighting design that mitigates light spill and to employ a control system which illuminates only those areas where activities are occurring (refer to paragraph 1.6.1 of Chapter H1 – Logistics Centre H1 - Proposed development of the Environmental Statement [APP-355]).
- 20.4.7 In addition, the main environmental factor determining the proposed final layout of the Logistics Centre (as described in Chapter H1 – Logistics Centre H1 -Proposed development of the Environmental Statement [APP-355] has been the requirement to maintain, as far as possible, the line of sight between the aforementioned Scheduled Monuments. In addition, the southern part of the Logistics Centre site has been assessed to be of high archaeological potential. The consideration of these factors resulted in the office/welfare building, covered inspection bay and HGV parking areas being located as far as possible outside these areas of interest.
- 20.4.8 The importance of the indivisibility between Ty Mawr Standing Stone (Asset 22) and the Trefignath Burial Chamber (Asset 21) has meant that the layout of the Logistics Centre was designed to reduce visual intrusion into the settings of Ty Mawr Standing Stone (Asset 22) and the Trefignath Burial Chamber (Asset 21) Scheduled Monuments and maintain the line of sight between the two heritage assets and the possible visual alignment of these monuments and the winter solstice sunrise, as far as reasonably practicable within security and operational requirements, was identified as embedded mitigation and is identified in paragraph 11.4.8 (refer to paragraphs 11.3.5 and 11.3.6 of the Chapter H11 - Cultural heritage of the Environmental Statement [APP-365]).
- 20.4.9 As presented in Appendix H11-2 of the Environmental Statement [APP-381] potential effects on Ty Mawr Standing Stone (Asset 22) and the Trefignath Burial Chamber (Asset 21) during consultation were identified resulting from the introduction of additional vehicle noise and movement into the setting of these assets. Before mitigation the significance of this effect was assessed to be minor adverse. After mitigation in the form of a photographic survey to make a record of current setting, the significance of residual effect was assessed to be minor adverse.
- 20.4.10 As presented in Appendix H11-2 [APP-381] while during operation the Logistics Centre would be present in the setting of the burial chamber (see appendix H10-5 (photomontage views) [APP-379]) and additional vehicle movement would be introduced into the asset's setting, the intervisibility between the burial chamber (Asset 21) and the standing stone (Asset 22) would be maintained and vehicle noise and movement and street lighting already form part of the setting. Based on this before mitigation the significance of this effect was assessed to be minor adverse. No mitigation

was proposed and the significance of residual effect was therefore assessed to be minor adverse.

20.4.11 External lighting proposals are provided in section 4.5 of the Design and Access Statement – Volume 3 – Associated Developments and Off-Site Power Station Facilities, Appendix 1-4 (Logistics Centre) (Revision 2.0) [REP2-030] and proposed lighting plan is shown of figure 34. As identified in paragraph 4.5.6 of the Design and Access Statement – Volume 3 – Associated Developments and Off-Site Power Station Facilities, Appendix 1-4 (Logistics Centre) (Revision 2.0):

The design would work under the 'broad consideration' that the Isle of Anglesey is working towards a Dark Sky Reserve Status. As such:

- *Consideration would be given to the presence of existing road lighting;*
- *Lighting design would be carefully planned to minimise light spill onto adjacent*
- *And environmentally sensitive areas, watercourses, hedgerows and other habitats; and the lighting would be zoned and dimmed to support the day-to-day operations of the facility*

20.4.12 As such is not considered that lighting would result in a significant effect to the setting the burial chamber (Asset 21) and the standing stone (Asset 22).

20.4.13 Whilst there will be an effect on the setting the burial chamber (Asset 21) and the standing stone (Asset 22), including from light from the proposed Logistics Centre, the intervisibiltiy would be retained and is not considered to be significant. No re-assessment is therefore required.

Issue 2

20.4.14 In paragraph 1.2.30 of chapter 20, LIR IACC states that proposed archaeological mitigation does not appear to accord with the conclusions reached in the Environmental Statement (ES) which state that archaeological remains have been previously identified and recorded.

20.4.15 Paragraph 11.3.3 of Chapter H11 – Cultural heritage of the Environmental Statement [APP-365] identifies that apart from two small areas, the Logistic Centre site has been subject to strip map and sample which mitigated the effects of the Parc Cybi employment area on any archaeological remains that were present. Given the intensity of investigation no additional evaluation was therefore required to inform the baseline of the Logistic Centre. One of the two areas was the site of 19th century farm buildings which are likely to have removed or truncated any archaeological remains that may have been present. While the second area is under mature scrub, it has been assessed to have a high potential for the presence of unknown archaeological remains, and is shown on figure H11-1 in ES Volume H - Logistics Centre Figure Booklet - Volume H [APP-383].

20.4.16 As identified in paragraph 1.6.1 of Chapter H1 -Proposed development of the Environmental Statement [APP-355] the location of buildings and other infrastructure avoids any ground disturbance within the area identified to be of

high archaeological potential. The general mitigation controls to be implemented for cultural heritage are described in section 12 of the Wylfa Newydd CoCP [REP2-031].

20.4.17 In addition the draft DCO s.016 agreement provides for an 'Interpretation Board Contribution' to improve, supplement or replace the existing interpretation boards at the Capel Soar Standing Stone, Trefignath Burial Chamber, and Ty Mawr Standing Stone.

Issue 3

20.4.18 In paragraphs 1.2.31 and 1.6.12 of chapter 20, LIR IACC states that measures such as provision of enhanced interpretation materials at the two scheduled monuments present opportunities to compensate some of the negative impacts of the scheme and should therefore be secured in the DCO.

20.4.19 Horizon notes that the draft DCO s.016 agreement provides for an 'Interpretation Board Contribution' payable to IACC to improve, supplement or replace the existing interpretation boards at the Capel Soar Standing Stone, Trefignath Burial Chamber, and Ty Mawr Standing Stone.

20.5 Traffic and transport

20.5.1 The key issues raised by IACC that relate to traffic and transport are as follows:

- Sustainable staff transport; and
- Construction traffic management.

20.5.2 These are addressed in turn below and on the following page.

Sustainable staff transport

20.5.3 At paragraph 1.2.13 of chapter 20, LIR IACC states its opinion that the sustainability of the site could be enhanced from a transport perspective and requests provision of public transport to serve the site.

20.5.4 The Logistics Centre will be staffed by 14 staff (see ES Volume C, App C2-4 DCO Transport Assessment [APP-101], paragraph 5.1.33). This number is not deemed sufficient to warrant additional public transport provision.

20.5.5 A travel plan would be developed for the construction and operational phase of the Parc Cybi Logistics Centre in order to minimise transport-related environmental impacts (see Design and Access Statement Volume 3, Appendix 1-4 Logistics Centre [REP2-029] paragraph 7.2.2).

20.5.6 Shuttle buses would potentially serve the Logistics Centre from the Dalar Hir Park & Ride, helping minimising construction worker traffic driving to the site by private car (see ES Volume C – C2 Traffic and Transport [APP-089], section 2.4.12).

Construction traffic management

- 20.5.7 At paragraph 1.2.14 of Chapter 20, LIR IACC requires that Horizon demonstrates how it has secured in an enforceable manner the Horizon commitment that the number of vehicles movements (LGV/MGH/HGV) is restricted to a maximum of 40 movements per hour per direction and that vehicles are released at regular intervals to avoid 'convoys' and sensitive times of the day (e.g. school run).
- 20.5.8 The Wylfa Newydd CoCP [REP2-031] includes a section on the Logistics Centre (see section 5.2). This provides details of the hours of operation of the Logistics Centre and restrictions in place before the opening of the A5025 Off-line Highway Improvements (paragraph 5.2.3). Further restrictions on the number of HGV movements per hour and per day are provided in paragraph 5.4.13.
- 20.5.9 The following text provided in the updated Logistics Centre sub-CoCP [REP2-373] provides further background to the management of vehicles using the Logistics Centre:

"The establishment and operation of a Logistics Centre between Valley and Holyhead, where deliveries to the Power Station Site are managed effectively, is central to Horizon's strategy to control deliveries to site and manage impacts on the local road network. An integrated Distribution Management Asset Tracking System (DMATS) will be used to monitor, manage and control deliveries to site and will likely comprise three elements:

- A Delivery Booking System;
- A Vehicle Tracking System; and
- An Asset Tracking System.

A DMATS is a collection of applications contained within a single electronic system designed to monitor, manage and control an entire distribution network efficiently and reliably. The Delivery Booking System will allow Horizon's contractors and other users requiring delivery of items to site to pre-book entry, typically 24 hours in advance. Vehicles will register and wait at the Logistics Centre ready to fulfil their reserved delivery slot.

The Vehicle Tracking System will monitor vehicle movements from source, to the Logistics Centre and then to site and provides delivery assurance.

The Asset Tracking System will enable the tracking of all delivery items (maximising delivery items per vehicle), the ability to pinpoint individual items quickly, efficiently and holistically from source to site, and provide accurate information to all contractors as well as clear accountability for material and goods ownership.

The DMATS will include appropriate use of technology such as barcoding, Global Positioning System tracking and just-in-time delivery systems and will allow capacity optimisation and maximise the efficacy of the overall system.

Heavy goods vehicle (HGV) deliveries would be allocated a time slot and associated delivery period when they should arrive at the Logistics Centre. The sequence of activities during this delivery period is as follows:

- Vehicle arrives at the site and queues up on the access road within the footprint but before the security kiosk.
- Delivery documentation is checked and authorised, vehicle drives through security and is directed to scanner or inspection bay.
- Vehicle is accepted, vehicle is tagged and driver is issued delivery documents, a departure time and is allocated a holding bay number, holding bay waiting time and, if required, directed to the inspection area.
- At the allotted time, the vehicle leaves the Logistics Centre and drives directly to the Power Station Site.

Day-to-day traffic movements will be managed via the DMATS.”

20.6 Hydrology and groundwater

Groundwater level and SuDS

- 20.6.1 IACC notes that the Centre is located within Flood Zone 1 with surface water features limited to off-site ponds plus two minor depressions. IACC has observed that the present condition of the site is noted as being marshy grassland which suggests a high groundwater level and confirmation is required that this would not pose a sustainable urban drainage (SuDs) design issue.
- 20.6.2 Marshy grassland is often developed on relatively impermeable bedrock or till and does not necessarily have a shallow saturated groundwater regime, although infiltration is likely to be low. There is no SI data for the site and this has been noted as a risk to Horizon, however, the existing ground requires reprofiling with substantial fill at the northern end to achieve a site gradient that an HGV can operate on which will ensure that there is sufficient space to install appropriate drainage which, as described within the FCA, will consist of impermeable paving from which surface runoff would be routed to a below-ground geo-cellular storage system. All runoff would be routed through a Class 1 Full Retention Oil Separator before discharge into an existing pond to the north-west. Any residual lack of infiltration rate, if due to an impermeable bedrock of low permeability till, would therefore not be an issue.

Discharge rates

- 20.6.3 IACC observes that the proposed drainage rates (paragraph 4.3.2 of the Flood Consequence Assessment) reference an equivalent discharge rate of 367l/s to the attenuation pond which appears extraordinarily high. IACC suggests it is not clear how this rate has been derived from the original Parc Cybi Drainage Strategy within which Plot 10 was a larger area than the current site. IACC requests clarification as to whether the off-site pond to the west is to provide further attenuation prior to discharge to a watercourse.

- 20.6.4 A drainage scheme (Figure H1-4) of the Environmental Statement [APP-383]) incorporating Sustainable Drainage Systems (SuDS) has been developed to manage surface water runoff associated with the Logistics Centre. The site surfacing is concrete due to the need to operate HGVs on it. The vehicle hard standing would be constructed using impermeable paving and surface runoff would be routed to a below-ground geo-cellular storage system. All surface water flows from the site will be passed through Class 1 Full Retention Oil Separator before discharge into an existing pond to the north-west. Water from the pond discharges into an open watercourse and flows north-eastwards under the A55. The discharges are set to match the design of the ponds that have been installed on site as part of the original development of the industrial park.
- 20.6.5 The observation that the runoff rate is high is noted, however, as explained in Section 4.3.2 of the FCA [APP-370] the allowance proposed within the FCA is largely driven by the allowed free drainage from up to 8,000m² of roof area that is set out in Surface Drainage Schedule for Plots in Section 3.2.3 of the Parc Cybi, Anglesey: plot Drainage Strategy (Atkins, 2008) with an additional 28.9l/s allowed runoff from hard standing/parking and green areas. Essentially, Horizon has calculated what the free runoff would be from the maximum 8,000m² roofed area for a range of return periods and has added a fixed runoff rate of 28.9l/s from car park/hard standing/green areas to this figure for the site. There was no pro-rate reduction in this rate to account for the larger size of Plot 10.
- 20.6.6 The design principles in Design and Access Statement – Volume 3 – Associated Developments and Off-Site Power Station Facilities (Revision 2.0) [REP2-029 to REP2-030] sufficiently cover drainage design. This includes that the drainage design will include measures to attenuate all surface water runoff and prevent changes in water quality and quantity affecting aquatic habitats by provision of an oil/water interceptor. Drainage will be designed to mitigate any significant effects on the attenuation pond.
- 20.6.7 Furthermore, all surface water runoff will be passed through an oil/water interceptor on the drainage outfall before passing through a below-ground geocellular attenuation tank. The vehicle hardstanding will be constructed using impermeable paving and surface runoff will be routed through a below-ground geocellular storage system. The maximum discharge will be attenuated to meet the criteria used for the design of the existing retention pond into which the surface water will be discharged.

A55 culvert capacity

- 20.6.8 With regard to drainage, IACC seeks confirmation that the capacity of the culverts which convey site/catchment drainage northwards under the A55 have been assessed.
- 20.6.9 Horizon can confirm that no assessment of the culvert capacity has been undertaken at this stage. As the original drainage strategy (2008) was approved relatively recently and as the original approved drainage strategy is reliant on the capacity of these structures, it was assumed that confirmation

of its capacity was undertaken at the time. If necessary, this is a check that can be undertaken at the detailed design stage.

Clarification of abstraction licensing text

20.6.10 Although not made explicitly clear in the LIR, IACC indicated in Section 1.5.5c of chapter 20 that clarification was required for text implying that abstraction licence exemptions were to be removed from January 2018.

20.6.11 Natural Resources Wales identifies on its website that from the 1st January 2018 most previously exempt abstractions (if over 20m³/day exemption threshold) will now require a licence to continue legally abstracting water.

20.7 DCO requirements and planning obligations

Response to the DCO requirements sought by IACC in section 1.6

20.7.1 The Logistics Centre sub-CoCP [REP2-373] secures a range of commitments for mitigating the construction, operation, and decommissioning related environmental effects of the Logistics Centre. Horizon considers that the management strategies in the sub-CoCP (along with the mitigation secured elsewhere in other control documents, including in the Wylfa Newydd Code of Construction Practice (CoCP) [REP2-031]) contain sufficient detail to secure the mitigation required to appropriately mitigate the adverse environmental effects of the Logistics Centre, as identified and assessed in Volume H of the Environmental Statement. For this reason, a DCO requirement that a revised sub-CoCP must be submitted to IACC for approval is not necessary or justified.

20.7.2 Horizon continues to engage with IACC and other stakeholders on these matters, and engagement to date has led to additional detail being added to the CoCP and sub-CoCPs submitted at Deadline 2 [REP2-031 to REP2-036, REP2-373]. Horizon has also made further commitments, as noted in responses to Written Question or Deadline 3 responses, to add additional detail in the revised CoCP and sub-CoCPs to be submitted at Deadline 4 (17 January 2018). Horizon acknowledges that further refinement of the CoCP and sub-CoCPs will occur throughout the course of the Examination.

20.7.3 In respect of the specific requests for requirements made by IACC in section 1.6 of this chapter, either:

- a) these are addressed in topic specific chapters of this response;
- b) are responded to below; or
- c) Horizon is continuing to consider the request.

20.7.4 In respect of b), Horizon does not consider that additional requirements in respect of the below matters raised by IACC are needed, for the following reasons:

- **Ecological receptors:** Horizon considers sufficient measures to safeguard ecological receptors are provided in sections 11.1 and 11.2 of the Wylfa Newydd CoCP (which applies to all sites).
- **Materials handling:** The Wylfa Newydd CoCP will be updated at Deadline 4 (17 January 2018) to specify with greater clarity that the fundamental requirements of Soil Resource Plans, as set out within the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (Defra, 2009), will be fulfilled prior to construction. These include the production of maps showing existing topsoil and subsoil types, the areas of soil to be stripped and left in situ, the location of stockpiles and their anticipated contents, the location of haul routes, and the expected reuse for all stripped soils. The methods for stripping, stockpiling, resspreading and decompacting will also be set out prior to construction.
- **Invasive species:** The Biosecurity Risk Assessment & Method Statement required by section 11.2 of the Wylfa Newydd CoCP already covers control of invasive species (at all sites including the Logistics Centre).
- **Existing woodland:** The layout of the site has been developed to retain as many of the existing landscape features as possible, driven by site constraints and functional criteria, including the number of vehicles, movement pattern and turning circles. The strip of existing woodland/scrub edge along the western boundary of the site would be retained as illustrated on figure 20, Planting Strategy in the Design and Access Statement Volume 3: Appendix 1-4 Logistics Centre [REP2-030]. The existing landform at the site falls from the entrance at the south-east to the north-west by approximately 10m. Site levels would be adjusted through cut and fill across the site to achieve an acceptable gradient on which to drive and park HGVs; this would result in the removal of the existing small copse on the south east corner of the site.
- **Lighting scheme:** Horizon is currently preparing a Lighting Strategy which will be incorporated into the relevant CoCPs and CoOPs that will be revised and submitted at Deadline 4 (17 January 2019). The strategy will, as far as reasonably practical in accordance with operational and security constraints, aim to minimise light pollution to mitigate effects on Dark Sky Reserve Status if granted.
- **Decommissioning strategy:** Requirement LC7 already provides that decommissioning of the Logistics Centre must not commence until a decommissioning strategy has been approved by IACC.
- **Detailed design and landscaping:** As part of the DCO application, Horizon submitted detailed plans for the Logistics Centre [APP-024]. These plans are marked as for approval as part of the DCO and show areas of retained areas hedgerow, new hedgerow, woodland and

grassland planting, and retained or new stone walls. Under Requirement PR2, Horizon must undertake construction of the Park and Ride facility in accordance with the detailed design drawings identified in Schedule 2 of the draft DCO; although it has the power under Requirement PR3 to submit new detailed designs to IACC for approval in accordance with the parameters and design principles in volume 3 of the Design and Access Statement [REP2-029 and REP2-030].

Horizon's response to the planning obligations sought by IACC

- 20.7.5 In respect of paragraph 1.6.11, Horizon does not agree an environmental fund is required; appropriate onsite controls are provided in the relevant sub-CoCP. As such the need for a 20-year fund to separately undertake off-site works and planting over and above the mitigation secured in the sub-CoCP (including as may be updated) is not considered necessary or proportionate.
- 20.7.6 In respect of the request for funding at 1.6.11(h) and 1.6.12, Horizon notes that the draft DCO s.106 agreement commits £300,000 to delivery of new and upgraded PRow and £6,000 for interpretation signage for the Capel Soar Standing Stone, Trefignath Burial Chamber, and Ty Mawr Standing Stone; the purposes for which this sum could be expended could be expanded to refer to access to these features.
- 20.7.7 The purposes of the rural skills programme is not clear to Horizon however this is a matter which can be discussed between the parties as to whether it should form part of the Jobs and Skills Implementation Plan under discussion between Horizon and IACC.

21 Local Impact Report – Offsite Power Station Facilities

21.1 Introduction

21.1.1 Horizon has reviewed chapter 22: Off-Site Power Station Facilities of IACC's LIR. This document responds to the key issues that relate to the Off-Site Power Station Facilities presented within chapter 22, with reference to the corresponding paragraph numbers in the LIR chapter where appropriate.

21.1.2 Key issues in this response are:

- Planning policy;
- Landscape and visual;
- Ecology;
- Hydrology and flooding; and
- Development Consent Order (“DCO”) requirements and section 106 (“s.106”) planning obligations.

21.2 Planning policy

21.2.1 National Policy Statements (“NPS”) EN-1 and EN-6 remain important and relevant matters which should carry significant weight in the determination of nuclear energy nationally significant infrastructure projects (“NSIPs”) that will deploy after 2025. They continue to represent the primary policy basis for a decision made by the Secretary of State on this DCO application. Notwithstanding this, relevant local planning policy and guidance, including the Wylfa Newydd Supplementary Planning Guidance (2018) and the Anglesey and Gwynedd Joint Local Development Plan (2017), have been considered by Horizon in preparing the DCO application and in formulating this response.

21.2.2 Please refer to the Planning Statement [APP-406] for further detail in respect of the status of the NPSs and the planning policy considered by Horizon.

21.2.3 Part 3 of NPS EN-1 defines and sets out the need that exists for nationally significant energy infrastructure, including new nuclear power stations. Paragraph 3.1.1 states that the UK needs all the types of energy infrastructure covered by the NPS in order to achieve energy security at the same time as dramatically reducing greenhouse gas emissions. Paragraph 3.1.2 goes on to state that it is for industry to propose new energy infrastructure and that the UK Government does not consider it appropriate for planning policy to set targets for or limits on different technologies.

21.2.4 The urgency of the need for new electricity generating capacity is underlined by projections within NPS EN-1 that indicate up to 22 gigawatts (“GW”) of existing capacity will close over the period to 2020 in part due to the Industrial Emissions Direction but also as a result of some power station reaching the end of their operational lives (paragraph 3.3.7). In response to this, NPS

EN-1 identifies a minimum need for 59 GW of new generating capacity over the period to 2025 (paragraph 3.3.23). Please also refer to Appendix 11-2 of the Statement of Reasons [APP-032] which provides further evidence of the urgent need for new nuclear power.

- 21.2.5 Section 2.2 of NPS EN-6 deals specifically with the need for new nuclear power stations. Paragraph 2.2.3 states that a failure to develop new nuclear power stations significantly earlier than the end of 2025 would increase the risk of the UK being locked into a higher carbon energy mix for a longer period of time than is consistent with the UK Government's ambitions to decarbonise electricity supply. As a result, it would become more difficult and expensive to meet the Government's targets for significant and urgent decarbonisation of the economy and enhanced security of supply (see Part 3 of NPS EN-1).
- 21.2.6 The Wylfa Newydd Off-Site Power Station Facilities comprise an Alternative Emergency Control Centre (AECC), an Environmental Survey Laboratory (ESL) and a Mobile Emergency Equipment Garage (MEEG). The Off-Site Power Station Facilities form a key part of the Wylfa Newydd DCO Project and will be instrumental in not only delivering a safe project, but in meeting the need for new energy infrastructure identified in the NPSs.
- 21.2.7 In accordance with UK regulatory requirements, Horizon is developing plans for operational and emergency preparedness. It will be a requirement of the Nuclear Site Licence issued by the Office of Nuclear Regulation that Horizon has adequate facilities to respond to an emergency prior to bringing fuel to the Power Station Site. This plan will include a phased approach to emergency response, identifying actions to be taken at the Power Station Site, in the local communities, across the region and then across the UK.
- 21.2.8 As part of its emergency planning arrangements, Horizon needs to develop integral facilities that will be physically separate from, but local to, the Power Station Site. These facilities are required in order to provide resilience against extreme events with very low probabilities, such as, for example, severe flooding, earthquake(s) and form an integral part of Horizon's emergency arrangements at the Power Station. The facilities therefore form a significant part of the safety case for the Power Station.
- 21.2.9 The positioning of the Off-Site Power Station Facilities must meet certain locational criteria which are based on the currently available technical data for UK ABWR and are outlined below:
- Located at a point immediately adjacent to and which provide straightforward access to the main road network (A5025, A55, A5);
 - Located outside the prevailing wind zone of the Power Station;
 - Located in a zone of low seismic activity; and
 - Located in a radius between 1.5 kilometre (km) and 7.5km from the Power Station Site.
- 21.2.10 The site selection process for the Off-Site Power Station Facilities was very important, as they must be resilient in extreme events and able to operate in an emergency scenario. The need for the Off-Site Power Station Facilities,

and the process taken to select the current location, is set out in Site Selection Report – Volume 3 – Off-Site Power Station Facilities [APP-438].

21.2.11 Section 5 of NPS EN-1 sets out ‘generic impacts’ relevant to all energy NSIPs. This is followed by detailed guidance on a topic by topic basis to guide the applicants as well as the decision maker in their detailed approach to NSIPs, informing their design, assessment and mitigation. These are listed in table 3-2 in the Planning Statement [APP-406].

21.2.12 In addition to the generic impacts set out in NPS EN-1, NPS EN-6 sets out a list of “Nuclear Impacts” that are considered particularly relevant to the development of new nuclear power stations (paragraph 3.4.3, NPS EN-6). This is followed by detailed guidance on these topics informing their design, assessment and mitigation (paragraphs 3.6-3.12).

21.2.13 These Nuclear Impacts are:

- Flood risk;
- Water quality and resources;
- Coastal change;
- Biodiversity and geological conservation;
- Landscape and visual impacts;
- Socio-economic; and
- Human health and well-being.

21.2.14 The Wylfa Newydd DCO Project is assessed relative to the generic impacts and each of the Nuclear Impacts in the Planning Statement [APP-406], including consideration of compliance with both national and local planning policy.

21.2.15 Paragraph 4.1.3 of NPS EN-1 states that in considering any proposed NSIP the decision maker should take into account:

- Its potential benefits, including in addition to its contribution to meeting the need for energy, its contribution to job creation and any long-term or wider benefits; and
- Its potential adverse impacts, including any long term and cumulative adverse impacts as well as any measures to avoid, reduce or compensate for any adverse impacts.

21.2.16 In summary, the Wylfa Newydd DCO Project will deliver significant benefits including a major contribution to meeting the pressing, and increasing, need for nuclear power by 2035 and significant benefits to the local economy. Whilst potential adverse impacts arise from the Wylfa Newydd DCO Project subject to appropriate mitigation, it would not have impacts on the local or the wider area which are sufficient to override the overall presumption in favour, as to warrant refusal of DCO. Please refer to the Planning Statement [APP-406] for more detail.

21.3 Landscape and visual

- 21.3.1 The key issues raised by IACC are as follows, along with corresponding paragraph numbers in chapter 22:
- Issue 1 On-site planting along boundaries: 1.2.15, 1.4.5, 1.2.24, 1.2.25, 1.3.12;
 - Issue 2 Off-site planting as Mitigation: 1.2.23, 1.3.12;
 - Issue 3 Compensation measures: 1.2.28, 1.4.5;
 - Issue 4 Assessment of Individual residential properties: 1.4.4;
 - Issue 5 Retention of boundary vegetation: Paragraphs: 1.2.13 & 1.4.5;
 - Issue 6 Lighting effects: 1.2.14;
 - Issue 7 Landscape fabric as a receptor: 1.2.21, 1.4.3; and
 - Issue 8: Monitoring impacts and reviewing mitigation: 1.3.13.
- 21.3.2 In respect of the Off-Site Power Station Facilities, only illustrative detailed design drawings have been provided as part of the DCO application. Requirement OPSF2 requires Horizon to submit detailed designs in accordance with the parameters in Schedule 3 of the Draft DCO (Revision 3.0) [REP2-020] and the design principles that apply to the Off-Site Power Station Facilities in the Design and Access Statement – Volume 3 – Associated Developments and Off-Site Power Station Facilities (Part 1 of 2) [REP2-029]. Horizon has made comments as to how the various matters raised by IACC in the LIR are addressed in the illustrative drawings; however, it notes that there are also design principles that will secure these matters at the time that detailed designs are submitted for approval.

On-site planting along boundaries

- 21.3.3 In relation to IACC's statement in paragraph 1.2.15 of chapter 22 that "*IACC would wish to see additional screen planting to be placed along the western and northern boundaries of the site which could consist of cloddiau topped with hedgerows. A similar approach should also be taken to the eastern boundary*", it should be noted that areas of native tree and shrub planting and hedgerow planting are currently proposed along the eastern boundary, as shown in figure 20 Indicative Landscape Masterplan in the Design and Access Statement - Volume 3 - appendix 1-1 [REP2-029].
- 21.3.4 In relation to cloddiau topped with hedgerows, it is necessary to provide a secure boundary and a clear line of sight along the external face of the security fence for security operations, which would preclude any tree or shrub planting between the boundary stone wall and the security fence on the northern boundary. In relation to the use of cloddiau topped with hedgerows as an alternative to free standing walls, it should be noted that the Design and Access Statement – Volume 3 – Associated Developments and Off-Site Power Station Facilities (Part 1 of 2) [REP2-029] cloddiau are not prevalent in the immediate area, the stone walling surrounding the site and flanking the A5025 is freestanding.

- 21.3.5 In relation to IACC's statement in paragraph 1.2.24 of chapter 22 that '*IACC would therefore wish to see a proportion of larger trees being planted alongside the existing northern and eastern boundary hedgerows to the site*', it should be noted that planting of large trees along the northern boundary is not considered practical due to the requirement for a clear line of site for security.
- 21.3.6 While consideration has been given to minimising the visual impact, a clear line of sight is required for security along the external face of the security fencing and so this would preclude any tree or shrub planting between the boundary stone wall and the security fencing on the northern boundary. The ESL building has been designed in principle to be incorporated into the secure boundary of the site and to remove the need to for a security fence along the A5025. Security criteria would however, still require a clear line of sight along the building elevation. Areas of native tree and shrub planting are currently proposed along the eastern boundary, as shown on the Indicative Landscape Masterplan in the Design and Access Statement – Volume 3 – appendix 1-1 [REP2-029].
- 21.3.7 In relation to paragraph 1.2.25 of chapter 22 regarding the suggestion that "*on-site access traffic island where shrub and/or tree planting would provide some screening and filtering of views for visual receptors located to the west and north-west of the site*", the location of the 'on-site traffic island' that IACC refers to is unclear. If this refers to the 'lay-by' to the north west of the ESL building, this is off-site and further planting in this location is not considered practicable as it is necessary to maintain a secure site boundary provided by the ESL building.

Off-site planting mitigation

- 21.3.8 A number of IACC statements relate to off-site planting as further mitigation:
- Paragraph 1.2.23 of chapter 22 states that "increasing the number of isolated hedgerow trees between the site and the school would potentially provide additional partial screening in the latter's northern views".
 - Paragraph 1.2.26 of chapter 22, relating to effects on the PRow within the AONB, states that "IACC concludes that significant negative impacts will continue throughout the operation period unless limited off-site planting is provided that will establish to filter views" and
 - Paragraph 1.3.12 of chapter 22, regarding Policy PS9, states that 'these criteria support the need for the provision of mitigation and compensation, the latter in the form of off-site screen planting, where its provision will potentially reduce adverse visual impacts sustained by residents'.
- 21.3.9 The illustrative landscape strategy that has been used to develop the design (submitted as part of the DCO application) ensures that the landscaping design responds sympathetically to the landscape context and technical requirements for the Off-Site Power Station Facilities by concentrating on

embedding any necessary screening within its operational boundary. This approach means that adequate screening can be achieved and maintained within the ownership of the site. Notwithstanding land ownership issues, it is considered that the establishment of a small number of hedgerow trees along the field boundary to the west would not change the assessed significance levels.

- 21.3.10 As detailed design has not been submitted for the Off-Site Power Station Facilities, the design principles in the Design and Access Statement – Volume 3 – Associate Developments and Off-Site Power Station Facilities (Part 1 of 2) (Revision 2.0) [REP2-029] will also ensure that final landscaping aligns with the statements above in respect of on-site planting.

Compensation measures

- 21.3.11 In relation to IACC's statement in paragraph 1.2.28 of chapter 22 that *"compensation measures in the form of improvements to the local PRow network should be provided"* and in paragraph 1.4.5 that *"IACC requires a commitment to provide compensation measures through improvements to the quality of public footpaths in the area consistent with IACC's wider recreation and access strategies..."*, it should be noted that the assessment of potential effects on public access and recreation in chapter B4 Public access and recreation) of the Environmental Statement [APP-069] does not identify any potential effects that require mitigation or compensation.

- 21.3.12 As part of the wider Wylfa Newydd DCO Project, contributions for IACC to undertake improvements to the PRow Network in proximity to the WNDA or the A5025 Highway Improvements, or along any section of the Wales Coast Path have been proposed as part of the Draft DCO s.106 Agreement (submitted at Deadline (3 December 2018)). Given the proximity of the Off-Site Power Station Facilities to the A5025, these funds could be used by the IACC on these PRow should IACC consider them to be a priority.

Assessment of residential views

- 21.3.13 In relation to IACC's statement in paragraph 1.4.4 of chapter 22 that *"the manner in which residential visual receptors in a settlement or community are grouped ignores the variations in baseline conditions, in the magnitude of change and hence upon the significance of residual effects that are likely to be sustained between residential receptors are missed"*, it should be noted that the various effects on receptors within the group are considered within the assessment of community views.

- 21.3.14 Mitigation has been proposed in accordance with the design principles to respond to significant effects where practicable. For example, a number of design principles in the Design and Access Statement – Volume 3 Associate Developments and Off-Site Power Station Facilities (Part 1 of 2) (Revision 2.0) require building design and layout on the Off-Site Power Station Facilities to seek to reduce effects on nearby receptors to the extent possible (e.g. design principle 3.4.9 states *"Buildings will be positioned, designed, and orientated to*

reduce their effects on the surrounding areas as far as practicable within operational requirements”).

21.3.15 In paragraph 1.4.4 of chapter 22, IACC states that it “*considers that an assessment of effects upon individual residential properties is necessary to properly inform the consideration of effects and necessity or otherwise of further mitigation...*”.

21.3.16 As stated in the methodology in Chapter B10 Landscape and visual of the Environmental Statement [APP-075], table B10-4 Key issues raised through Scoping, “*Visual effects on views from individual private residential properties are not assessed ... Instead, the effects on the visual amenity of local communities has been assessed. This approach was set out in the methodology document provided to the IACC and discussed during the stakeholder meeting on LVIA methodology held on 1 April 2016 where the IACC expressed support for a community views approach to the Assessment*”. The assessment of visual effects in Chapter E10 - Landscape and visual of the Environmental Statement [APP-248] and appendix E10-3 of the Environmental Statement [APP-259] has been aligned with this approach.

Retention of boundary vegetation

21.3.17 In relation to the IACC's statement in paragraph 1.2.13 of chapter 22 that “*opportunities to mitigate further the residual impacts of the development would include for the retention of more of the existing mature boundary vegetation as this may reduce these short-term effects further*”, and in paragraph 1.4.5 that changes are “*required to the submitted landscape scheme to include the retention of more exiting vegetation...*”, it should be noted that the site supports limited vegetation and the illustrative landscape design has retained existing vegetation where practicable, given operational constraints. The existing hedge along the southern boundary will be retained, in conjunction with proposed hedge planting and dense planting on this and other boundaries, where security requirements for a clear line of sight permit, as shown on figure 21 of the Design and Access Statement – Volume 3 – Associated developments and Off-Site Power Station Facilities (Part 1 of 2), Appendix 1-1 (Off-Site Power Station Facilities) [REP2-029]. The conifer tree belt is proposed to be removed to provide space for the proposed wall and fence and a clear line of sight along the fence for security. These proposed works will be secured through the design principles.

Lighting effects

21.3.18 In relation to the IACC's statement in paragraph 1.2.14 of chapter 22 that “*the proposed lighting could also give rise to effects upon the adjacent AONB, as well as to local residents and ecological receptors...*” it should be noted that, as set out in the design principles, the proposed external lighting scheme would be carefully planned to minimise light spill onto adjacent and environmentally sensitive areas, watercourses, hedgerows and other habitats. In relation to visual receptors, section 3.4 of Design and Access Statement – Volume 3 – Associated developments and Off-Site Power Station Facilities

(Part 1 of 2), Appendix 1-1 (Off-Site Power Station Facilities) [REP2-029], it is also stated that *“Operational lighting will also be designed to control light spill, whilst providing safe levels for site use and security, to limit effects on night-time human viewers, for example local communities...”* and *“Measures such as restricting heights of lighting columns and using directional or down lights will be used where practicable.”* These factors will limit any associated effects on the AONB through the final detailed design.

Effects on Landscape Fabric

21.3.19 At paragraph 1.2.21 of chapter 22, IACC notes that it *“has identified a significant negative impact upon landscape fabric which is a receptor group that has not been considered by Horizon”*, and at paragraph 1.4.3 that *“with regard to Landscape receptors, there is no baseline survey or assessment of effects upon landscape fabric nor a detailed hard and soft landscape scheme”*.

21.3.20 NPS EN-1 is not prescriptive on how the landscape assessment should be done, neither does it state that the effects on landscape components and landscape character should be assessed separately. As explained in chapter E10 of the Environmental Statement [APP-248], the effects on constituent landscape elements such as trees, woodland or hedgerows would also have an effect on landscape character. As such the assessment of effects on landscape elements has been incorporated into the assessment of effects on landscape character, Appendix E10-2 of the Environmental Statement [APP-258] provides detailed assessment on the landscape fabric in relation to each landscape character receptor.

Monitoring impacts and reviewing mitigation

21.3.21 In relation to IACC's statement in paragraph 1.3.13 of chapter 22 that it *“therefore considers it necessary for the developer to monitor impacts and review the adequacy of the mitigation measures and to make adjustments as necessary”*, it should be noted that as set out in chapter E10 – Landscape and visual of the Environmental Statement [APP-248] Horizon has confirmed that *“additional mitigation measures would be implemented to address potential significant effects...”*.

21.3.22 Additional mitigation measures, as set out in table E10-3 of the chapter, include quarterly landscape site inspections for a five-year period, followed by annual inspection for second five-year period (total 10 years) in order to ensure landscaping has established appropriately. This has been secured through the Wylfa Newydd CoOP [REP2-031] which states that *“Horizon will continue the landscape site inspections commenced under the Off-site Power Station Facility Sub CoCP for the remaining duration of the original period (total 10 years)”*.

21.4 Ecology

21.4.1 IACC states that it considers that the terrestrial and freshwater ecology assessment lacks robustness but agrees with conclusion of a neutral effect

provided mitigation in the ES and recommended by IACC is adopted (paragraph 1.2.6, 1.3.11 and 1.4.2).

21.4.2 Horizon considers its assessment to be robust and notes IACC agrees generally with the conclusions of neutral effects on ecological receptors. The mitigation in the Environmental Statement is to be secured through the Wylfa Newydd CoCP [REP2-031] and the Off-site Power Station Facilities sub-CoCP [REP2-034]. These documents will be revised and submitted at Deadline 4 (17 January 2019).

21.4.3 IACC provides recommendations for a range of mitigation measures including:

- Pre-construction surveys should be carried out for bats (paragraph 1.2.7 and 1.2.8);
- The lighting scheme should be compatible with Bat Conservation Trust guidelines (paragraph 1.2.9 and 1.5.1);
- Precautionary working practices should be carried out for herpetofauna and Section 7 mammals (paragraph 1.2.9);
- Further detail is provided on the measures to be taken with regard to the effects of drainage/outfall construction on otter/water vole (paragraph 1.2.9);
- Method statements to ensure that works do not harm protected species (paragraphs 1.2.9 and 1.3.11);
- Appropriate mitigation measures to demonstrate the project would not have an adverse effect on water quality, riparian habitats and aquatic features (paragraph 1.3.20);
- Further information on the approach to mitigating construction effects upon habitats and species on and off site (paragraph 1.4.2);
- Preparation of an ecological method statement (paragraph 1.5.1); and
- Further detail on the mitigation of contamination (paragraph 1.5.1).

21.4.4 Horizon considers the bat assessment that has been undertaken is robust and that sufficient information has been provided to the decision-maker to enable it to conclude the potential for significant effects. The survey data used in the assessment shows that bat use is very limited and additional surveys would have been extremely unlikely to have shown any significant change in this situation. NRW have stated in paragraph 10.6.3 of their Written Representation [REP2-325]: “*NRW is satisfied that sufficient baseline information has been collected to inform the impact assessment for the protected species referred to above*” [i.e. bats; GCN; otter; water vole; Schedule 1 birds]. Pre-construction surveys have been specified and secured in the Off-site Power Station Facilities sub-CoCP [REP2-034]. As a result, no significant effects on bats will occur during operation and as such no offences will be committed. Horizon also undertook emergence surveys of building M3; however, these surveys returned negative results for the presence of roosting bats. Details of these surveys will be submitted at Deadline 3 (18 December 2018).

- 21.4.5 Regarding lighting, the Off-site Power Station Facilities sub-CoCP [REP2-034] states that the lighting used during construction will be designed to reduce light spill and limit the effects on habitats of most value to sensitive ecological receptors. This would include reference to BCT guidance. Horizon notes that there is an explicit design principle in the Design and Access Statement – Volume 3 [REP2-029], that requires operational lighting to minimise spill on sensitive ecological species (bats, water vole and otter) to the extent practicable within operational requirements) (refer to design principle 3.4.47).
- 21.4.6 Protection of sensitive habitats and species is secured through the provisions of the Wylfa Newydd CoCP [REP2-031] which include an Ecological Clerk of Works to supervise construction, including precautionary methods. Suitable mitigation for otter and water voles, and for the protection of the water environment and control of contamination, is also secured through the provisions of the Wylfa Newydd CoCP. It is Horizon's view that the Wylfa Newydd CoCP [REP2-031] and the Off-site Power Station Facilities sub-CoCP [REP2-034] contain the level of detail sought by IACC to ensure the above.

21.5 Hydrology and flooding

- 21.5.1 IACC notes that Horizon's Flood Consequence Assessment [APP-246] identifies risks with a surface water flowpath and with the depth/velocity of flood water on the A5025 at the site entrance, and through the site. IACC recognises that Horizon has a proposed design that would intercept any flood water noting that this would be confirmed via detailed design with the future development site potentially experiencing flood depths of 0.022m in the 0.01% event.
- 21.5.2 With respect to the site, the following points are made:
- IACC notes that the mitigation measures proposed would be reliant upon regular maintenance. A commitment to the undertaking of regular maintenance should be provided.
 - Furthermore, when undertaking the detailed design Horizon and IACC need to be assured that the pipes draining the 'cattle grid' feature for intercepting A5025 surface water are of an appropriate scale/capacity and this information should be provided to IACC prior to commencement of development.
 - Clarity is also sought as to whether the swale which would be connected to the feature would have pollution control valves to minimise the risk of it being a pollution pathway between the A5025 and the Afon Llanhyddlad.
- 21.5.3 Horizon acknowledges the comments made by IACC regarding reliance of the flood mitigation measures being reliant on regular maintenance. A commitment to maintenance of the swale within the Off-Site Power Station Facilities is made in paragraph 10.4.3 of the Wylfa Newydd CoOP [REP2-037], and this is further supported by a commitment to inspection and maintenance

of the drainage system (of all facilities) to ensure that they are operating effectively and to prevent pollution and flooding.

21.5.4 When undertaking the detailed design, Horizon will ensure that the design complies with the design principles relating to drainage in the Design and Access Statement - Volume 3 - [REP2-029], in particular:

- The drainage design will provide sustainable attenuation capacity to address increased surface water runoff rates and pollution interception risks arising as a result of the development (3.4.45);
- Surface water drainage and attenuation will be designed to maintain current runoff rates up to a 1 in 100-year storm event and will not increase the risk of off-site flooding (3.4.46); and
- A swale will be provided between the main part of the Off-Site Power Station Facilities and the area of additional car parking to safely convey or absorb surface water flows that may exceed the capacity of the road drainage system (3.4.53).

21.5.5 Horizon will provide sufficient information to IACC to provide necessary assurances on scale and capacity prior to commencement of the development; and in any event, these will be provided for as part of the detailed design submitted for approval.

21.5.6 The swale provides a means of maintaining existing flow paths through the site but does not create a new pathway for water to pass through the site. No pollution control valves are currently included in the design, as there are currently no existing pollution control valves on the existing pathways.

21.6 DCO requirements and planning obligations

Horizon's response to the DCO requirements sought by IACC

21.6.1 The Off-Site Power Station Facilities sub-CoCP [REP2-034] secures a range of Horizon's commitments for mitigating the construction related environmental effects of the Off-Site Power Station Facilities. Horizon considers that the management strategies in the sub-CoCP (along with the mitigation secured elsewhere in other control documents, including in the Wylfa Newydd CoCP [REP2-031]) contain sufficient detail to secure the mitigation required to appropriately mitigate the adverse environmental effects of the construction of the Off-Site Power Station Facilities, as identified and assessed in Volume E of the Environmental Statement [APP-239 and APP-265]. For this reason, a DCO requirement that a revised sub-CoCP must be submitted to IACC for approval is not necessary or justified.

21.6.2 Horizon continues to engage with IACC and other stakeholders on these matters, and engagement to date has led to additional detail being added to the CoCP and sub-CoCPs submitted at Deadline 2 [REP2-031 to REP2-036]. Horizon has also made further commitments, as noted in responses to the Examining Authority's First Written Questions [REP2-002] or in Deadline 3 responses, to add additional detail in the revised CoCP and sub-CoCPs to be

submitted at Deadline 4 (17 January 2019). Horizon acknowledges that further refinement of the CoCP and sub-CoCPs will occur throughout the course of the Examination.

21.6.3 In respect of the specific requests for requirements made by IACC in section 1.5 of chapter 22, either:

- These are addressed in topic specific above;
- Are responded to below; or
- Horizon is continuing to consider the request.

21.6.4 In respect of the second bullet, Horizon does not consider that additional requirements in respect of the below matters raised by IACC are needed, for the following reasons:

- **Ecological receptors:** Horizon considers sufficient measures to safeguard ecological receptors are provided in sections 11.1 and 11.2 of the Wylfa Newydd CoCP [REP2-031] (which applies to all sites). In respect of site lighting, section 4.5 of the CoCP already requires that the lighting used during construction of the Off-Site Power Station Facilities seeks to limit the effects on habitats of most value to sensitive ecological receptors. As noted above, this is also secured via a design principle in the Design and Access Statement.
- **Land contamination:** Section 9.3 of the Off-Site Power Station Facilities sub-CoCP [REP2-034] sets out the proposed mitigation for assessing, and if required remediating, any land contamination present at the site. At this stage, no further detail on the remediation measures that may be required can be provided as a ground investigation has yet to be completed. The Wylfa Newydd CoCP [REP2-031] will be updated at Deadline 4 (17 January 2019) to specify with greater clarity that the fundamental requirements of Soil Resource Plans, as set out within the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (Defra, 2009), will be fulfilled prior to construction.
- **Bat surveys:** The version of the Off-Site Power Station Facilities sub-CoCP submitted at Deadline 2 (4 December 2018) specifies and secures pre-construction bat surveys [REP2-034] (see section 11.5.1). Further, surveys of building M3 were completed in 2018, the results of which were negative in relation to building M3 being used as a bat roost. The results of this survey will be submitted at Deadline 3 (18 December 2018).
- **Drainage details:** Please see Horizon's response to Q4.0.84 [REP2-002] and above, which explains that detailed designs for the Off-Site Power Station Facilities will be submitted to IACC for approval, including in respect of drainage treatment.
- **Archaeological investigation:** Horizon does not agree that the implementation of an agreed scheme of archaeological investigation should be the subject of a DCO requirement, as this is covered by the

existing CoCP and sub-CoCP. Chapter 12 of the Wylfa Newydd CoCP and chapter 12 of the sub-CoCP require archaeological excavation and photographic survey for the Off-Site Power Station Facilities to be undertaken in accordance with a Written Scheme of Investigation which would be agreed with GAPS.

- **Detailed design:** In accordance with the Requirement OPSF2 (2), design proposals will be submitted for approval by IACC based on the parameters and parameter plan identified in Requirement OPSF3 and the design and landscaping principles relating to the Off-Site Power Station Facilities in the Design and Access Statement – Volume 3 – Associated Developments and Off-Site Power Station Facilities [REP2-029 and REP2-030].

Horizon's response to the planning obligations sought by IACC

- 21.6.5 In respect of paragraph 1.5.7 of chapter 22, Horizon does not agree an environmental fund is required; onsite planting and maintenance is secured in paragraph 11.2.1 of the relevant sub-CoCP.
- 21.6.6 Horizon notes that the draft DCO s.106 Agreement commits £300,000 to delivery of new and upgraded PRow including in the vicinity of the A5025 (which includes this site). The Draft DCO s.106 Agreement has been submitted at Deadline 3 (18 December 2018).

22 Local Impact Report – A5025 Off-line Highway Improvements

22.1 Introduction

- 22.1.1 Horizon has reviewed chapter 22: A5025 Off-line Highway Improvements of the IACC LIR. This section responds to the key issues in respect of the A5025 Off-Line Highway Improvement Works presented within that chapter, with reference to the corresponding paragraph numbers in the LIR chapter 22 where appropriate.
- 22.1.2 The key issues identified in this response are:
- Planning policy;
 - Landscape and visual impacts;
 - Historic environment;
 - Hydrology and groundwater;
 - Ecology; and
 - Development Consent Order (“DCO”) requirements and section 106 (“s106”) planning obligations.

22.2 Planning policy

- 22.2.1 National Policy Statement (“NPS”) EN-1 and NPS EN-6 remain important and relevant matters which should carry significant weight in the determination of nuclear energy NSIPs that will deploy after 2025. They continue to represent the primary policy basis for a decision made by the Secretary of State on this DCO application. Notwithstanding this, relevant local planning policy and guidance, including the Wylfa Newydd Supplementary Planning Guidance (2018) and the Anglesey and Gwynedd Joint Local Development Plan (2017), have been considered by Horizon in preparing the DCO application and in formulating this response.
- 22.2.2 Please refer to the Planning Statement [APP-406] for further detail in respect of the status of the NPSs and the planning policy considered by Horizon.
- 22.2.3 Part 3 of NPS EN-1 defines and sets out the need that exists for nationally significant energy infrastructure, including new nuclear power stations. Paragraph 3.1.1 states that the UK needs all the types of energy infrastructure covered by the NPS in order to achieve energy security at the same time as dramatically reducing greenhouse gas emissions. Paragraph 3.1.2 goes on to state that it is for industry to propose new energy infrastructure and that the UK Government does not consider it appropriate for planning policy to set targets for or limits on different technologies.
- 22.2.4 The urgency of the need for new electricity generating capacity is underlined by projections within EN-1 that indicate up to 22 gigawatts (“GW”) of existing capacity will close over the period to 2020 in part due to the Industrial

- Emissions Direction but also as a result of some power stations reaching the end of their operational lives (paragraph 3.3.7). In response to this, EN-1 identifies a minimum need for 59 GW of new generating capacity over the period to 2025 (paragraph 3.3.23). Please also refer to Appendix 11-2 of the Statement of Reasons [APP-032] which provides further evidence of the urgent need for new nuclear power.
- 22.2.5 Section 2.2 of EN-6 deals specifically with the need for new nuclear power stations. Paragraph 2.2.3 states that a failure to develop new nuclear power stations significantly earlier than the end of 2025 would increase the risk of the UK being locked into a higher carbon energy mix for a longer period of time than is consistent with the UK Government's ambitions to decarbonise electricity supply. As a result, it would become more difficult and expensive to meet the UK Government's targets for significant and urgent decarbonisation of the economy and enhanced security of supply (see Part 3 of EN-1).
- 22.2.6 The A5025 Off-line Highway Improvements form a key part of the Wylfa Newydd DCO Project and will be instrumental in not only delivering a safe and efficient project, but assisting Horizon to meet the need for new energy infrastructure identified in the NPSs. The A5025 Off-line Highway Improvements comprise new sections of road along the A5025 between Valley and the Power Station Site (the A5025 route corridor) to improve access and safety. The need for the improvements is agreed as set out in Site Selection Report, Volume 7 [APP-442].
- 22.2.7 Section 5 of NPS EN-1 sets out 'generic impacts' relevant to all energy NSIPs. This is followed by detailed guidance on a topic-by-topic basis to guide the applicants as well as the decision maker in their detailed approach to NSIPs, informing their design, assessment and mitigation. These are listed in table 3-2 in the Planning Statement [APP-406]. In addition to the generic impacts set out in NPS EN-1, NPS EN-6 sets out a list of "Nuclear Impacts" that are considered particularly relevant to the development of new nuclear power stations (paragraph 3.4.3, NPS EN-6). This is followed by detailed guidance on these topics informing their design, assessment and mitigation (paragraphs 3.6-3.12).
- 22.2.8 These Nuclear Impacts are:
- Flood risk;
 - Water quality and resources;
 - Coastal change;
 - Biodiversity and geological conservation;
 - Landscape and visual impacts;
 - Socio-economic; and
 - Human health and well-being.
- 22.2.9 The Wylfa Newydd DCO Project is assessed relative to the generic impacts and each of the Nuclear Impacts in the Planning Statement [APP-406],

including consideration of compliance with both national and local planning policy.

22.2.10 Paragraph 4.1.3 of NPS EN-1 states that in considering any proposed NSIP the decision maker should take into account:

- Its potential benefits, including its contribution to meeting the need for energy, in addition to its contribution to job creation and any long term or wider benefits; and
- Its potential adverse impacts, including any long term and cumulative adverse impacts as well as any measures to avoid, reduce or compensate for any adverse impacts.

22.2.11 In summary, the Wylfa Newydd DCO Project will deliver significant benefits including a major contribution to meeting the pressing, and increasing, need for nuclear power by 2035 and significant benefits to the local economy. Whilst potential adverse impacts arise from the Wylfa Newydd DCO Project subject to appropriate mitigation, it would not have impacts on the local or the wider area which are sufficient to override the overall presumption in favour, as to warrant refusal of the DCO. Please refer to the Planning Statement [APP-406] for more detail.

22.3 Landscape and visual impacts

22.3.1 The key issues raised by IACC in the LIR are as follows:

- Issue 1 – short-term landscape effects;
- Issue 2 – effects on the Isle of Anglesey Area of Outstanding Natural Beauty (AONB);
- Issue 3 – effects on the landscape fabric;
- Issue 4 – additional mitigation measures at Valley;
- Issue 5 – off-site planting at Valley;
- Issue 6 – Public Right of Way (PRoW) Improvements;
- Issue 7 – assessment of visual effects at section 3 Llanfachraeth;
- Issue 8 – off-site planting at Llanfachraeth;
- Issue 9 – on and off-site planting at Llanfaethlu;
- Issue 10 – assessment of visual effects at section 7 Cefn Coch;
- Issue 11 – off-site planting at Cefn Coch;
- Issue 12 – field boundary enhancement; and
- Issue 13 – gaps in information.

22.3.2 These are dealt with in turn below.

22.3.3 In respect of the A5025 Off-Line Highway Improvements, only illustrative landscape proposals have been provided as part of the DCO application. Horizon has made comments below as to how the various matters raised by IACC in the LIR are addressed in the illustrative Landscape Scheme drawings

in appendix G10-9 of the ES (Landscape Scheme) [APP-344] and replicated in volume 3 of the Design and Access Statement (Part 2 of 2) (appendix 1-5 A5025 Off-line Highway Improvements) [REP2-030]; however, it notes that there are also design principles that will secure these matters at the time that detailed designs are submitted for approval. Schedule 3 of the draft DCO [REP1-005], Requirement OH8 requires that the final detailed landscape design must be submitted to IACC for approval and this requirement will therefore allow IACC to ensure that the detailed design meets the principles set out in the Design and Access Statement – Volume - Associated Developments and Off-Site Power Station Facilities (Appendix 1-5 - A5025 Off-line Highway Improvements) [REP2-030] and delivers a design that accords with the illustrative landscape proposals shown in the Landscape Scheme drawings contained in appendix A of Appendix 1-5 -A5025 Off-line Highway Improvements.

Issue 1 – Short-term landscape effects.

- 22.3.4 In paragraph 1.2.15 of chapter 22, LIR IACC states that negative impacts on landscape receptors are likely to be significant in the short-term. This is the case for some landscape receptors but not for all. For example, short-term effects on the landscape character of the Isle of Anglesey AONB have been assessed as slight adverse and therefore not significant. This would be due to the localised nature of indirect effects along the boundary of the AONB and minimal physical changes to landscape components, which would result in a limited effect on the overall landscape character of the AONB.

Issue 2 – Effects on the Isle of Anglesey AONB

- 22.3.5 In paragraph 1.2.16 of chapter 22, LIR IACC states that there would be short-term significant effects on the AONB. In paragraph 1.2.21, IACC again states there would be negative (or significant) effects on the AONB in the short-term. As stated above in issue 1, short-term effects on the landscape character of the AONB are considered to be slight adverse and therefore 'not significant' within appendix G10-3 [APP-338].
- 22.3.6 In paragraph 1.2.21 of chapter 22, LIR IACC states that there would be no direct effects on the AONB. However, it should be noted that there would be direct effects associated with the construction of the A5025 Off-line Highway Improvements at section 3, as presented in appendix G10-3. These direct effects have been taken into account in the assessment of effects on the landscape character of the AONB.
- 22.3.7 Direct effects have now also been identified at section 5, which have not previously been discussed within appendix G10-3. Section 5 construction works would result in the loss of a group of trees and grass verge area within the lay-by on the existing A5025, east of Llanfaethlu. Loss of trees within the lay-by would be noticeable in the landscape during operation until year 15, when establishment of shrubs with intermittent trees along section 5 would restore vegetation lost during construction. However, effects on the AONB at

section 5 would be very localised and would not result in a change in the level of assessment predicted within appendix G10-3.

Issue 3 – Effects on the landscape fabric

- 22.3.8 In paragraph 1.2.19 of chapter 22, LIR IACC only disagrees with a few of the neutral impacts presented by Horizon but considers that there would be significant adverse effects on the landscape fabric during construction. The assessment of effects arising from the A5025 Off-line Highway Improvements on landscape elements has been incorporated into the assessment of effects on landscape character presented in Chapter G-10 – Landscape and visual of the Environmental Statement [APP-313] and appendix G10-3. Within this assessment, short and medium-term significant adverse effects on landscape character have been identified, the assessment of which considers effects on the landscape fabric. For example, within Local Landscape Character Area ("LLCA") 7 changes in field pattern, vegetation and tranquillity are described for both construction and operation year 1 and a moderate adverse effect is anticipated in both instances. This aligns with IACC's position on there being some negative impacts on the landscape fabric during construction and operation year 1.

Issue 4 – Additional mitigation measures at Valley

- 22.3.9 In paragraph 1.2.25 of chapter 22, LIR IACC requests the provision of two of the additional mitigation measures listed in table G10-9 within chapter G-10 to mitigate adverse visual effects for some receptors at Valley. These additional mitigation measures (reduction of light spill from, and the design of, the construction compound) have already been applied to the relevant visual receptors in Valley, as presented in the 'additional mitigation' column in appendix G10-4 [APP-339].

Issue 5 – Off-site planting at Valley

- 22.3.10 In paragraph 1.2.26 of chapter 22, LIR IACC discusses the provision of off-site planting along the boundary of properties at R4 Glyn Villa and Preswylfa and Z1 Valley cemetery. The tree and shrub planting proposed within the A5025 Landscape Scheme in appendix G10-9 [APP-344] would filter views of moving traffic and help integrate the A5025 Off-line Highway Improvements into the surrounding landscape at operation year 15, resulting in a slight adverse effect on views from R4 Glyn Villa and Preswylfa and Z1 Valley cemetery. It is therefore considered that adequate mitigation measures are already proposed, and off-site planting is not required.

Issue 6 – PRow Improvements

- 22.3.11 In paragraph 1.2.25 of chapter 22, LIR IACC requests the provision of compensation measures for footpaths 49/016/1, 49/016/2 and 49/009/1 involving footpath and signage improvements. Where signage is removed as part of the A5025 Off-line Highway Improvements, Horizon would provide replacements or improvements. It is not considered necessary to undertake

further improvements to these PRoW as they are beyond the boundary of the road improvements and there is no significant effect on these routes arising from the Wylfa Newydd DCO Project.

- 22.3.12 In paragraph 1.2.41 of chapter 22, LIR IACC requests further PRoW improvements as compensation and enhancement. Where PRoWs are to be temporarily diverted during construction, signage of these diversions would be provided. Where PRoWs link to sections of the A5025 that have been improved, or where there is a requirement for a permanent diversion, then new signage would be erected. Horizon acknowledged as part of its assessment that inaccessibility is not in itself a reason to devalue a PRoW as it does not necessarily imply a lack of desire to follow a route. As noted in other sections of this response, Horizon has proposed payments to IACC as part of the draft DCO s.106 agreement (submitted at Deadline 3) for improvements to the PRoW network close to the WNDA or along the A5025 corridor. This will support the aspirations set out in IACC's emerging Rights of Way Improvement Plan.

Issue 7 – Assessment of visual effects at section 3 Llanfachraeth

- 22.3.13 In paragraphs 1.2.28 and 1.2.29, IACC discusses where its assessment of visual effects for section 3 at Llanfachraeth differ to those presented in appendix G10-4 for operation year 1 and year 15. The levels of effect presented by Horizon is considered to be accurate as discussed below.
- 22.3.14 The effect on views experienced by residents at Parc Llynnon (R27) has been assessed as large adverse during operation year 1, as presented in appendix G10-4. It is not considered that there would be a very large adverse effect on views from these properties, as it is not anticipated that when the road is operational there would be a 'loss of views' or that the scheme would form a 'dominant discordant feature' rather than a 'major discordant feature' (refer to Chapter B10 – Landscape and visual of the Environmental Statement [APP-075] for methodology). Although views of the operational road would be close-range, traffic would be partially in cutting and further screening would be provided by the noise barrier. It is acknowledged that the noise barrier could, subject to its design, form a visual detractor and this has been taken into account in the assessment. The assessment of large adverse demonstrates a very notable change in the view; an assessment of very large adverse is not considered appropriate.
- 22.3.15 Similarly, it is not considered that there would be a very large or large adverse effect on views from these properties during operation year 15, as the establishment of a hedgerow along the noise barrier and shrub blocks on the overbridge embankments would soften the appearance of these elements and reduce the effect on views. It is acknowledged that there would be a significant change in the character of views from these properties and that there would be a foreshortening of views. However, it is not considered that the scheme would form a 'dominant' or 'major discordant element in the view' (refer to Chapter B10 – Landscape and visual of the Environmental Statement [APP-

075]), as moving traffic on the road to the east would be predominantly screened from view by the cutting, noise barrier and hedgerow.

- 22.3.16 The effect on views experienced by residents at Bedo Farm (R30) has been assessed as moderate adverse during operation year 1, as presented in appendix G10-4 [APP-313]. It is not considered that there would be a very large or large adverse effect on views from this property, due to the nature of existing views. In the direction of the scheme existing views are restricted by farm outbuildings and a fence line. In addition, the existing A5025 and the residential edge of Llanfachraeth are apparent in views. It is therefore considered that the change in views would be less apparent than for a receptor with open views with less infrastructure in the view. For the same reasons, it is not considered that there would be a very large or large adverse effect on views from this property at operation year 15.
- 22.3.17 The effect on views experienced by residents at four properties to the east of Llanfachraeth (R31) has been assessed as slight adverse during operation year 1, as presented in appendix G10-4 [APP-313]. It is not considered that there would be a very large, large or moderate adverse effect on views from the representative property Bryn Farm, due to the nature of existing views from this property. Existing views in the direction of the scheme are restricted by vegetation along the property boundary and within adjacent fields. In addition, the existing A5025 and the residential edge of Llanfachraeth are apparent in views. It is therefore considered that the change in views would be less apparent than for a receptor with open views with less infrastructure in the view. Furthermore, the section of road corridor closest to the property would be in cutting, which would screen views of moving traffic. In addition, the scheme would not be significantly different in character to the existing A5025 and the residential edge of Llanfachraeth.
- 22.3.18 The effect on views experienced by residents at Pen-y-groes (R40) has been assessed as moderate adverse during operation year 1, as presented in appendix G10-4. It is not considered that there would be a very large or large adverse effect on views from this property, due to the nature of existing views. The property borders the existing A5025 and there are close-range views towards the carriageway and moving traffic. It is acknowledged in the assessment that section 3 would be more visible to this property than the existing road due to the angle of view. However, the existing view already comprises a carriageway and moving traffic therefore it is considered that the change in views would be less apparent than for a receptor with less infrastructure in the view. For the same reasons, it is not considered that there would be a very large or large adverse effect on views from this property at operation year 15.
- 22.3.19 The effect on views experienced by users of PRoW to the south-east of Llanfachraeth (PR8) has been assessed as slight adverse during operation year 15, as presented in appendix G10-4 [APP-313]. It is not considered that there would be a very large, large or moderate adverse effect on views from these PRoW, due to the nature of existing views. These PRoWs have close-range and/or elevated views towards the existing A5025 and residential edge of Llanfachraeth, as well as views towards overhead transmission lines. Even

with the establishment of mitigation vegetation, it is acknowledged in the assessment that section 3 would be more visible than the existing road. However, the existing view already comprises a carriageway and moving traffic therefore it is considered that the change in views would be less apparent than for a receptor with less infrastructure in the view.

- 22.3.20 The effect on views experienced by users of PRoW along the Afon Alaw (PR9) has been assessed as moderate adverse during operation year 15, as presented in appendix G10-4 [APP-313]. It is not considered that there would be a very large or large adverse effect on views from these PRoW, as the establishment of mitigation planting would soften the appearance of features such as the noise barrier and earthworks along section 3 and reduce the effect on views. It is acknowledged that there would be a significant change in the character of views from these PRoWs and that there would be a foreshortening of views. However, it is not considered that the scheme would form a 'dominant' or 'major discordant element in the view' (refer to Chapter B10 – Landscape and visual of the Environmental Statement [APP-075] for methodology), as moving traffic on the road would be predominantly screened from view by linear belts of trees and shrubs.
- 22.3.21 The effect on views experienced by users of PRoW to the south of Plas Ellen and Tan y Bryn (PR8) has been assessed as slight adverse during operation year 15, as presented in appendix G10-4. It is not considered that there would be a very large, large or moderate adverse effect on views from this PRoW, as the nature of existing views has been taken into account in the assessment. The existing footpath joins the existing A5025 north of Llanfachraeth where there are close-range views towards the carriageway and moving traffic. Even with the establishment of mitigation vegetation, it is acknowledged in the assessment that section 3 would be more visible to this PRoW than the existing road due to the overall highway corridor appearing wider. However, the existing view comprises a carriageway and moving traffic therefore it is considered that the change in views would be less apparent than for a receptor with less infrastructure in the view. In addition, a greater proportion of the diverted route would have views filtered by existing vegetation along the minor road to Llanfigael compared to the existing footpath, where views towards the existing A5025 are relatively open.
- 22.3.22 The effect on views experienced by users of the PRoW south of Dronwy (PR14) has been assessed as neutral during operation year 15, as presented in appendix G10-4 [APP-313]. It is not considered that there would be an adverse effect on views, as section 3 is unlikely to appear dissimilar to the existing A5025. This PRoW has views east towards the existing A5025, with views south-east partially obscured by buildings at Penyrorsedd and intervening landform. The combination of section 3 and the existing A5025 carriageway may appear slightly wider in the landscape. However, this is unlikely to be discernible at a distance of 400m and would not appear out of character in a view already comprising road infrastructure.

Issue 8 – Off-site planting at Llanfachraeth

- 22.3.23 In paragraphs 1.2.30 and 1.2.31 of chapter 22, LIR IACC requests the provision of off-site planting to further mitigate local impacts. Horizon considers on-site mitigation to be more effective, as it is likely to reduce effects for a larger number of visual receptors. The indicative tree and shrub planting proposed at section 3 within the A5025 Landscape Scheme in appendix G10-9 [APP-34] would filter views of moving traffic and help integrate the A5025 Off-line Highway Improvements into the surrounding landscape at operation year 15, resulting in a slight adverse or neutral effect on views from the majority of receptors. Where moderate adverse effects remain, it is unlikely that additional off-site planting would reduce effects to 'not significant' for the reasons described below. It is therefore considered that adequate mitigation measures are already proposed. Notwithstanding this, please note, as previously stated, that Schedule 3 of the draft DCO [REP2-020], Requirement OH8 requires that the final detailed landscape design must be submitted to IACC for approval. This requirement will therefore allow IACC to ensure that the detailed design meets the principles set out in the Design and Access Statement – Volume 3 – Associated Developments and Off-Site Power Station Facilities (Part 2 of 2) (Appendix 1-5 - A5025 Off-line Highway Improvements) [REP2-030] and delivers appropriate mitigation.
- 22.3.24 For residents at R24, R25, R27 and R36, a moderate adverse effect would remain at operation year 15, as the character of views would change from one with few visual detractors to one with new road infrastructure. There are few existing field boundaries between these receptors and section 3 and planting along the property boundaries is not considered appropriate, as complete enclosure and foreshortening of views is also likely to obscure views over the landscape.
- 22.3.25 For residents at Bedo Farm (R30), a moderate adverse effect would remain at operation year 15 due to the proximity of section 3 compared to the existing A5025. The provision of a hedgerow with stone wall along the eastern boundary of section 3 is considered more in keeping with the landscape character than a tree and shrub belt along section 3 or the property boundary, which is likely to foreshorten views from the property and obscure views over adjacent fields and towards vegetation along the Afon Alaw. In addition, linear tree and shrub belts on the embankments at the viaduct are considered appropriate as they would help to soften views towards these features.
- 22.3.26 For residents at Plas Ellen and Tan y Bryn (R33), a moderate adverse effect would remain at operation year 15 due to the elevated position of the properties and the angle of the view. Additional planting along the southern side of the minor road to Llanfigael is unlikely to reduce effects on views, as residents would have views over this vegetation towards section 3.
- 22.3.27 For residents at Pen-y-groes (R40), a moderate adverse effect would remain at operation year 15 as both carriageways of the existing A5025 and section 3 would be visible, which in combination would appear as a wider road corridor. Additional planting along section 3 is unlikely to reduce effects on views as there would still be open views along each carriageway due to the

angle of view. In addition, planting along the property boundary is not considered appropriate, as complete enclosure and foreshortening of views is also likely to obscure views over the landscape.

- 22.3.28 A moderate adverse effect would remain on users of PRoW at PR11 and the local road between Llanfachraeth and Llanfigael at operation year 15, as section 3 would cross each of these routes and receptors would have close-range views of road infrastructure and moving traffic. It is not feasible to provide additional mitigation planting where the routes are crossed.
- 22.3.29 A moderate adverse effect would remain on users of PRoW at PR9 at operation year 15, as the character of views would significantly change from one with few visual detractors to one with new road infrastructure. In addition, it is not feasible to provide additional mitigation planting where the route is crossed, resulting in close-range views towards the viaduct.
- 22.3.30 IACC specifically mentions views from the AONB, Tyn Ffynnon (R23) and footpath 27/012/1 east of Pen yr orsedd (PR13) in paragraph 1.2.31. As identified on figures G10-23 and G10-24 [APP-353 and APP-354], the visual effects on all visual receptors located within the AONB (which is to the west of the existing A5025) have been assessed as experiencing effects of slight adverse, neutral or slight beneficial by operation year 15. In addition, the visual effects on residents at Tyn Ffynnon (R23) and users of footpath 27/012/1 east of Pen yr orsedd (PR13) have been assessed as experiencing effects of slight adverse by operation year 15. Since no significant effects are predicted in views from the AONB, it is therefore considered that adequate mitigation measures are already proposed and off-site planting is not required.

Issue 9 – On and off-site planting at Llanfaethlu

- 22.3.31 In paragraph 1.2.33 of chapter 22, LIR IACC requests the provision of additional on-site planting near the section 5 junction with the former A5025 to further mitigate local impacts. Within the A5025 Landscape Scheme in appendix G10-9 [APP-344], shrubs with intermittent trees are already proposed to the north of this junction to help filter views of traffic from R56 Rhos-ty-mawr. Section 5 is in cutting to the east of this property and moving traffic would be predominantly screened. However, adverse effects on views would remain due to the presence of section 5 within previously undeveloped views east, and the elevated position of the property. Additional planting is unlikely to reduce these effects and would result in a foreshortening of views, which was deliberately avoided as there are long-range views towards Snowdonia. It is therefore considered that adequate mitigation measures are proposed.
- 22.3.32 In paragraph 1.2.34 of chapter 22, LIR IACC suggests the provision of off-site planting along field boundaries near Cae'r Bryniau and the Llanfaethlu to Llanddeusant road. On-site mitigation is considered to be more effective, as it is likely to reduce effects for a larger number of visual receptors. In addition, the tree and shrub planting proposed within the A5025 Landscape Scheme in appendix G10-9 [APP-344] is considered appropriate and in keeping with landscape character. The planting would filter views of moving traffic and help

integrate the A5025 Off-line Highway Improvements into the surrounding landscape at operation year 15, resulting in a slight adverse effect on views from R53 Cae'r Bryniau and T4 Local road: Llanfaethlu to Llanddeusant. Existing hedgerow boundaries between R53 Cae'r Bryniau and PR18 and at the western end of T4 Local road: Llanfaethlu to Llanddeusant are relatively dense and already provide some filtering of views. Thicker or taller vegetation belts to provide additional screening are likely to appear out of character in the landscape, which is relatively open in this location. It is therefore considered that appropriate mitigation measures are proposed.

Issue 10 – Assessment of visual effects at section 7 Cefn Coch

- 22.3.33 In paragraphs 1.2.36 and 1.2.37 of chapter 22, LIR IACC discusses where its assessment of visual effects arising from section 7 at Cefn Coch differs to that presented in appendix G10-4 [APP-339] for operation year 1 (although IACC refer to construction effects, it is assumed that this comment refers to effects during operation year 1) and operation year 15. The levels of effect presented by Horizon is considered to be accurate as discussed below.
- 22.3.34 The effect on views experienced by residents at Pen y groes (R79) has been assessed as slight adverse during operation year 1, as presented in appendix G10-4 [APP-339]. It is not considered that there would be a very large, large or moderate adverse effect on views from this property, due to the nature of existing views. There are elevated views from this property over the adjacent countryside towards Mynydd y Garn and the A5025 is visible directly below but does not form a dominant feature due to the elevated position of the building. Section 7 would run in close parallel to the A5025 and would also not form a dominant feature in the view due to the elevated position of the building. It is acknowledged that the combination of section 7 and the existing A5025 would appear as a wider corridor; however, it is not considered that this would give rise to effects greater than slight adverse. For the same reasons, it is not considered that there would be a very large, large or moderate adverse effect on views from this property at operation year 15.
- 22.3.35 The effect on views experienced by residents at The White House (R80) and Rhandir (R87) and users of footpath 18/018/1 near The White House (R23) has been assessed as slight adverse during operation year 1, as presented in appendix G10-4 [APP-339]. It is not considered that there would be a very large, large or moderate adverse effect on views from these receptors, as the nature of existing views has been taken into account in the assessment. The properties and footpath border the existing A5025 and there are close-range views towards the carriageway and moving traffic. It is acknowledged in the assessment that the combination of section 7 and the existing A5025 would appear as a wider corridor and that there would be views towards attenuation ponds. However, views of moving traffic would be partially screened by the cutting along section 7. In addition, the existing view already comprises a carriageway and moving traffic, therefore it is considered that the change in views would be less apparent than for a receptor with less infrastructure in the view. For the same reasons, it is not considered that there would be a very

large, large or moderate adverse effect on views experienced by these receptors at operation year 15.

Issue 11 – Off-site planting at Cefn Coch

22.3.36 In paragraphs 1.2.39 and 1.2.40 of chapter 22, LIR IACC requests the provision of off-site planting along field boundaries and within the remnant fields to the east of section 7 to further reduce adverse effects on views from receptors such as Pen y groes (R79). Horizon considers on-site mitigation will be more effective, as it is likely to reduce effects for a larger number of visual receptors. In addition, the tree and shrub planting proposed within the A5025 Landscape Scheme in appendix G10-9 [APP-344] would filter views of moving traffic and help integrate the A5025 Off-line Highway Improvements into the surrounding landscape at operation year 15, resulting in a slight adverse or neutral effect on views from all receptors except R76 Tyn Felin. Additional planting is unlikely to reduce effects on views from this property due to the presence of section 7 within previously undeveloped views, and a foreshortening of views due to the road embankments. It is therefore considered that adequate mitigation measures are already proposed.

Issue 12 – Field boundary enhancement

22.3.37 In paragraphs 1.2.41 and 1.2.42 of chapter 22, LIR IACC request the provision of field boundary enhancement, in particular relating to cloddiau and LLCAs 11, 12 and 21. All effects on landscape character arising from the A5025 Off-line Highway Improvements, including on designations such as the AONB, reduce to slight adverse or neutral by operation year 15 therefore further off-site mitigation is not considered appropriate.

22.3.38 Throughout issues 1 to 11 above, it has been noted that the mitigation measures proposed within the A5025 Landscape Scheme in appendix G10-9 [APP-344] reduce effects on views arising from the A5025 Off-line Highway Improvements to slight adverse or neutral for most visual receptors. Where adverse effects remain at moderate or, it has been explained why this is the case. The conclusion is that the provision of additional mitigation is unlikely to reduce these visual effects further due to the degree of change in existing views, the proximity of the scheme and the openness and/or elevation of views. It is therefore considered that adequate mitigation measures are already proposed.

Issue 13 – Gaps in information

22.3.39 In paragraph 1.4.7 of chapter 22, LIR IACC requests that further tree survey information is provided for the Power Station Access Road Junction. This area lies within the Order Limits boundary for the Wylfa Newydd Development Area [APP-009]. A tree survey covering the site of the Power Station Access Road Junction within the Wylfa Newydd Development Area is therefore provided in appendix C of part 2 of the Landscape and Habitat Management Strategy [APP-425]. The tree survey indicates that woody vegetation in this area is

limited to short linear tree groups along the north of the existing A5025 and a field boundary perpendicular to the road.

- 22.3.40 In paragraph 1.4.7 of chapter 22, LIR IACC queries the age of the baseline information presented on figures D9-03 and D9-10 [APP-237 and APP-238] covering Phase 1 Habitat Survey information and the presence of ecological habitats within the Wylfa Newydd Development Area. It is therefore confirmed that additional survey work was undertaken in 2017 and 2018 to verify the baseline information and it was concluded that nothing significant had changed with regard to vegetation and field boundaries.
- 22.3.41 In paragraph 1.4.7 of chapter 22, LIR IACC queries the loss of a 'clawdd' at the Power Station Access Road Junction as a hedgerow and stone wall are shown on figures D9-03 and D9-10. It should be noted that the location of the clawdd assessed as requiring partial removal in appendix G10-3 [APP-338] is along a field boundary perpendicular to the existing A5025. This has been shown as a wall on figure D9-03 as there is no Phase 1 Habitat Survey code for cloddiau. These features have also been represented on figures G9-11 to G9-16 [APP-353 and APP-354] as stone walls. It should also be noted that figure D9-10 does not show a hedgerow along this clawdd field boundary.
- 22.3.42 In paragraphs 1.4.8 and 1.4.10 of chapter 22, LIR IACC requests a survey of cloddiau field boundaries along the A5025, and details of cloddiau and earth bank removal to be shown within the site clearance information for the A5025 Off-line Highway Improvements. In paragraph 1.4.9, IACC also requests that the A5025 Off-line Highway Improvements are shown as a pale outline on figures G9-11 to G9-16 [APP-353 and APP-354] to improve readability of field boundaries and vegetation. The Proposed Site Clearance Plans for sections 1, 3, 5, 7 and 9 of the A5025 Off-line Highway Improvements [APP-019 to APP-022, APP-015] provide information on boundary features (including earth banks) and vegetation to be removed. This information is based on a topographical survey. It is therefore considered that a further survey of field boundaries is not required, as the information is already included on the site clearance plans. In addition, it is not considered necessary to update figures G9-11 to G9-16, as details of field boundary and vegetation removal are shown on the site clearance plans
- 22.3.43 In paragraph 1.4.11, IACC requests alterations to an Important Hedgerow shown for removal on the Proposed Site Clearance Plans for section 3 of the A5025 Off-line Highway Improvements. These plans are based on a topographical survey and identify the boundary south of IH306 as a stone wall. In addition, the Hedgerow Survey Results drawing MMD-320831-L-DR-XX-3462 within appendix G9-6 [APP-330] does not identify an Important Hedgerow south of IH306. IACC also requests alterations to an Important Hedgerow shown for removal on the Proposed Site Clearance Plans for section 5. These plans are based on a topographical survey and identify the boundary west of the existing A5025 and north-west of IH509 as a stone wall with a timber fence. In addition, the Hedgerow Survey Results drawing MMD-320831-L-DR-XX-3463 within appendix G9-6 does not identify an Important Hedgerow along this boundary.

- 22.3.44 In paragraph 1.4.12 of chapter 22, LIR IACC requests clarification on which field boundaries and vegetation shown within the A5025 Landscape Scheme in appendix G10-9 [APP-344] are to be retained. Horizon confirms that IACC are correct in their assumption that where these features are shown in grey, they would not be affected by the works. Where shown in green or brown, these features are within the Order Limits and would be retained, as noted in the key.
- 22.3.45 In paragraphs 1.4.13 and 1.4.15 of chapter 22, LIR IACC requests clarification on whether the slackening of earthwork slopes at section 3 and 5 has already been accommodated within the design of the A5025 Off-line Highway Improvements or whether this is an additional mitigation measure. Horizon confirms that the slackening of earthworks slopes is included within the design, as shown on the detailed plans for sections 3 and 5.
- 22.3.46 In paragraph 1.4.16 of chapter 22, LIR IACC suggests that cloddiau or earth bank boundaries may be more suitable in some locations along the A5025 Off-line Highway Improvements than the boundaries proposed within the A5025 Landscape Scheme in appendix G10-9 [APP-344]. Field boundaries in proximity to the A5025 Off-line Highway Improvements are predominantly hedgerows, stone walls and/or timber post and wire fences, as illustrated on Proposed Site Clearance Plans for sections 1, 3, 5, 7 and 9 of the A5025 Off-line Highway Improvements [APP-019 to APP-022, APP-015]. Very few existing field boundaries were identified as earth banks on the topographical survey. The provision of hedgerows and stone walls for new boundaries is therefore considered most appropriate because it is in keeping with local landscape character, and cloddiau and earth banks are therefore not proposed. In light of this, updates to the A5025 Landscape Scheme in appendix G10-9 and the A5025 Off-line Highway Improvements Boundary Details drawing [APP-022] requested by IACC in paragraphs 1.4.17 and 1.4.18 are not considered necessary.
- 22.3.47 In paragraph 1.4.17 of chapter 22, LIR IACC requests that details of access routes and gates to severed parcels of land are added to the A5025 Landscape Scheme in appendix G10-9 and the detailed plans for the A5025 Off-line Highway Improvements. However, these details are already shown on the drawings; for example, within Inset A on figure 1 of appendix G10-9 a field access and gate are shown to the east of section 1.
- 22.3.48 In paragraph 1.4.19 of chapter 22, LIR IACC requests that a five-year maintenance strategy is undertaken for hard and soft landscaping rather than a three-year strategy. This request is currently being reviewed and an update will be provided to the Examining Authority.

22.4 Historic environment

- 22.4.1 IACC has identified that Capel Soar Standing Stone (Asset 146) is visible from the current A5025 and that Horizon should identify potential compensation measures which could include an information board or similar at an appropriate location.

- 22.4.2 In addition, the draft DCO s.106 agreement provides for an 'Interpretation Board Contribution' appropriate location, Horizon is content to improve, supplement or replace the existing interpretation boards at the Capel Soar Standing Stone, Trefignath Burial Chamber, and Ty Mawr Standing Stone.

22.5 Hydrology and groundwater

- 22.5.1 The key issues raised by IACC are as follows:

- Flood risk at Section 3 (Afon Alaw viaduct);
- Private Water Supplies;
- Afon Cafnan natural bedrock cascade; and
- Drainage of road embankments.

- 22.5.2 These are dealt with in turn below and on the following pages.

Flood risk at Section 3 (Afon Alaw viaduct)

- 22.5.3 IACC states that it has significant concerns regarding potential flood risk impacts at the unnamed residential property at section 3 (Afon Alaw viaduct). Furthermore, that detailed design will be able to prevent the predicted minor increase in flood risk but IACC would wish to understand the fall-back position should such design prove physically/financially infeasible.
- 22.5.4 IACC has incorrectly interpreted the conclusions of the FCA for the A5025 Off-line Highway Improvements [APP-323].
- 22.5.5 For tidal only flooding, Table G8-01.16 of the FCA shows that there is no measurable change to the simulated water levels at the unnamed residential property relative to baseline simulated water levels presented in Table G8-01.15 of the FCA and this is confirmed in paragraph 6.3.9 of the FCA.
- 22.5.6 For combined tidal and fluvial flooding, Table G8-01.17 of the FCA shows that there is a small reduction in the simulated water levels at the unnamed residential property relative to baseline simulated water levels and this is confirmed in paragraph 6.3.11 of the FCA.
- 22.5.7 For fluvial only flooding, Table G8-01.19 of the FCA shows that there is no measurable change to the simulated water levels at the unnamed residential property relative to baseline simulated water levels presented in Table G8-01.18 of the FCA and this is confirmed in paragraph 6.3.20 of the FCA.
- 22.5.8 Paragraph 6.3.26 of the FCA indicates the same outcomes for pluvial sources of flooding.

Private Water Supplies

- 22.5.9 IACC states that further detail is required in respect of potential impacts upon private water supplies (PWS). IACC has concerns that the assessment as presented includes for assumptions which are inconsistent and lacking in detail. Furthermore, that no site visits appear to have been undertaken with few if any attempts to gather additional information. IACC comments that

Horizon's ground investigation identified discontinuous thin aquifer horizons with low storage and IACC considers that this therefore means that PWS are potentially vulnerable to local changes which may affect their catchment. IACC states that a better understanding of PWS/well use, construction, abstraction quantity and purpose should be provided rather than reliance on monitoring of one PWS at Erw Goch.

22.5.10 Horizon does not agree that the assessment assumptions are inconsistent and lacking in detail. Also, Chapter G8 - Surface water and groundwater of the Environmental Statement [APP-311] explicitly states that none of the wells were visited as part of this assessment, which is typical at this stage where PWS are assessed as to whether there is a potential that they could be at risk.

22.5.11 Under the Private Water Supplies (Wales) Regulations 2010, IACC as the local authority has a duty to monitor private supplies and to make and maintain records for every water supply in its area used for potable purposes. Horizon applied to IACC for identification of any PWS held on its records within the groundwater study area which covered the development sites and a buffer distance of 500m in all directions. IACC identified 5 PWS within 500 m of the A5025 Off-line Highway Improvements together with their location and usage but did not give details of construction. These are rarely available for PWS. All data received from IACC under the Regulations were presented. NRW were also requested for information on PWS but confirmed that they did not hold any information on PWS.

22.5.12 In addition, large scale OS maps were searched for water features and small wells which could potentially be used for PWS but not maintained on IACC records. A further 28 well features were identified. Although none of these were on the IACC records, and are likely therefore to have been replaced by mains supply or used for livestock or irrigation, a precautionary approach was taken which assumed that some of these abstractions could be actively used for private water supply purposes. Their location is presented in Figure G8-2 (App-353).

22.5.13 A two stage risk assessment for each of the five identified PWS and the 28 additional PWS was undertaken.

22.5.14 The risk assessment considered issues such as:

- Exact distance from the development;
- The activities and changes at the proximal development to each potential PWS including the absence of any dewatering associated with the scheme;
- The likely hydrogeology (whether up gradient or down hydraulic gradient from the works, likely limited nature of groundwater flow paths, typical recharge area/zone of influence for such small residential abstraction);
- The presence of watercourses which may have an influence of watercourses on the PWS; and

- The geology and presence of hills, valleys, field drains, tracks and roads separating the wells from the development.

22.5.15 The first stage screening risk assessment concluded that 4 of these were potentially at risk – wells at Ty'n-y-Buarth, Bryn, Mountain View, Plas Uchaf just south of Llanfaethlu, Cefn Coch and Erw Goch. A more detailed risk assessment was carried out on these. Of these, only one was assessed as being at potential risk. This was the PWS at Erw Goch which is located 45m west of section 3, downgradient, of the embankment. As set out in the A5025 Off-line Highway Improvements sub-CoCP [App-420] there will be pre-construction monitoring at Erw Goch, which will include the characterisation details requested in addition to water levels and quality. The A5025 Off-line Highway Improvements sub-CoCP [REP2-036] will be revised where necessary and submitted during the Examination process to address stakeholder comments.

22.5.16 Although the assessment does not consider the wells at Ty'n-y-Buarth, Bryn, Mountain View, Plas Uchaf just south of Llanfaethlu and Cefn Coch likely to be affected, further consideration of whether this well should be included will be undertaken and the A5025 Off-line Highway Improvements sub-CoCP [REP2-036] may be revised accordingly and submitted during the Examination process.

Afon Cafnan natural bedrock cascade

22.5.17 IACC requires further information about the bedrock cascade as the suitability of the mitigation is unclear. IACC believes that Horizon needs to give consideration as to whether the feature is likely to be entirely removed (lost), or whether the extent of works can be adjusted to leave as much as possible of the feature intact. IACC requests more information to demonstrate whether recreation/mitigation is possible.

22.5.18 Horizon currently considers that there is likely to be a loss of part of the rock cascade, which is recognised to be of high sensitivity and hence the assessments presented within Chapter G8 - Surface water and groundwater of the Environmental Statement [APP-311] considers this to be an effect of moderate adverse significance. Table G8-8 of the Environmental Statement, which describes additional mitigation measures to be taken, states that Horizon will seek reduce the extent of the area that is likely to be damaged with the aim of ensuring no significant damage to the channel bed and river morphology. The detail of whether this is achievable and if so, how, is not yet available, hence the conclusions presented within the Environmental Statement.

Drainage of road embankments

22.5.19 IACC notes that the designs appear to show that in instances where only areas of new (steep) road embankments are drained, this passes direct to watercourses. IACC requests further information to understand whether this is assessed as being of no consequence in terms of runoff rates, or whether

allowances been made for pro-rata runoff rate reductions in the other attenuated sub-catchments).

22.5.20 In general, the area associated with embankments that drain directly to watercourses is considered very small relative to the catchment of any receiving watercourse. As indicated in Section 4.7 of the A5025 Off-line Highway Improvements FCA [APP-323], the drainage strategy for each section differs in response to the potential for impacts on flood risk, however, the underlying principle is that runoff from the development will be restricted to greenfield rates and attenuation will be provided for the 100 year return period storm with a 30% allowance for climate change. There are exceptions, such as in Section 1 where the provision of attenuation could increase flood risk elsewhere.

22.5.21 Designs have been submitted by Horizon for approval by IACC [APP-019 and 022]. Should any amendments be required these can be discussed and agreed accordingly.

22.6 Ecology

22.6.1 Horizon acknowledges that IACC is in general agreement with the conclusions made in the ecological assessment presented within Chapter G9 Terrestrial and Freshwater Ecology [APP-312] (see paragraphs 1.2.5 to 1.2.7 of the LIR). However, IACC does make a number of specific points with regard to how a number of receptors are assessed and these are addressed as separate issues below.

22.6.2 IACC considers that the assessment upon bats is unsubstantiated with assessment of effects insufficient and conservation value understated with omissions in the baseline data (LIR, paragraph 1.2.8).

22.6.3 Horizon considers the assessment of bats as a grouped receptor to be robust in that sufficient information has been provided to the Examining Authority to enable it to conclude the potential for significant effects. Horizon note that in NRW's Written Representation, paragraph 10.6.3, it states that "*NRW is satisfied that sufficient baseline information has been collected to inform the impact assessment for the protected species referred to above [bats; GCN; otter; water vole; Schedule 1 birds]*". The survey data used in the assessment shows that bat use is generally low level and by common species, and additional surveys are considered to be unlikely to show any significant change in this situation. Effects such as increased traffic volume during operation, habitat loss and fragmentation, are assessed where relevant.

22.6.4 Horizon considers that the risks to bats have been avoided through the provision of embedded and good practice mitigation, and therefore the level of detail is proportionate to the likely effect and confidence in the success of the mitigation. Mitigation is secured through the Design and Access Statement - Volume 3 – Associated Developments and Off-Site Power Station Facilities (Part 2 of 2) [REP2-030], the Wylfa Newydd CoCP [REP2-031], and the A5025 Off-line Highway Improvements sub-CoCP [REP2-036].

- 22.6.5 IACC considers that the assessment of effects on otter is limited and, with regard to water vole, the conservation value of the species is too low with a lack of clarity as to what the effects on water vole are (LIR, paragraph 1.2.9).
- 22.6.6 Horizon considers that the assessment of effects on otters, detailed within Chapter G9 – Terrestrial and freshwater ecology of the Environmental Statement [APP-312], is robust and proportionate considering the widespread low level use of the area by this species and the limited areas where the proposed scheme would affect land used by otter. All of the watercourse crossings will allow free passage of otter, and the agricultural land use across the rest of the areas required by the highways improvements is such that the likelihood of otters using them is extremely low.
- 22.6.7 In relation to water vole, the value of a population relates to the population within the potential zone of influence of a project. It is considered that there are limited mechanisms for effecting water vole, and the limited evidence of water vole shows that, if present nearby, they would be in very small numbers. It is considered that the population potentially affected is of low value to the conservation of the species.
- 22.6.8 IACC requires clarification on the mitigation proposals for water vole, and certainty that NRW are content with the approach (LIR paragraphs 1.2.9 and 1.4.2).
- 22.6.9 Horizon consider that the embedded mitigation and the proposed approach set out in the A5025 Off-line Highway Improvements Protected and Legally Controlled Species Report [APP-334], and secured within the Wylfa Newydd CoCP [REP2-031], and the A5025 Off-line Highway Improvements sub-CoCP [REP2-036] is sufficiently robust to manage any risks with regard to water vole. It should be noted that Revised versions of both CoCP documents will be submitted at Deadline 4 (17 January 2019), although no revisions relate to the proposed water vole mitigation.
- 22.6.10 IACC does not agree with the scoping out from the assessment of badgers and other species/habitats that are of Principal Importance for biodiversity conservation (LIR paragraphs 1.2.10 and 1.2.12).
- 22.6.11 Horizon consider that the scoping out of receptors based on their likely absence within the study area or a lack of a pathway to effects has been completed robustly. This is set out both in the EIA Scoping Report [APP-060], as well as chapter G9 Terrestrial and freshwater ecology.
- 22.6.12 IACC considers that detailed Method Statements and measures for a number of species groups should form part of an updated sub-CoCP (LIR paras 1.2.9, 1.2.10, 1.2.12, 1.2.13, 1.3.16, 1.4.2 to 1.4.6).
- 22.6.13 Although the embedded and good practice mitigation sections within chapter G9 do not provide a reference for receptors which would benefit from each measure, the assessment text within the chapter does reference how specific measures would offset adverse effects on specific receptors. Where additional mitigation is proposed, this is detailed for each relevant receptor within the additional mitigation section and summary table.

- 22.6.14 Horizon consider that the proposed approach set out in the A5025 Off-line Highway Improvements Protected and Legally Controlled Species Report is sufficiently robust to manage any risks with regard to all species and species groups highlighted by IACC. The proposed approach set out in the A5025 Off-line Highway Improvements Protected and Legally Controlled Species Report [APP-334], and secured within the Wylfa Newydd CoCP [REP2-031], and the A5025 Off-line Highway Improvements sub-CoCP [REP2-036], provides all of the information that IACC would expect to see in the species Method Statements.
- 22.6.15 IACC considers that the survey data for great crested newt ("GCN") is out of date and does not agree with Horizon that effects upon GCN will be minor positive, considering it instead to be neutral. IACC also considers the requirement, or otherwise, for GCN mitigation at the Power Station Access Road Junction is not clearly set out and further information should be provided (LIR paragraphs 1.2.11 and 1.4.4).
- 22.6.16 Horizon considers that the baseline information presented within the A5025 Terrestrial Ecology Factual Report 2014-2016 [APP-326], and A5025 Route Improvement Contract EIA: Great Crested Newt Field Survey Results [APP-329], is sufficiently robust to enable the assessment presented in Chapter G9 – Terrestrial and freshwater ecology of the Environmental Statement [APP-312] to be accurate. Horizon notes that in NRW's Written Representation at paragraph 10.6.3 it states that "*NRW is satisfied that sufficient baseline information has been collected to inform the impact assessment for the protected species referred to above [bats; GCN; otter; water vole; Schedule 1 birds]*".
- 22.6.17 Justification for slight positive effects on GCN is the result of the enhanced habitat quality being provided being of greater quality and value to GCN compared to the current baseline. This is set out within chapter G9. The provisions of the draft European Protected Species Mitigation Licence with respect to GCN [APP-335], once granted, will ensure there is no detriment to the maintenance of the favourable conservation status of this species; the content and conclusions of the licence being supported by NRW.
- 22.6.18 Both the A5025 Off-line Highway Improvements Protected and Legally Controlled Species Report and the A5025 Draft Great Crested Newt Mitigation Licence provide detail of this mitigation strategy, and how Horizon will ensure no detriment to the maintenance of the favourable condition status of this species in its natural range. The Wylfa Newydd Code of Construction Practice provides the commitment to deliver the measures specific to GCN. There were no GCN recorded with 250m of the proposed power station access road as set out in para 9.5.89, therefore no effects predicted.

22.7 DCO requirements and planning obligations

Horizon's response to the DCO requirements sought by IACC

- 22.7.1 The A5025 Off-line Highway Improvements sub-CoCP [REP2-036] secures a range of Horizon's commitments for mitigating the construction-related

environmental effects of the A5025 Off-line Highway Improvements. Horizon considers that the management strategies in the sub-CoCP (along with the mitigation secured elsewhere in other control documents, including in the Wylfa Newydd CoCP [REP2-031]) contain sufficient detail to secure the mitigation required to appropriately mitigate the construction-related adverse environmental effects of the A5025 Off-line Highway Improvements, as identified and assessed in Volume G of the ES. For this reason, a DCO requirement that a revised sub-CoCP must be submitted to IACC for approval is not necessary or justified.

22.7.2 Horizon continues to engage with IACC and other stakeholders on these matters, and engagement to date has led to additional detail being added to the CoCP and sub-CoCPs submitted at Deadline 2 [REP2-031 to REP2-036]. Horizon has also made further commitments, as noted in responses to First Written Questions or in Deadline 3 responses, to add additional detail in the revised CoCP and sub-CoCPs to be submitted at Deadline 4 (17 January 2018). Horizon acknowledges that further refinement of the CoCP and sub-CoCPs will occur throughout the course of the Examination.

22.7.3 In respect of the specific requests for requirements made by IACC in section 1.5 of this LIR chapter, either:

- a) these are addressed in topic specific above;
- b) are responded to below; or
- c) Horizon is continuing to consider the request.

22.7.4 In respect of b), Horizon does not consider that additional requirements in respect of the below matters raised by IACC are needed, for the following reasons:

- **Ecological receptors:** Horizon considers sufficient measures to safeguard ecological receptors are provided in sections 11.1 and 11.2 of the Wylfa Newydd CoCP (which applies to all sites).
- **Access:** Access to/from residential properties, local businesses and local services and agricultural interests will be maintained throughout the construction period where possible, and by means of signed diversions where necessary. Horizon will provide replacement means of access where necessary (in cases where existing access cannot be maintained) through the modification of roads and junctions, and the re-use of existing sections of carriageway. This is already secured by Section 6.4 of the Wylfa Newydd CoCP [REP2-031].
- **Public rights of way (PRoW) improvements:** In respect of IACC's requests for improvements to various public rights of way (PRoWs), the second draft DCO section 106 agreement submitted at Deadline 3 provides for £150,000 payment on implementation to fund improvements to the PRoW network including:
 - creating new PRoW and upgrading existing PRoW;

- installing information/interpretation boards on or near the PRow Network which give information about the local area including its history and ecology;
- additional signage and directional signage for the PRow Network;
- additional signage for nature trails;
- and providing benches.

In addition, a commitment for £150,000 payment is paid for maintenance costs for the PRow networks. IACC could use these payments in order to implement its requested improvements.

- **PRow management strategy:** the Wylfa Newydd CoCP [REP2-031] and the A5025 Off-line Highway Improvements sub-CoCP [REP2-036] already include the public access management strategy (Section 6 of both documents) that will apply in respect of the management of existing rights of way which are likely to be temporarily and permanently affected by the A5025 Off-line Highway Improvements.
- **Invasive species:** The Biosecurity Risk Assessment & Method Statement required by section 11.2 of the Wylfa Newydd CoCP [REP2-031] already covers control of invasive species (at all sites including the Park and Ride), so no further specific requirement is needed.
- **Construction traffic:** Please note details regarding construction workforce travel arrangements, large vehicle controls, abnormal indivisible loads, works within the highway, road cleanliness and monitoring are outlined in section 5 of the Wylfa Newydd CoCP.
- **Shared use footway/cycleways:** IACC requests that the route of the shared use footway/cycleway in Section 5 of the A5025 Off-Line Highway Improvements is adjusted so that it crosses the A5025 no more than twice. However, the route as proposed would only cross the A5025 once in Section 5, as shown in [APP-022], therefore Horizon considers that this is not necessary. Further, IACC requests that the shared use footway/cycleway to the north of the Power Station Access Road junction is incorporated into the design. While Horizon has incorporated a shared use footway/cycleway within the Power Station Access Road junction, the section to the north is outside of the Order Limits, and is therefore not within the scope of the A5025 Off-Line Highway Improvements.
- **Lighting scheme:** Horizon is currently preparing a Lighting Strategy which will be incorporated into the relevant CoCPs and CoOPs that will be revised and submitted at Deadline 4 (17 January 2019). The strategy will, as far as reasonably practical in accordance with operational and security constraints, aim to minimise light pollution to mitigate effects on Dark Sky Reserve Status if granted.

- **Hard and Soft landscape elements:** Requirement OH8 already provides that A5025 Off-line Highway Improvements may not operate until plans and written details of the landscape design (including location species and planting density, finished ground levels and materials) have been submitted to IACC for approval.
- **Landscape surveys:** the Wylfa Newydd CoCP [REP2-031] at section 12.4 already requires historic landscape surveys, topographic and landscape survey and photographic surveys, which will be undertaken in accordance with relevant good practice guidance and Written Schemes of Investigation agreed with the Gwynedd Archaeological Planning Service. Horizon considers it is unnecessary for such surveys to be submitted for approval.
- **Planting in Section 3:** Additional planting in this section is not necessary because the tree and shrub planting blocks proposed, as illustrated within the A5025 Landscape Scheme in appendix G10-9 [APP-344], have been proposed to provide screening of key elements such as the new viaduct at section 3, and filtering of views towards the new noise barrier. Further tree and shrub blocks were considered along other parts of Section 3. However, it was considered that this may draw attention to the linear road corridor, as the landscape in proximity to the A5025 is open in character, with only isolated tree and shrub blocks present. It is therefore considered that the mitigation measures already proposed are appropriate
- **Hedgerows in Section 7:** The tree and shrub planting proposed within this section, as illustrated by the Landscape Scheme in appendix G10-9 [APP-344], would filter views of moving traffic and help integrate the A5025 Off-line Highway Improvements into the surrounding landscape at operation year 15, resulting in a slight adverse effect on views from R79 Pen y groes, R80 The White House, R87 Rhandir and PR23 18/018/1 Near The White House. Additional planting is unlikely to reduce effects on views from R76 Tyn Felin due to the presence of section 7 within previously undeveloped views, and a foreshortening of views. It is therefore considered that adequate mitigation measures are proposed.
- **Planting of local provenance:** Volume 3 of the Design and Access Statement already includes a design principle that planting will be of local provenance. It may not always be practical that these grown in a local nursery to acclimatise the plants to the local conditions prior to planting.
- **Screen planting:** The tree and shrub planting illustrated within the A5025 Landscape Scheme in appendix G10-9 [APP-344] is considered appropriate and in keeping with landscape character. Tree and shrub blocks have been proposed to provide screening of key elements such

as the new viaduct at section 3, and the roundabout at section 1. Further tree and shrub blocks to those shown within the A5025 Landscape Scheme were considered along other parts of the A5025 Off-line Highway Improvements. However, it was considered that further planting may draw attention to the linear road corridor, as the landscape in proximity to the A5025 Highway Improvements is relatively open in character, with only isolated tree and shrub blocks present. Regarding the AONB, tree and shrub planting illustrated within the A5025 Landscape Scheme in appendix G10-9 [APP-344] would help to integrate the A5025 Off-line Highway Improvements into the surrounding landscape at operation year 15, resulting in a neutral effect on the landscape character of the AONB. It is therefore considered that adequate mitigation measures are proposed.

- **Formal planting approaching Valley:** Figure 1 of the A5025 Landscape Scheme in appendix G10-9 illustrates the provision of individual tree and ornamental planting at the new roundabout. Volume 3 of the Design and Access Statement states that formal planting along the existing A5 route at Valley should be proposed to improve the sense of arrival into the village. This mitigation has been secured in a design principle in the Design and Access Statement (Volume 3) [REP2-029]. A tree avenue along the A5 was investigated at the design stage; however, it was concluded that the trees could not be positioned 5m away from the road edge in line with Design Manual for Roads and Bridges guidance. It is therefore considered that adequate mitigation measures are proposed.
- **Success of planting:** There is already provision in the draft Development Consent Order, Requirement OH8 (4) for replacement planting: any tree or shrub planted as part of an approved detailed design under subparagraph (1) that, within a period of five years after planting, is removed, dies or becomes, in the opinion of IACC, seriously damaged or diseased, must be replaced in the first available planting season with a specimen of the same species and size as that originally planted, unless otherwise approved by IACC. For this reason, Horizon does not consider any additional mitigation is required.

22.7.5 It should be noted, in terms of landscape and visual mitigation (general) and to secure relevant provisions set out above, that Requirement OH8 in Schedule 3 of the draft DCO [REP1-005] requires that the final detailed landscape design must be submitted to IACC for approval and this requirement will therefore allow IACC to ensure that the detailed design meets the principles set out in volume 3 of the Design and Access Statement (Part 2 of 2) (appendix 1-5 A5025 Off-line Highway Improvements) [APP-410] and deliver a design that aligns with the illustrative landscape proposals shown in the Landscape Scheme drawings contained in appendix A of appendix 1-5.

Horizon's response to the planning obligations sought by IACC

- 22.7.6 In respect of paragraph 1.6, Horizon does not agree an environmental fund is required to fund the offsite measures set out; many the matters referred to in the paragraph are sought in paragraph 1.5 of the chapter to be provided by way of updates to the relevant sub-COCP (for example rebuilding of stone walls, ecological mitigation, drainage mitigation, and control of INNS). As such the need for a 20-year fund to separately undertake off-site works and planting over and above the mitigation secured in the A5025 Off-line Highway Improvements sub-CoCP [REP2-036] (including as may be updated) is not considered necessary or proportionate. In respect of the specific items noted at paragraph 1.6.2(f), Horizon notes that the second draft s.106 agreement issued to IACC on 30 November 2018 commits £300,000 to delivery of new and upgraded PRoW; the purposes for which this sum could be expended could be expanded to refer to access. The purposes of the rural skills programme are not clear to Horizon however this is a matter which can be discussed between the parties as to whether it should form part of the jobs and skills implementation plan under discussion between Horizon and IACC.

23 Local Impact Report – Conclusion

23.1 Introduction

- 23.1.1 Horizon has reviewed chapter 23: Conclusion of the IACC LIR. This section responds to the key issues presented within that chapter with reference to the corresponding paragraph numbers in the LIR chapter and various control documents where appropriate.
- 23.1.2 Horizon has noted IACC's comments on mitigation and the concerns presented. Horizon has noted IACC's intention to produce a comparative mitigation route map.
- 23.1.3 As a response to each key thematic area of recommended mitigation, please see the table below. Horizon believes that most of these areas of mitigation have already been considered and mitigated adequately in the DCO application (via the control documents) and the draft DCO s.106 agreement, which has now been provided into the examination at Deadline 3.
- 23.1.4 The table is split into project wide mitigation followed by site specific mitigation.

Table 1-1 Key areas of mitigation and summary of current status

Key item of mitigation	Summary of current status of mitigation
ECONOMIC DEVELOPMENT	
Resisting displacement of the workforce especially in the care, hospitality and tourism sectors	Horizon is committed to a Jobs and Skills Implementation Plan (JSIP), (paragraph 2.1.4, section 2, Schedule 4 of the draft DCO s.106 agreement) for the duration of the construction and operation period. One of the key functions of the JSIP is to monitor the impact of the Project on the local labour market within the DCCZ including displacement and workforce planning in the tourism (including the food/hospitality sector), health and social care, education, construction, and service sectors. Moreover, the money allocated for the Skills Fund (a total fund of £10,000,000) can be released for Training and Employment Initiatives to support mitigation to offset any identified adverse effects of labour churn as a result of the Project (paragraph 4.1.7, section 2, Schedule 4 of the draft DCO s.106 agreement).
Assistance to the SME sector to bid for WN contracts	Horizon is committed to operating and maintaining the Supply Chain Portal in accordance with the Supply Chain Action Plan (paragraph 6.1-6.2, section 6, Schedule 4 of the draft DCO s.106 agreement). The Supply Chain Portal will be operated to enable Horizon to engage with the local supply chain, <u>including the SME sector</u>, (emphasis added) and maximise local employment opportunities by: • Identifying the project activities requiring supply contracts; • Outlining the minimal standards to be eligible for contracting; • Publicising invitations to tender to local eligible suppliers; • Enabling local suppliers to register their interest in supplying the Project and apply for available tender invitations; and • Facilitating engagement between Horizon and individual suppliers. The Supply Chain Action Plan will be attached to the second draft s.106 agreement. A meeting with stakeholders is anticipated to finalise the Supply Chain Action Plan shortly. Horizon is also proposing to fund two Economic Development Officers (paragraph 8.2-8.3, section 8, Schedule 8 of the second draft s.106 agreement) whose role will include: • Representing the Council and local businesses in engaging with Horizon's supply chain in respect of the Development;

Key item of mitigation	Summary of current status of mitigation
	• Liaising with potential inward investors and supply chain related businesses to identify barriers and opportunities to realising economic growth and/or benefits within the Council areas; • Monitoring the operation and effectiveness of the Supply Chain Portal.
Increase in local skills training to take advantage of local employment opportunities in construction, operation and outage phases of WN	Horizon is committed to the Skills Fund and the JSIP, both of which will allow local skills training to take place: meaning that local people can take advantage of employment opportunities. The money allocated for the Skills Fund can be released for Training and Employment Initiatives which could potentially support: • Training capacity related to key skills requirements needed on the Project; • Development of training courses related to key skill requirements; • Initiatives for upskilling of existing construction workers in the local area to enable them to access employment opportunities on the Project; • Educational activity focussed on STEM subject to promote skills and interest in the nuclear and construction industries (paragraph 4.1, section 4, Schedule 4, second draft s.106 agreement). It should be noted that outages are transient activities for all nuclear sites that required highly skilled and experienced workers for a short-period of time at each site. However, these activities are continuously occurring across the UK and the world, leading to suppliers basing personnel at a location which best supports the demand from multiple sites. Personnel are then mobilised to individual sites for each outage and provide a large financial benefit to the area for the duration of the outage: • The outage workforce can be expected to provide a large financial benefit to the local economy particularly the hospitality industry and local suppliers of consumables; • The contracts for maintenance and outage support have not yet been put in place and will be competitively let. This is likely to result in contracts with large companies that can carry the financial risk and have sufficient personnel to meet the requirements. The value of which, will need to be justified to investors. Putting constraints on these contracts which are in Horizon's supply chain prior to negotiating them is likely to adversely affect their cost and value; • Basing a large outage organisation at Anglesey would require a major movement of resources and facilities by suppliers which is unlikely to be economic for them.

Key item of mitigation	Summary of current status of mitigation
	- Investors will want to see long term service agreements in place with key suppliers in order to reduce the risk to their investment; - The two ABWRs at Wylfa will be the only ones in the UK. Hence, there will be areas where the necessary experience will be outside of the UK - although knowledge transfer is expected over time.
TOURISM	
Protection of the available workforce and accommodation needed to support the local tourism economy	This issue has three interconnected strands of mitigation measures for: - Resisting displacement; - Workforce accommodation; - Supporting the local tourism economy. Protection of the available workforce – Horizon is committed to resisting displacement – see response to ‘<i>Resisting displacement of the workforce especially in the care, hospitality and tourism sectors</i>’ set out in the Economic Development response above. Workforce Accommodation – the draft DCO s.106 agreement has 4 different types of accommodation payments secured within Schedule 5 – Worker Accommodation to mitigate potential significant effects in the accommodation sector: Accommodation Officers Contribution (a total of £760,000) for funding up to 3 accommodation officers during the Construction Period, who will: sit on the Workforce Accommodation Management Service (WAMS) Oversight Board, manage and deliver accommodation matters (such as monitoring) and liaise with Gwynedd Council and Conwy Council to ensure a collaborative approach to monitoring accommodation matters relating to the Project (paragraphs 3.2.1-3.2.4, section 3.2, Schedule 5 of the draft DCO s.106 agreement). Worker Accommodation (Annual) Contribution (£100,000 annually to IACC for a period of 6 years i.e. until the workforce starts reducing and capacity is released) towards the cost of: - Monitoring instances of homelessness and housing displacement;

Key item of mitigation	Summary of current status of mitigation
	- Establishing and operating community programmes assisting with managing housing demands and prevention of homelessness; - Monitoring accommodation enforcement issues within the KSA such as unlawfully sited caravans (paragraph 4.2.1-4.2.3, Section 4.2, Schedule 5 of the draft DCO s.106 Agreement). 3. Worker Accommodation (Capacity Enhancement) Contribution (a total of £10,000,000) towards initiatives to ensure adequate supply of local housing provision having regard to the Wylfa Newydd DCO Project including: - Undertaking interventions to stimulate supply of latent accommodation; - Providing new build permanent housing, including Affordable Housing; - Supporting the social-rented sector through the provision of assistance to existing tenants (including rehousing support); - Bringing empty homes back into use in the period in the lead up to year three in the Construction Period (paragraphs 5.2.1-5.2.4, section 5.2, Schedule 5 of the second draft s.106 agreement). This Capacity Enhancement fund will be released early: with 10% of the funds to be released prior to implementation, a substantial payment on the first anniversary of implementation, and the rest by the second anniversary of implementation. This will aid in tackling all potential significant effects on the accommodation sector. 4. Accommodation (Contingency) Fund (a total of £1,500,000) in the event of un-anticipated significant adverse effects (or forecast effects) on the accommodation sector within the KSA. This fund will be available to cover issues such as: an increase in homelessness; a lack of access to the private rental sector within the KSA or the need for an additional accommodation officer to monitor/manage the effects on accommodation sector (paragraph 7.1-7.2, section 5.2, Schedule 5 of the draft DCO s.106 agreement). It should be noted that Horizon's Site Campus (secured by the Phasing Strategy [APP-447]) is also an embedded mitigation for potential adverse effects on the accommodation sector. This Site Campus will deliver 4000 beds at the WNDA and will be built in phases. In respect of phasing, Horizon is promoting revisions to

Key item of mitigation	Summary of current status of mitigation
	the phasing strategy to provide clarity on the delivery of the site campus. This will commit Horizon to deliver Site Campus in the following three phases: • Phase 1 to deliver first 1,000 beds on or before Q8 post DCO grant; • Phase 2 to deliver 1,500 beds on or before Q15 (so that the total count of beds will be 2,500) • Phase 3 to deliver final 1,500 beds on or before Q18 (so that the total count of beds will be 4,000). This will be secured in the revised Phasing Strategy proposed to be submitted at Deadline 4. Supporting the local tourism economy - Horizon is committed to promoting the local tourism economy and has therefore committed to the following funds in the second draft s.106 agreement: 1. Tourism Officer Contribution (£40,000 annually) to fund a Tourism Officer for the duration of the Construction Period (section 1, Schedule 3 of the draft DCO s.106 agreement). 2. A Tourism Annual Contribution (£100,000 annually) for: • Safeguarding and enhancing the image and perception of North Anglesey as a visitor destination; • Measures to attract greater visitor numbers to North Anglesey; • Collation of appropriate monitoring data to monitor impacts on tourism as an economic sector; and • Liaising with Gwynedd Council and Conwy Council for joint tourism promotion initiatives; • Other matters which promote or support Anglesey as a tourism destination (paragraphs 2.2.1-2.2.5, section 2, Schedule 3 of the draft DCO s.106 agreement). 3. Tourism (WG Annual Monitoring) Contribution (£20,000 annually) paid to the Welsh Government for the purposes of contributing to the Welsh Government costs of part-sponsoring the existing Wales Tourism Surveys to improve both the sample sizes and regularity of such surveys (paragraph 3.1, section 3, Schedule 3 of the draft DCO s.106 agreement). 4. Tourism Contingency Fund (a total of £1,000,000) in the event of significant adverse effects (or forecast effects) on the local tourism sector in Anglesey. This fund will be available to cover potential effects such as changes in visitor numbers, changes in availability and quality of tourism accommodation, a decrease

Key item of mitigation	Summary of current status of mitigation
	in visitor numbers and other negative impacts on tourism business (paragraph 5.1-5.2, section 5, Schedule 3 of the draft DCO s.106 agreement).
Increased marketing and enhanced visitor facilities to respond to construction pressures and perception of adverse impacts from construction and long-term operation of WN	Horizon is committed to safeguarding and enhancing the image and perception of Anglesey as a visitor destination and attracting greater number of visitors using a range of measures secured in the draft DCO s.106 agreement. See tourism response to <i>Protection of the available workforce and accommodation needed to support the local tourism economy</i> – as set out above. Horizon is committed to providing appropriate visitor interpretation facilities during the construction phase of the project. Facilities will include a temporary viewing platform, as committed in the Main Power Station Site sub-CoCP [APP-415]. Horizon is keen to agree with local communities, the provision of other temporary facilities to support visitor interpretation. These could include facilities in the north of Anglesey. Horizon is also committed to the provision of archaeological interpretation materials, linked to the site a £90,000 contribution for this has been committed to in the agreed draft site preparation and clearance s.106 agreement. Horizon will also use reasonable endeavours to obtain a planning permission for the development of a permanent Visitor and Media Reception Centre to be available from the commencement of Operation of Unit 2 (paragraph 6.1, section 6, Schedule 3 of the draft DCO s.106 agreement).
SAFEGUARDING	
Active protection of local communities and vulnerable groups responding to challenges from a changed social environment	Horizon has provided a more detailed response to this issue as part of Examiner's First Written Question - Q10.1.23. A summary is presented below. Horizon takes the issue of safeguarding the general public and its workforce extremely seriously. Horizon is committed to the following measures for active protection of local communities and vulnerable groups: • Screening and management systems - Horizon will take such actions as it can to guide the behaviour of its construction workforce, both on-site and off-site, through the implementation of the Workforce Management Strategy (WMS) and the principles which it outlines in respect to the development of a Code of Conduct;

Key item of mitigation	Summary of current status of mitigation
	• BPSS - All personnel working with, or for, Horizon on site and who will access offices where Sensitive Nuclear Material (SNI) is held, or who require access to SNI, Nuclear Material, Other Radioactive Material or access the Site Licence Site will require a minimum of Baseline Personnel Security Standard (BPSS) preemployment check; • People who do not require a BPSS may require a Right to Work check and an unspent criminal conviction check. Employment can be denied if an individual is believed to be unsuitable for work at the site, or they will have caveats placed upon their activity. For example: no solo working; • Separate to BPSS checks any Horizon staff who will work with children (such as STEM ambassadors) or with vulnerable adults will receive an enhanced Disclosure and Barring Service (DBS) check. This will be co-ordinated through Human Resources; • Horizon policies on Modern Slavery sets out a robust response to the risk of modern slavery and maintains a focus on developing policies, process and internal capability to understand and manage future risks; • Ongoing liaison with external stakeholders is of great importance to Horizon and this dialogue will be maintained where relevant. For example, the safeguarding issues related to the Logistics Centre; • Horizon will establish a Health and Well-being engagement sub-group, as part of the Wylfa Newydd Major Permissions Oversight Panel (WNMPOP) (Schedule 16, draft DCO s.106 agreement). If appropriate this sub group will discuss the need for additional mitigation or follow-up investigation. The topics will be expected to include safeguarding (with regard to vulnerable adults and children). Horizon is also committed to ongoing engagement with the relevant stakeholders to further develop its mitigation related to safeguarding.
EDUCATION AND SKILLS	
Education provision at all age levels to support increased local labour participation in the WN project	Horizon is committed to education provision. Horizon's approach to education has three components: • Measures to support the provision of school places; • Measures to support Welsh Language immersion; • Measures to promote the project and career opportunities with schools, including actions to promote STEM (science, technology, engineering and mathematics).

Key item of mitigation	Summary of current status of mitigation
	Horizon's education strategy is summarised in section 7 of the Jobs & Skills Strategy (JSS) [APP-411], and it will be delivered in practice via the JSIP (which is near agreed) and which will be appended to the draft DCO s.106 agreement. Currently, Horizon is investing early in education to maximise opportunities for local people. Horizon currently promotes STEM teaching and subjects and career preparation through its Educational Outreach programme 'Futures/Dyfodol' in local secondary and primary schools, as well as already investing in an apprenticeship scheme with Coleg Menai. Horizon is also committed to maintaining its existing programme of educational support till the end of the Construction Period as secured by (paragraphs 6.1.1-6.1.3, section 6, Schedule 1 of the draft DCO s.106 agreement) including: • Existing bilingual educational support for primary and secondary pupils as well as Post-16 education; • Existing Wylfa Newydd DCO Project Technical Apprenticeship Scheme; • Delivery of the existing 'Work Insight Week', or an equivalent scheme, to young people. To support the existing education programmes, the draft DCO s.106 agreement contains three specific funds to demonstrate Horizon's commitment to education provision and early capacity enhancement in local schools: 1. Education Contribution (a total of £1,000,000) to prepare a programme for early capacity enhancement in local schools including: • Improving the retention of teachers and school staff and increasing the supply of new teachers and school staff; • Improving training and support for existing and new teachers and school staff; • Providing additional resources to teachers including access to equipment, kits, workshops and live programmes for all learners; • Monitoring the effects of the Project on the local schools (para 1.2.1-1.2.3, Section 1, Schedule 6 of the draft DCO s.106 agreement). 2. Education Contingency Fund (a total of £3,000,000) in the event of significant additional demand on education sector in the KSA or forecasts trends that are likely to lead to a significant additional demand

Key item of mitigation	Summary of current status of mitigation
	on the education sector in the KSA (para 3.1.1, Section 3, Schedule 6 of the draft DCO s.106 agreement). 3. Welsh Language Education (Annual) Contribution (£80,000 annually) to fund the employment of two or more peripatetic teachers to support current Welsh immersion education capacity within the Council's local authority boundary and potentially Council local authority boundary (paragraph 4.2, section 4, Schedule 1 of the draft DCO s.106 agreement). Horizon is committed to developing further specificity in the application of these contributions with IACC. Over and above these education commitments, in order to facilitate the upskilling and recruitment of local people, Horizon has committed to several measures during construction - described in more detail below: • Wylfa Newydd Employment and Skills Service (WNESS) (secured though section 1, Schedule 4 of the draft DCO s.106 agreement); • Skills Fund (secured though section 4, Schedule 4 of the draft DCO s.106 agreement); • Jobs and Skills Implementation Plan (section 2, Schedule 4 of the draft DCO s.106 agreement) for the duration of the construction and operation period; • Focussing on recruitment and careers (section 2, Schedule 1 of the draft DCO s.106 agreement): - o Distributing information on career opportunities at the Project to local communities and young people regularly; - o Developing role model activities and resources to encourage awareness of career opportunities within the community; - o Notifying all external vacancies to the WNESS and publicising them in Welsh and English; - o Advertising any such vacancies outside of the WNESS in Welsh and English through recruitment channels including local and national partners that engage with a Welsh-speaking audience; • Mitigation contained in the Welsh Language and Culture Mitigation and Enhancement Strategy (secured though Schedule 1 of the draft DCO s.106 agreement); • Supply Chain Portal (secured through section 6, Schedule 4, of the draft DCO s.106 agreement); • Supply Chain Charter, Action Plan and Service (secured though Schedule 4 of the draft DCO s.106 agreement);

Key item of mitigation	Summary of current status of mitigation
	• Community Involvement Officer (section 1, Schedule 14 of the draft DCO s.106 agreement); • Economic Development Officers (secured through section 8, Schedule 4 of the draft DCO s.106 agreement); • Principles about recruiting local workforce (secured in the Workforce Management Strategy [APP – 413] and Requirement PW8).
Supporting schools and teachers to respond to demands of accommodating dependents of migrant workers whilst maintaining existing standards	Horizon is committed to supporting schools and teachers to ensure existing standards are maintained when accommodating dependents of migrant children and have proposed two specific funds in the second draft s.106 agreement to facilitate this. • Welsh Language Education (Annual) Contribution (£80,000 annually) to fund the employment of two or more peripatetic teachers to support current Welsh immersion education capacity within the Council's local authority boundary (and if the monitoring undertaken indicates a need to do so), in the Gwynedd Council local authority boundary. para 4.2, Section 4, Schedule 1, of the draft DCO s.106 agreement) • Education Contribution (a total of £1,000,000) to prepare a programme for early capacity enhancement in local schools including: • Improving the retention of teachers and school staff and increasing the supply of new teachers and school staff; • Improving training and support for existing and new teachers and school staff; • Providing additional resources to teachers including access to equipment, kits, workshops and live programmes for all learners; and • Monitoring the effects of the Project on the local schools (paragraphs 1.2.1-1.2.3, section 1, Schedule 6 of the draft DCO s.106 agreement) • Education Contingency Fund (a total of £3,000,000) in the event of significant additional demand on education sector in the KSA or forecasts trends that are likely to lead to a significant additional demand on the education sector in the KSA. (paragraph 3.1.1, section 3, Schedule 6 of the draft DCO s.106 agreement).

Key item of mitigation	Summary of current status of mitigation
	Horizon will also maintain its existing programme of educational support till the end of the Construction Period as secured by (paragraphs 6.1.1- 6.1.3, section 6, Schedule 1 of the draft DCO s.106 agreement) including: • Existing bilingual educational support for primary and secondary pupils as well as Post-16 education; • Existing Wylfa Newydd DCO Project Technical Apprenticeship Scheme; • Delivery of the existing 'Work Insight Week', or an equivalent scheme, to young people. Additionally, during the Construction Period, Horizon will circulate welcome packs to the Workforce Dependents who move to the KSA (paragraph 6.2, section 6, Schedule 1 of the draft DCO s.106 agreement). Horizon has also committed to provision of regular monitoring of its education, Welsh language commitments and reporting back to the Welsh Language and Culture Sub-Group as set out in section 9 of Schedule 1 of the draft DCO s.106 agreement). Relevant aspects on this monitoring may be shared with local authorities, and education and early years providers including Gwynedd Council, Mudiad Meithrin (Welshmedium early years representative body), Menter Iaith Môn and Grŵp Llandrillo-Menai (subject always to compliance with Data Protection Legislation), and an ongoing dialogue with these bodies will be maintained to understand and where relevant mitigate the inflow of pre-school age children on local Welsh-medium provision (paragraphs 9.1-9.2, section 9, Schedule 1 of the draft DCO s.106 agreement).
Ensuring adequate special needs provision	Special needs provision is not mentioned explicitly in the second draft s.106 agreement, but Horizon expects the following funds could be used to provide support for special needs and is happy to discuss specific allocation with IACC: 1. Education Contribution (a total of £1,000,000); 2. Education Contingency Fund (a total of £3,000,00).

Key item of mitigation	Summary of current status of mitigation
HOUSING	
Protection of the private rental sector for local population and tourism	This issue has two interconnected strands of mitigation measures for: • Workforce accommodation; • Tourism. Workforce accommodation – Horizon would like to reiterate some key messages regarding workforce accommodation: • Horizon has carried out a robust assessment in terms of use of existing accommodation (which is a small percentage from each sector); • Horizon would like to clarify that tourist accommodation is counted separately from private rental sector in Horizon's estimates; Horizon is proposing only to use a small amount of the headroom; • Horizon is aware that there is an issue with supply of PRS in the north of the island, compared with the location of workers shown from the gravity model; this will be addressed through the WAMS and the Housing Fund payments to potentially boost supply in this area; • It is Horizon's opinion that the Housing Fund will work effectively to boost supply; • Workers should not be competing with those in housing need. In addition to the WAMS, which will be a critical mitigation in managing supply and demand of accommodation, and avoiding housing pressure in any one location, the draft DCO s.106 agreement has 4 different types of accommodation payments secured within Schedule 5 – Worker Accommodation to mitigate potential significant effects in the accommodation sector and protect the private rental sector for the local population: • Accommodation Officers Contribution (a total of £760,000) for funding up to 3 accommodation officers for managing and monitoring accommodation issues; • Worker Accommodation (Annual) Contribution (£100,000 annually for 6 years) towards the cost of managing a range of issues including homelessness, housing demand and enforcement issues; • Worker Accommodation (Capacity Enhancement) Contribution (a total of £10,000,000) towards initiatives to ensure adequate supply of local housing provision having regard to the Wylfa Newydd DCO Project; and

Key item of mitigation	Summary of current status of mitigation
	• Accommodation (Contingency) Fund (a total of £1,500,000) in the event of significant adverse effect on the accommodation sector within the KSA are found or predicted to cover issues such as an increase in homelessness, a lack of access to the private rental sector within the KSA or the need for an additional accommodation officer to monitor/manage the effects on accommodation sector. See the full Workforce Accommodation response to <i>Protection of the available workforce and accommodation needed to support the local tourism economy</i> – set out under Tourism section above. It should be noted that Horizon's Site Campus (Secured by the Phasing Strategy [APP-447]) is also an embedded mitigation for potential adverse effects on the accommodation sector. This Site Campus will deliver 4000 beds at the WNDA and be built in phases (see above for phasing). Tourism - Horizon is committed to safeguarding and enhancing the image and perception of Anglesey as a visitor destination and attracting greater number of visitors using a range of measures secured in the draft DCO s.106 agreement . See tourism response to <i>Protection of the available workforce and accommodation needed to support the local tourism economy</i> – set out in the Tourism section above.
Encouragement of new build and return to use of vacant and underused property	Horizon is committed to a Worker Accommodation (Capacity Enhancement) Contribution (a total of £10,000,000) towards initiatives to ensure adequate supply of local housing provision having regard to the Wylfa Newydd DCO Project including: • Providing new build permanent housing, including Affordable Housing; • Bringing empty homes back into use in the period in the lead up to year three in the Construction Period (paragraphs 5.2.1-5.2.4, section 5.2, schedule 5 of the draft DCO s.106 agreement). It should be noted that this Worker Accommodation Capacity Enhancement Contribution will be released early - with 10% of the funds to be released prior to implementation, 45% on the first anniversary of implementation, and the remaining 45% on the second anniversary of implementation.

Key item of mitigation	Summary of current status of mitigation
Control of caravan use for construction purposes	The draft DCO s.106 agreement has two different types of accommodation payments, secured within Schedule 5 – Worker Accommodation, to mitigate potential significant effects in the accommodation sector (including the control of caravan use): • Worker Accommodation (Annual) Contribution (£100,000 annually for 6 years) is earmarked for IACC towards a range of issues including monitoring accommodation enforcement issues within the KSA such as unlawfully sited caravans (paragraph 4.2.3, section 4.2, Schedule 5 of the draft DCO s.106 agreement); • This will be supported by the Accommodation Officers Contribution (a total of £760,000) for funding up to 3 accommodation officers during the Construction Period to discharge a range of duties; the chief amongst which are related to monitoring and enforcement to sit on the WAMS Oversight board, liaison with Gwynedd Council and Conwy Council to ensure a collaborative approach to monitoring accommodation matters relating to the Project (section 3.2, Schedule 5 and paragraph 5.2, section 5, Schedule 5 of the draft DCO s.106 agreement).
WELSH LANGUAGE AND CULTURE	
Resourcing (including immersion capability) especially for education and local community facilities to respond to pressure from substantial net inflow of temporary and permanent workers and dependents	Horizon understands that the language immersion service on the Isle of Anglesey is primarily a centre-based model, operating from two centres in Holyhead and Moelfre, with some peripatetic outreach provision to supplement the centre-based provision. Horizon understands that the service employs five full-time language immersion teachers. Horizon is committed to the following measures to facilitate adequate resourcing (including immersion capability) for education and local communities: 1. The Welsh Language Education (Annual) Contribution (£80,000 annually) will be used to fund the employment of an <i>additional</i> two or more peripatetic teachers to support current Welsh immersion education capacity within the Council's local authority boundary and potentially Council local authority boundary (para 4.2, Section 4, Schedule 1 of the draft DCO s.106 agreement); The level of this service will be proportionate to the number of workers that will bring their families and increase or decrease in response to demand. The number of workers bringing families will be carefully

Key item of mitigation	Summary of current status of mitigation
	monitored through collection of data via WAMS (section 1, Schedule 5 of draft DCO s.106 agreement). Horizon considers funding for two teachers commensurate with numbers of dependants forecast. This funding will facilitate the two language immersion teachers who will be available to work with pupils from early in the construction programme. 2. Horizon is also committed to a Welsh Language Culture Coordinator (section 1, Schedule 1 of the second draft s.106 agreement) prior to commencement and for the duration of the Construction Period and the role will include: • Ensuring delivery of the of the Welsh Language and Culture Mitigation and Enhancement Strategy; • Focusing on the development and implementation of Welsh language and culture mitigation; • Monitoring, measuring and evaluating language and culture related community benefit activities and associated mitigation measures. • Working closely with the Community Involvement Officers to deliver the Community Impact Joint Work Plan. Horizon can confirm the appointment of a Welsh Language Culture Coordinator has taken place and this person is in role. 3. Welsh Language Officer Contribution (£40,000 annually) towards the provision of a Welsh Language Officer who will be responsible for developing measures to ensure continued Welsh speaking characteristics of organisations and activities in the local communities (paragraph 5.3, section 5, Schedule 1 of the draft DCO s.106 agreement). 4. Horizon will promote career opportunities at Wylfa Newydd (paragraphs 2.2-2.5, section 2, Schedule 1 of the second draft s.106 agreement) Project by: • Distributing information on career opportunities at the Wylfa Newydd DCO Project (including the bilingual Wylfa Newydd 'Career Route Maps' and Job Profiles or other such equivalent schemes in the local community); • Developing role model activities and resources to encourage awareness of career opportunities within the community where:

Key item of mitigation	Summary of current status of mitigation
	- o Welsh speaking Horizon staff (including Welsh learners) and local suppliers will be involved in such activities; - o Staff and contractors will take part in various 'role model' activities and resources such as case study video clips, written materials, presentations in schools; • Notifying all external vacancies to the WNESS and publicising them in Welsh and English; • Advertising any such vacancies outside of the WNESS in Welsh and English through recruitment channels, including local and national partners that engage with a Welsh-speaking audience; • Where practicable, including a Welsh speaker on interview panels for job applicants for roles whose preferred language is Welsh, provided that where the job role demands English language skills, those skills will also be considered in such interview process. 5. Horizon will also maintain its existing programme of educational support until the end of the Construction Period (paragraphs 6.1.1-6.1.3, section 6, schedule 1 of the second draft s.106 agreement) including existing bilingual educational support for primary and secondary pupils as well as post-16 education. 6. During the Construction Period, Horizon will circulate welcome packs to the Workforce Dependants who move to the KSA (paragraphs 6.2, section 6, Schedule 1 of the second draft s.106 agreement). 7. Horizon is also committed to maintaining and update its Welsh Language Policy until the end of the Operational Period including measures for: • Language and culture awareness training; • A programme of Welsh language training for the operational staff where relevant; • A Welsh language mentoring scheme for learners; • Maintenance of the Welsh speaker badge scheme; • Ensure a Welsh speaking member of staff is included on interview panels for jobs where candidates are required to have Welsh language skills; • An annual review of the Welsh language policy to respond to the demands of the Project with updates to reflect the Horizon's commitment to promoting and enhancing the Welsh language (paragraph 1.3, section 1, Schedule 1 of the draft DCO s.106 agreement).

Key item of mitigation	Summary of current status of mitigation
Welsh language support in WN construction and operation workplace through recruitment, day to day operations and use of contractors	Horizon will provide the necessary support for Welsh language in construction and operational workplace as well as day to day operations by committing to the following measures: 1. Horizon is committed to employing a Welsh language Culture Coordinator (Section 1, Schedule 1 of the Second draft DCO s.106 agreement) prior to Commencement: • For the Construction Period - the role will include ensuring delivery of the Welsh Language and Culture Mitigation Strategy, focusing on development and implementation of relevant mitigation, monitoring, evaluating language and culture related community benefit activities and working with Community Involvement Officers to deliver the Community Impact Joint Work Plan (Schedule 14 of the draft DCO s.106 agreement); • For the Operation Period - this role would contribute to the annual reviews of the Welsh Language policy and liaise with external partners on matters relating to the Welsh language. 2. Horizon will promote career opportunities at the Wylfa Newydd (paragraphs 2.2-2.5, section 2, Schedule 1 of the second draft s.106 agreement) Project by: • Distributing information on career opportunities at the Wylfa Newydd DCO Project (including the bilingual Wylfa Newydd 'Career Route Maps' and Job Profiles or other such equivalent schemes in the local community); • Developing role model activities and resources to encourage awareness of career opportunities within the community where: - o Welsh speaking Horizon staff (including Welsh learners) and local suppliers will be involved in such activities; - o Staff and contractors will take part in various 'role model' activities and resources such as case study video clips, written materials, presentations in schools. • Notifying all external vacancies to the WNESS and publicising them in Welsh and English; • Advertising any such vacancies outside of the WNESS in Welsh and English through recruitment channels including local and national partners that engage with a Welsh speaking audience;

Key item of mitigation	Summary of current status of mitigation
	- Where practicable, including a Welsh speaker on interview panels for job applicants for roles whose preferred language is Welsh, provided that where the job role demands English language skills, those skills will also be considered in such interview process. 3. Horizon has also developed several measures to support the Welsh Language while engaging with contractors which are listed in (paragraphs 3.1-3.4, section 3, Schedule 1 of the Second draft s.106 agreement) and below: - Prior to commencement of work Horizon will provide its contractors with: - Information on Horizon's Welsh Language Policy and obligations in this and the contractors' role in delivering such policy and obligations including for example via their recruitment processes and internal and external communications; - Information on local suppliers including the business database being developed by IACC, other local authorities, North Wales Economic Ambitions Board and Welsh Government. - As part of the induction process for the Workforce operating on the Site the Developer will provide the Workforce attending such site induction(s) with the following Welsh language materials: - Welsh language briefing packs and/or induction materials; - The "Byw mewn gwlad ddwyieithog/Living in a bilingual nation" Welsh Language booklet produced by the Welsh Government dated 2017; - Any other materials agreed by Horizon and the Council. The purpose of the information provided to contractors and the Workforce will be to raise awareness of and respect for the Welsh language and culture, and Welsh speaking among the contractors and the Workforce. Horizon will also include Welsh language information requirements as an agenda item for all relevant contractor meetings.

Key item of mitigation	Summary of current status of mitigation
	4. Horizon is also committed to maintaining and update its Welsh Language Policy until the end of the Operational period including measures for: • Language and culture awareness training; • A programme of Welsh language training for the operational staff where relevant; • A Welsh language mentoring scheme for learners; • Maintenance of the Welsh speaker badge scheme; • Ensure a Welsh speaking member of staff is included on interview panels for jobs where candidates are required to have Welsh language skills; • An annual review of the Welsh language policy to respond to the demands of the Project with updates to reflect the Horizon's commitment to promoting and enhancing the Welsh language (paragraph 1.3, section 1, Schedule 1 of the (draft DCO s.106 agreement)).
Support for translation services and signage provisions	Horizon has committed support for translation services under the Community Translation Service Contribution (a sum total of £250,000) (paragraphs 7.1-7.3, section 7, Schedule 1 of the draft DCO s.106 agreement). This will be paid by Horizon to the Council prior to Implementation. This contribution will be used for establishing and funding for the duration of the Construction Period a community translation service which will serve local community groups to enable better engagement with the Wylfa Newydd DCO Project for example by providing simultaneous translation facilities for community groups engaging on the Wylfa Newydd DCO Project. The Welsh Language and Culture Coordinator (section 1, Schedule 1 of the of the draft DCO s.106 agreement) will also assist the Council in operating the community translation service. Horizon has several commitments in its DCO application for signage including a commitment for <i>all</i> public-facing permanent and temporary signage on the sites relating to the Wylfa Newydd DCO Project to be bilingual (save where safety or other material considerations require that signage is in English only) (paragraph 1.3.1, section 1, Schedule 1 of the of the draft DCO s.106 agreement).

Key item of mitigation	Summary of current status of mitigation
	In addition to this, Horizon is committed to the Copper Trail (Signage) Contribution (a total of £65,000) to the erection of new road signage for the Copper Trail between Cemlyn Bay and Llanfechell along the new route of the Copper Trail and the removal of obsolete signage near Tregale (section 3, Schedule 13 of the of the draft DCO s.106 agreement). Horizon is also committed to the Copper Trail (Sustrans) Payment (a total of £10,000) for payment to Sustrans (or an equivalent successor body) for the purpose of updating the Copper Trail leaflet to reflect the permanent diversion of the Copper Trail route between Cemlyn Bay and Llanfechell including the printing of a minimum of 500 updated Copper Trail leaflets for the purposes of replacing existing stocks and making the leaflet a downloadable pdf from the Sustrans website, and otherwise advertising and promoting of cycle routes on Anglesey (section 3, Schedule 13 of the of the draft DCO s.106 agreement).
TRAFFIC AND TRANSPORT	
Increased park and share and bus service provision	Horizon's DCO application contains all the necessary parking (onsite and at Dalar Hir) to meet the requirements of the Wylfa Newydd DCO Project and minimise the traffic and transport impacts of the Wylfa Newydd DCO Project. Nevertheless, IACC's proposed Park and Share facility at Four Crosses could provide extra flexibility, for example as park and share facilities which could be available for workers car sharing and Horizon refers to its response to the Examining Authority's first written questions at Q11.1.39. Horizon's commitment to shuttle bus services is presented below and is considered adequate for the needs of the Project. No increase to this provision is currently considered necessary: • Shuttle buses to be provided between the Park and Ride and construction sites at the WNDA Development, the Off-Site Power Station Facilities and Logistics Centre; • Dedicated shuttle bus services for construction workers living in the north of Anglesey; • Dedicated shuttle bus services for construction workers living in Anglesey i.e. in Holyhead, Bangor, Caernarfon, Amlwch, Cemaes and Benllech, as needed; • Shuttle buses to Holyhead and other local railway stations (all secured by the WN CoCP, [APP-414]).

Key item of mitigation	Summary of current status of mitigation
Enhanced monitoring to enforce WN travel plans (e.g. in relation to fly-parking and rat-running)	The revised Wylfa Newydd CoCP [REP2-031] contains further details on enforcement and monitoring of the Traffic and Transport Strategy, including enhanced mitigation and monitoring measures to tackle issues related to fly parking and rat-running. Horizon is also committed to the following measures to deliver and monitor the Traffic and Transport Strategy and manage enforcement issues related to fly parking and rat running: • A Transport Contingency Fund (a total fund of £1,300,000) in case the traffic monitoring data indicates a significant adverse effect on the transport network and infrastructure within the DCCZ as a result of the Project (paragraph 5.1-5.2, section 5, Schedule 7 of the draft DCO s.106 agreement); • Transport Officer Contribution (£40,000 annually) to fund the employment of a Transport Officer whose role will include managing enforcement and issues such as fly parking which may be caused by the Wylfa Newydd DCO Project (para 1.2, Section 5, Schedule 7 of the draft DCO s.106 agreement); • The Transport Officer will for the duration of Construction report the results of the transport analysis, surveys, monitoring and enforcement actions back to the to the Transport Sub-Group on a quarterly basis (paragraph 1.2, section 5, Schedule 7 of the draft DCO s.106 agreement).
Additional funding for road repairs	Horizon and IACC Highways have agreed to carry out condition surveys of the A5025 between the proposed Power Station Access Road Junction and the existing Magnox junction through Tregele, together with Junction 3 of the A55, HGV routes from Parc Cybi and the bus route from Dalar Hir on the local network (i.e. when not on the A55 and slip roads). Following the surveys, Horizon will prepare a schedule of monitoring and agree with IACC Highways, the extent of works to upgrade the road surfacing where required. Horizon will financially support the initial resurfacing and carry out periodic joint inspections throughout the lifecycle of the construction works. This would then inform Horizon of the requirement for ongoing repair works. The assumption is that the works would be undertaken by IACC Highways maintenance teams, financed by Horizon (Secured by the A5025 sub-CoCP [APP-420]). Horizon considers this is adequate and is not proposing any further funding for road repairs.

Key item of mitigation	Summary of current status of mitigation
WASTE MANAGEMENT, NOISE AND VIBRATION, AIR QUALITY AND LIGHTING	
Monitoring and mitigation strategy for waste arisings	All waste arising from the Wylfa Newydd DCO Project will be managed in a responsible manner with the clear intention of applying Horizon's waste hierarchy and in line with all relevant waste legislation and regulation during the construction of the Wylfa Newydd DCO Project. The Wylfa Newydd CoCP [REP2-031] in Chapter 9 provides adequate details on the management and monitoring of waste arisings across the Project. This is also supplemented by any site-specific requirements across the sub-CoCPs. The updates to the WN CoCP at Deadline 4 will include a specific commitment to produce a Site Waste Management Plan, although the general components of a typical SWMP are already mentioned in the WN CoCP under Section 9.3 Site Waste Management.
Monitoring and response strategies to amenity impacts from noise, vibration dust and lighting.	As mentioned in the Wylfa Newydd CoCP [REP2-031], the sub-CoCPs [REP2-032 to REP2-036, REP2-373] secure Horizon's commitment to mitigating construction-related environmental effects, including those on amenity from noise, vibration, dust and lighting. The controls presented in the CoCPs are the means by which Horizon will control the potential impacts of the Project on people, amenity, businesses and the natural and historical environment. It is Horizon's view that the CoCP and the sub-CoCPs 'management strategies' contain sufficient detail to demonstrate that the mitigation described in the Environmental Statement and other assessments will be secured. However, Horizon acknowledges that these documents may be further refined during the Examination period, in response to comments from the Examining Authority and other interested parties and stakeholders, such as IACC. It is Horizon's opinion that by the close of the DCO examination period, the Wylfa Newydd CoCP] and sub-CoCPs, will contain the necessary details sought by the relevant stakeholders. It should be noted that the following management strategies in the CoCPs were updated with more detailed mitigation and submitted at Deadline 2 [REP2-031 to REP2-036, REP-373] and more changes are planned at Deadline 4.

Key item of mitigation	Summary of current status of mitigation
	• The Air Quality Management Strategy (including dust emissions), contained in the Wylfa Newydd CoCP [APP-414] and sub-CoCPs [APP-415 to APP-420] was updated as a response to the ongoing SOCG discussions. The Rev 2.0 submission [REP2-031 to REP2-036, REP-373] now includes further details on air quality thresholds, monitoring and locations. • The Noise Management Strategy contained in the Wylfa Newydd CoCP [APP-414] and sub-CoCPs [APP-414 to APP-420] was updated as a response to the ongoing SOCG discussions. The Rev 2.0 submission [REP2-031 to REP2-036, REP-373] now includes further details on noise monitoring and monitoring locations. • The Local Noise Mitigation Strategy (LNMS) in the Wylfa Newydd CoCP [REP2-031] is currently being revised (as a response to the ongoing SOCG discussions) with updated thresholds, scope, eligibility criteria, implementation procedures and governance arrangements. Horizon is also producing a companion document to help address some of the concerns around the implementation of the LNMS along with some frequently asked questions. These updates will be submitted in the form of a technical note by Deadline 4. • Horizon is also revising its Lighting mitigation (contained in the Wylfa Newydd CoCP [REP2-031] and the sub CoCPs [REP2-031 to REP2-036, REP-373]) as a response to stakeholder comments and ongoing SOCG discussions. These updates will be presented in the revised Wylfa Newydd CoCP and sub CoCPs at Deadline 4. • The Rev 2.0 Wylfa Newydd CoCP also includes more information about the Wylfa Newydd Major Permissions Oversight Panel (WNMPOP) and the nine engagement sub groups which sit under it. These groups have a critical role in monitoring and engagement across a range of environmental topics and more information about them is also presented in the draft DCO s.106 agreement.
Identification and protection of particular	Horizon takes the identification and protection of sensitive receptors in residential, educational and recreational contexts very seriously. As well as design decisions throughout the Project's development seeking to avoid

Key item of mitigation	Summary of current status of mitigation
sensitivities in residential, education and recreational contexts (such as schools, community facilities and dark sky status).	adverse effects arising, and the controls on noise, vibration, dust and light emissions in the CoCPs, Horizon is also committing to: The Local Noise Mitigation Strategy (LNMS), part of the Wylfa Newydd CoCP [REP2-031] presents some sensitive receptors for noise mitigation in paragraphs 8.3.14 – 15. As stated in the previous row, the LNMS is currently undergoing revision with the updated text to be submitted by Deadline 4. The draft DCO s.106 agreement also recognises the following sensitive noise receptors and earmarks a contribution to mitigate potential noise effects: Construction Noise (Cemaes Primary School) Contribution (a total of £250,000) to agree appropriate noise insulation measures to reduce noise in classrooms to address impacts of construction noise for the Construction Period (paragraph 1.2, section 1, Schedule 10 of the second Draft s.106 agreement); Construction Noise (Eglwys Sant Padrig Church) Contribution (a total of £250,000) to agree to work with the owners of Eglwys Sant Padrig Church to agree an appropriate noise insulation measures to reduce noise to address impacts of construction noise for the Construction Period (paragraph 2.2, section 2, Schedule 10 second draft s.106 agreement). Horizon recognises that Anglesey is predominantly a rural county that still has some of the darkest skies in the United Kingdom. Looking at the scale of the proposed Wylfa Newydd Power Station, it is therefore essential that good practice in lighting design is followed to help ensure that the natural dark skies of Anglesey are preserved. However, it should be noted that although IACC are interested in applying for Dark Sky Status, there are no designated Dark Sky areas on Anglesey. The International Dark Sky Places conservation program recognises and promotes excellent stewardship of the night sky. The IACC have their own page on applying for Dark Sky Status. There is currently no publicly available information about timescales the IACC are working on to apply for Dark Sky Status. The last document published by the IACC on this topic was in spring 2015. Minutes for the 2017 JAC meeting, show that Dark Skies were discussed, with responses about taking into account recent

Key item of mitigation	Summary of current status of mitigation
	Welsh Government legislation, and that more community and business support was required for the application to be successful. Currently, there are no designated Dark Sky areas on Anglesey. Horizon's current lighting controls are currently set out in the WN CoCP [REP2-031] and where relevant the sub-CoCPs. However, Horizon is revising its Lighting mitigation (contained in the WN CoCP and the sub CoCPs) as a response to stakeholder comments and ongoing SoCG discussions. These updates will be presented in the revised Wylfa Newydd CoCP and sub CoCPs at Deadline 4.
COMMUNITY	
Leisure Provision - (especially related to the main campus) provision of upgraded leisure facilities and improvement of existing facilities for indoor and outdoor recreation and swimming	Horizon's amenity building, within the proposed Site Campus, is anticipated to provide the following recreational and leisure facilities that encourage on-site recreation (as outlined in the Design and Access Statement (Vol3) [APP-409 and APP-410] Appendix 1-2 The Site Campus): • Accessible restaurant and gym; • Licensed bars with seating areas and storage area; • Coffee bars for franchised retailers; • Multi-purpose rooms/TV/cinema/lounge areas; • Accessible changing for external sports facilities; • Inclusive well-being room; • Catering and dining facilities, including kitchen and stores area; • Retail shop outlets providing basic toiletries and snacks; Furthermore, Horizon is committed to three specific contributions for upgrades to existing leisure facilities to mitigate the impact on leisure and sports capacity from the anticipated increase in population resulting from the Development: • The Leisure (Indoor Sports Halls) Contribution (a total of £2,100,000 to upgrade the existing indoor sports facilities at the Amlwch Leisure Centre and the Holyhead Leisure Centre and monitor the usage of these facilities (para 1.2, Section1, Schedule 2 of the draft DCO s.106 agreement);

Key item of mitigation	Summary of current status of mitigation
	• The Leisure (Outdoor Facilities) Contribution (a total of £260,000 to upgrade the existing outdoor multi use games areas at Amlwch Leisure Centre (and Holyhead Leisure Centre) to provide additional 3G standard pitches and monitor the usage of these facilities (paragraph 1.3, section 1, Schedule 2 of the draft DCO s.106 agreement); • The Leisure (Swimming Facilities) Contribution (a total of £1,500,000 for alterations to improve, remodel and/or expand the changing facilities at Amlwch Leisure Centre and monitor the usage of these facilities (paragraph 1.4, section 1, Schedule 2 of the draft DCO s.106 agreement).
Ensuring adequate medical and social support facilities for local communities and incoming workforce	Horizon's Site Campus Medical Centre, within the proposed Site Campus will provide the following facilities (as outlined in the Design and Access Statement (Volume 3.0) [APP-409 and APP-410]) Appendix 1-2 The Site Campus): • Primary care services, including GP services, specialised clinics, out-of-hours care and pharmaceutical services; • Occupational health services, including medicals and screening of workers where required; • Administrative functions, including medical records and health surveillance systems; and • Occupational hygiene facilities and resources, which would then be deployed across the Wylfa Newydd Development Area. Furthermore, Horizon is committed to six specific contributions (as set out in the draft DCO s.106 agreement) to mitigate the impact on medical facilities in the local community due to the incoming workforce resulting from the Development: • Health (Contingency) Fund (a total of £4,690,000) if monitoring indicates a significant additional demand or forecasts trends which indicate a significant additional demand on the Local Health Services as a result of the Wylfa Newydd DCO Project (paragraph 5.1, section 5, Schedule 8 of the draft DCO s.106 agreement); • Health (Monitoring) Payment (a total of £110,000) paid for the purpose of monitoring the effects of the Wylfa Newydd DCO Project on Local Health Services during the Construction Period (paragraph 1.1.1, section 1, Schedule 8 of the draft DCO s.106 agreement);

Key item of mitigation	Summary of current status of mitigation
	• Health (NHS Dependants Use) Payment (a sum total of £1,617,885) paid to BCUHB for the cost of partners and children of the non-homebased Workforce personnel registering with and/or using off-Site GP services during the Construction Period (para 1.3, Section 1, Schedule 8 of the draft DCO s.106 agreement); • Health (NHS Referral) Payment (a sum total of £65,000) towards the cost of referrals to NHS services of non-home-based Workforce personnel during the Construction Period (para 1.1.2, Section 1, Schedule 8 of the draft DCO s.106 agreement); • Health (First NHS Workforce Use) Payment (a sum total of £2,500,000) will be paid by the Developer to BCUHB towards the cost of non-homebased Workforce personnel registration with or use of off-Site GP services in years 1 to 3 of the Construction Period (paragraph 1.2, section 1, Schedule 8 of the draft DCO s.106 agreement); • Health (Second NHS Workforce Use) Payment (a sum total of 660,000); paid to BCUHB upon the Site Campus medical facility becoming operational towards the cost of non-homebased Workforce personnel registration with or use of off-Site GP services for the duration of the Construction Period following delivery of the Site Campus medical facility (paragraph 1.4, section 1, Schedule 8 of the draft DCO s.106 agreement). Horizon is also committed to quarterly reporting by BCUHB to the Health and Wellbeing Sub-Group around issues related to: • Access of members of the local communities to community healthcare services; • The respiratory health of members of the local communities; • Sleep disturbance patterns of members of the local communities; • The behaviours and lifestyles of members of the local communities including the level of physical activity of members of the local communities and the level of community cohesion; • The effectiveness of the safeguards in place to protected vulnerable adults and children within local communities; • Accident hotspots within the local communities; • Housing market pressures within the local communities; • Recruitment rates within the local communities.

Key item of mitigation	Summary of current status of mitigation
	In terms of social support Horizon is committed to Community Involvement Officers who will deliver the Community Involvement Officer Joint Work Plan (Schedule 14 of the draft DCO s.106 agreement) including the following actions: • Manage/establish community language services (including the development of appropriate training materials); • Support the integration of the Workforce and Workforce Dependents; • Liaise with communities, the Council and the Developer in respect of Workforce conduct issues (in accordance with the Community Safety Management Strategy); • Delivering and operating the community translation service described in Schedule 1 Error! Reference source not found. of the draft DCO s.106 agreement; • Promote education, upskilling, training and local employment opportunities including support for young people from disadvantaged backgrounds; • Provide information about planned PRoW diversions to local communities including via the use of bi-lingual information boards; • Promote local walking, cycling, public transport, car sharing, travel planning, leisure facilities and road safety initiatives; • Disseminate information about construction and operational safety; • Provide support and a communication channel for people experiencing [elevated levels of emissions or disturbance]; • Promoting community cohesion; • Support the integration of incomers into host communities; • Report regularly to the Health and Wellbeing Engagement Sub-Group and the Welsh Language and Culture Sub-Group in respect of the above matters; • Provide support to groups wishing to access the Community Fund; • Other matters which may be agreed with Horizon from time to time.
Enhanced blue light services to respond to	Horizon is committed to developing a detailed Community Safety Management Strategy (CSMS) in line with the principles outlines in the WN CoCP [REP2-031]. Horizon is engaging continually with the blue light services to better understand what the detailed mitigation measures to include in the CSMS.

Key item of mitigation	Summary of current status of mitigation
construction workforce demands	However, Horizon is committed to three types of contribution (as outlined in the draft DCO s.106 agreement) to mitigate the impact on blue light services due to the incoming workforce resulting from the Development: • Public Services (Ambulance) Contribution - paid by Horizon to Welsh Ambulances Service NHS Trust towards building resilience and mitigating impacts of the Project on ambulance services on Anglesey (paragraph 1.1, section 1, Schedule 9 of the draft DCO s.106 agreement); • Public Services (Fire) Contribution - paid by Horizon to North Wales Fire and Rescue Service towards building resilience and mitigating impacts of the Project on fire and rescue services on Anglesey (para 2.1, Section 2, Schedule 9 of the draft DCO s.106 agreement); • Public Service (Police) Contribution - paid by Horizon to North Wales Police towards building resilience and mitigating impacts of the Wylfa Newydd DCO Project on police services on Anglesey (paragraph 3.1, section 3, Schedule 9 of the draft DCO s.106 agreement). Further detail on the contributions sought by each of these stakeholders has been provided in their written representations (submitted for deadline 2) and Horizon has responded separately to each of those.
CUMULATIVE IMPACTS	The mitigation for environmental effects has been identified throughout the environmental assessment process and is secured throughout the Wylfa Newydd DCO Project control documents (for example, the Wylfa Newydd CoCP [REP2-031]). With respect to funds, the draft DCO s.106 agreement includes details of funds proposed and mechanisms for their deployment. This includes a Community Fund (see Schedule 12 of the draft DCO s.106 agreement). Horizon will continue to work with IACC on development of the s.106 agreement.
SITE SPECIFIC – WNDA	
Limiting or offsetting landscape and visual impacts to users of PRoWs and local settlements	Horizon is committed to limiting landscape and visual impacts for users of PRoWs and local settlements through the use of design principles and the Landscape and Habitat Management Strategy (LHMS) [REP2-039]. Construction effects will have specific mitigation secured via the LHMS as well as other control documents such as the Wylfa Newydd CoCP and site specific sub-CoCPs [REP2-031 to REP2-036, REP-373]. Horizon is also committed to reinstating land used temporarily for construction to a condition similar to that prior to construction.

Key item of mitigation	Summary of current status of mitigation
	Detailed Mitigation wording is presented in: • Landscape and Habitat Management Strategy [REP2-039]; • Design and Access Statement Volumes 1, 2 and 3 [REP2-029 to REP2-030] – design principles; • Wylfa Newydd CoCP [REP2-031] section 11.4 – commitment to reinstate land used temporarily for construction to a condition similar to that prior to construction; • Main Power Station Site sub-CoCP [REP2-032] – section 11.17 for construction effects.
Protection and management of important landscape features including areas of special sensitivity such as public rights of way, settlements and AONB	Horizon is committed to the management of important landscape features at the Wylfa Newydd Development Site. This will be achieved primarily through the design principles contained in the Design and Access Statement Volume 2 [REP2-030] and Landscape and Habitat Management Strategy (LHMS) [REP2-039] as well as the control measures contained in the Wylfa Newydd CoCP [REP2-031] and the Main Power Station Site sub-CoCP [REP2-032]. Detailed Mitigation wording is presented in: • Landscape and Habitat Management Strategy – design principles and long term management; • Design and Access Statement Volume 2 – design principles; • Wylfa Newydd CoCP and Main Power Station Site sub-CoCP– Ecology and Landscape Management Strategy. Public Rights of Way have specific mitigation measures to ensure they are managed appropriately. Detailed Mitigation wording is presented in: • Wylfa Newydd CoCP] and Main Power Station Site sub-CoCP -Public Access Management Strategy; • Wylfa Newydd Code of Operational Practice (WN CoOP) [REP2-037] - Public Access Management Strategy; • Draft DCO s.106 agreement, Schedule 13 - Public Rights of Way (which commits £300,000 in contributions for funding upgrades, new delivery, and maintenance).

Key item of mitigation	Summary of current status of mitigation
Compensatory measures to offset unavoidable impacts.	The principles of the three compensatory sites is secured via the LHMS [REP2-039].The sequencing of the mitigation delivery is out in the Phasing Strategy [APP-447] which secures the three proposed compensation sites within Anglesey to create new rich fen habitat and enhance existing rich fen and mire habitat.
Species and habitats (protected and non-protected) protected and enhanced (including avoidance and compensatory measures).	Horizon is committed to species and habitats protection and enhancement. This will be achieved through the Phasing Strategy [APP-447] (secured by Requirement PW2), Landscape and Habitat Management Strategy (LHMS) [REP2-039] (secured by Requirements WN8, WN9 and WN11), and specific commitments appropriate to the species in question. <i>Species:</i> • WN CoCP section 11 – EPS licences committed across the Project, measures surrounding notable mammals, breeding birds, Schedule 1 birds [REP2-031]; • Wylfa Newydd CoCP, section 11 – Ecology and Landscape Management Strategy [REP2-031]; • WN CoCP, Section 4 – lighting controls; • Main Power Station Site sub-CoCP [REP2-032], commitment to species specific pre-construction surveys, tern measures, and other site/species specific measures i.e. bat boxes. <i>Habitats:</i> • Landscape and Habitat Management Strategy – creation, maintenance and monitoring of habitats; • Phasing Strategy - secures the three proposed ecological compensation sites within Anglesey to create new rich fen habitat and enhance existing rich fen and mire habitat.
Protection and ongoing management of historic features including archaeological remains, scheduled monuments, listed buildings and	Horizon is committed to the protection and ongoing management of historic features. This will be achieved through the specific measures in the WN CoCP [REP2-031] and Main Power Station Site sub-CoCP [REP2-032]. Detailed Mitigation wording is presented in: • Wylfa Newydd CoCP, section 12 – project-wide measures;

Key item of mitigation	Summary of current status of mitigation
registered park and gardens	- Main Power Station Site sub-CoCP, section 12 – site-specific measures. It is understood that the content of these two documents may be revised during Examination.: In addition, schedule 11 of the draft DCO s.106 agreement provides: - A 0.5 FTE Environmental Fund Officer Please note that following receipt of the LIR, Horizon has agreed to extend the funding of the existing 0.5 FTE Environmental Fund Officer to a full time role with an extended job scope. This will be drafted in to the next version of the DCO s.106 agreement; - Commitments to funding works to, and a management plan for, Cestyll Garden. The draft DCO s.106 agreement anticipates that this funding would be provided to the landowner (NDA). However since issue, Horizon and the NDA are in the process of agreeing heads of terms for acquisition of a number of land interests which include Cestyll Gardens, although it is currently subject to contract (and where Horizon notes NDA's desire to safeguard the amenity).
Protection and control of Surface Water, Groundwater, Bathing Water and existing contaminated land issues	The Project-wide measures for protection and control of Surface Water, Groundwater, Bathing Water and existing contaminated land issues are contained in the WN CoCP [REP2-031] and site-specific measures in the Main Power Station Site sub-CoCP [REP2-032]. Detailed Mitigation wording is presented in: <i>Surfacewater, Groundwater:</i> - WN CoCP section 10 Water management strategy: including project-wide general measures and committed good practice, protection of watercourses, site drainage, control of (surfacewater and groundwater) pollution; - WN CoCP section 4.8 Environmental emergency management strategy – project-wide measures; - Main Power Station Site sub-CoCP – buffer zones, surfacewater management, monitoring arrangements.

Key item of mitigation	Summary of current status of mitigation
	<i>Bathing Water:</i> • Main Power Station Site sub-CoCP – in addition to the above measures for surfacewater and groundwater, the revision of the document at Deadline 4 will contain commitment not to graze livestock in the Cemaes catchment area (found within the Wylfa Newydd Development Area) area for four weeks prior to the start of works, which would allow sufficient time for animal faeces to biodegrade naturally, and reduce the risk of runoff containing E.coli and intestinal enterococci; • Construction sewage treatment – package plant as set out in Construction Method Statement [APP-136], and Site Campus treatment set out in Design and Access Statement (Volume 3) [REP2-030] Appendix 1-2 The Site Campus; • Main Power Station Site sub-CoCP confirms in paragraph 10.2.8 <i>Foul water discharge will be to an existing Dŵr Cymru Welsh Water sewage treatment works and to the on-site package treatment plants. Foul water will not be discharged to the surface water environment.</i> <i>Contaminated Land:</i> • WN CoCP section 9.4 – Land contamination management, including unexpected contamination processes; • Main Power Station Site sub-CoCP – Deadline 2 version (section 9), in section 9.3 contains measures pertaining to known Contaminated Land issues on the WNDA.
SITE SPECIFIC - WYLFA NEWYDD SITE CAMPUS	
Provision of suitable leisure and amenity facilities	The leisure and amenity facilities to be contained in the proposed Site Campus are detailed in the Design and Access Statement Volume 3 – under design principles, general references to amenity building and Multi Use Games area (MUGA). (Design and Access Statement (Volume 3) [REP2-030] Appendix 1-2 The Site Campus.) See above also for reference to funding committed in the draft DCO s.106 agreement for off-site leisure facilities.

Key item of mitigation	Summary of current status of mitigation
DALAR HIR PARK AND RIDE	
Safeguarding of ecological receptors and deterrence of vermin	Horizon is committed to safeguarding ecological receptors at Dalar Hir. Horizon has already committed to EPS licences, appropriate lighting controls and site-specific species (badger) controls in the Wylfa Newydd CoCP [REP2-031] and Park and Ride sub-CoCP [REP2-035]. Horizon is also committed to appropriately controlling vermin. Detailed Mitigation wording is presented in: - Project-wide measures in the Wylfa Newydd CoCP and site-specific measures in the Park and Ride sub-CoCP: <i>Ecological receptors:</i> - Wylfa Newydd section 11 – EPS licences committed across the Project, measures surrounding notable mammals, breeding birds, Schedule 1 birds; - Wylfa Newydd CoCP, Section 11 – Ecology and Landscape Management Strategy; - Wylfa Newydd CoCP, Section 4 – Lighting controls; - Park and Ride sub-CoCP - commitment to species specific pre-construction surveys, site specific badger controls. <i>Vermin:</i> - Wylfa Newydd CoCP section 4.4 contains vermin control commitments.
Management of flooding and wider drainage concerns	Horizon is committed to appropriate management of flooding and addressing wider drainage concerns. Detailed Mitigation wording is presented in: - Project-wide measures in the WN CoCP [REP2-031] and site-specific measures in the Park and Ride sub-CoCP [REP2-035] – section 10; - The revision 2 version of the Park and Ride sub-CoCP contain appropriate measures for management of flooding and drainage;

Key item of mitigation	Summary of current status of mitigation
	The Design and Access Statement (DAS) Volume 3 [REP2-030] (Dalar Hir), updated at Deadline 2 contain specific design principles relating to flood attenuation areas on the site
Ensuring local traffic conditions (including the junction with the A55) continue to operate satisfactorily	Horizon is committed to ensuring local traffic conditions will continue to operate in a satisfactory manner near to the Park and Ride. Detailed Mitigation wording is presented in: - Design and Access Statement (DAS) Volume 3 [REP2-030] – design principles that refer out to sections describing roundabout and junction improvements at the west of the site. - Park and Ride sub-CoCP – ANPR scanning to ease traffic flows.
PARC CYBI LOGISTICS CENTRE	
Protection of existing and replacement landscape features	Horizon has committed to protecting the existing landscape features, as well as any replacement features at Parc Cybi. Detailed Mitigation wording is presented in: - Design and Access Statement (DAS) Volume 3 [REP2-030] – design principles; - Wylfa Newydd CoCP [REP2-031] , section 11.4 – commitment to <i>reinstate land used temporarily for construction to a condition similar to that prior to construction</i>; - Logistics Centre sub-CoCP [REP2-373], section 11 – landscape requirements.
Ecological management to protect and create habitat for wildlife species and control invasive flora	Horizon has committed to ecological management at Parc Cybi, as well as the creation of habitats (Design and Access Statement Volume 3 – design principles). Detailed Mitigation wording is presented in: <i>Ecological management to protect and create habitat:</i> Design and Access Statement (DAS) Volume3 [REP2-030] – design principles <i>Invasive flora</i>:

Key item of mitigation	Summary of current status of mitigation
	Wylfa Newydd CoCP [REP2-031], section 11.2 - commitment to project-wide <i>Invasive non-native plant species</i> measures.
Rights of way improvement schemes	Horizon has committed to Rights of Way improvement schemes, such as cycle-pedestrian crossing at the entrance to the site for Parc Cybi. Detailed Mitigation wording is presented in: - Design and Access Statement (DAS) Volume 3 – commitment to some form of cycle-pedestrian crossing of the entrance to the site (identified on design as ‘zebra’ marks); - Draft DCO s.106 agreement, Schedule 13 Public Rights of Way.
OFFSITE POWER STATION FACILITIES	
Securing off-site screen planting and for the delivery of compensatory measures to improve the quality and usability of the public right of way network surrounding the sites	Horizon has committed to securing off-site screen planting and delivery of compensatory measures to improve the quality and usability of the public right of way network. Detailed Mitigation wording is presented in: - Design and Access Statement (DAS) Volume 3 [REP2-030] - <i>Public right of way network</i>: - Draft DCO s.106 agreement, Schedule 13 Public Rights of Way.
Control of invasive species and drainage management	Horizon has committed to control of invasive species and appropriate drainage management. Detailed Mitigation wording is presented in: <i>Control of invasive species:</i>

Key item of mitigation	Summary of current status of mitigation
	- Wylfa Newydd CoCP [REP2-031] - section 11.2 contains project-wide measures for <i>Invasive non-native plant species</i>; appropriate measures for risk areas and activities, as well as monitoring measures. <i>Drainage management:</i> - Wylfa Newydd CoCP - section 10 Water management strategy: includes project-wide general measures (applicable to the Off-site Power Station Facilities as well) and committed good practice, protection of watercourses, site drainage, control of (surfacewater and groundwater) pollution.
A5025 OFFLINE HIGHWAY IMPROVEMENTS	
Surveying and restoration of traditional landscape features and improvements to Rights of Way.	Horizon is committed to reinstating land used temporarily for construction as stated in the WN CoCP [REP2-031], as well as protecting existing trees, scrub and hedgerows. The condition of the PRow network around construction areas will be surveyed and any improvement to the right of way required will also be completed. Detailed Mitigation wording is presented in: <i>Surveying and restoration of traditional landscape features</i> - WN CoCP - section 11, protection of existing trees, scrub and hedgerows will be retained in accordance with BS 5837; - WN CoCP - section 11.4, commitment to <i>reinstate land used temporarily for construction to a condition similar to that prior to construction</i>; - WN CoCP - section 6.3, condition surveys of the PRow network around construction areas. Reinstatement. <i>Improvements to Rights of Way:</i> - Draft DCO s.106 agreement, Schedule 13 Public Rights of Way.

Key item of mitigation	Summary of current status of mitigation
Restoration and enhancement of important species habitats and connectivity between habitats	Horizon is committed to restoring, and enhancing, habitats for important species and their connectivity during the A5025 Offline Highway Improvements by implementing a landscape management strategy and appropriate landscape reinstatement works. Detailed Mitigation wording is presented in: • Design and Access Statement (DAS) Volume 3 [REP2-030] – design principles; • A5025 Off-line Highways Improvements sub-CoCP [REP2-036] - section 11.8 Landscape planting; • A5025 Off-line Highways Improvements sub-CoCP [REP2-036] - section 11.9 Landscape reinstatement .