

From: [Kieran Somers](#)
To: [Kay Sully](#); [Wylfa Newydd](#)
Cc: [KJ Johansson](#); [Horizon Production Management Team](#); [David Palmer \(Contractor\)](#); [PMO](#); [James.Hooker@gov.wales](#); [Iwan.Williams@cyfoethnaturiolcymru.gov.uk](#); [energyisland@cyfoethnaturiolcymru.gov.uk](#); [Dylan Williams](#); [Neil Burke](#)
Subject: Wylfa Newydd DCO Examination Horizon - Deadline 2 Submissions
Date: 04 December 2018 21:59:02
Attachments: [Horizon's Responses to ExA's First Written Questions - Appendices.pdf](#)

Good Evening

Please find attached Horizon's Deadline 2 submissions relating to :

- Horizon's Response to ExA's First Written Questions

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: +44 (0)7989 493647
kieran.somers@Horizonnuclearpower.com

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 Responses to ExA's First Written Questions - Appendices

PINS Reference Number: EN010007

4 December 2018

Revision 1.0
Examination Deadline 2

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

[This page is intentionally blank]

Wylfa Newydd Project

Appendix 4a

PINS Reference Number: EN010007

4 December 2018

Revision 1.0
Examination Deadline 2

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

[This page is intentionally blank]

Status:  Law In Force

Harbours, Docks, and Piers Clauses Act 1847 c. 27

Collection of rates

This version in force from: Date not available to present

(version 1 of 1)

35. Master to report arrival of vessel. Penalty for neglect.

Within twenty-four hours after the arrival within the limits of the harbour, dock, or pier of any vessel ~~liable to rates~~, the master of such vessel shall report such arrival to the harbour master; and if he fail to make such report within the time aforesaid he shall be liable to a penalty not exceeding [level 1 on the standard scale] ¹.

[234](#) _____

Notes

- [1](#) . Words substituted by Criminal Justice Act 1982 (c.48), s. 46 and Criminal Procedure (Scotland) Act 1975 (c.21), s. 289G
- [2](#) . Act extended by Harbours, Piers and Ferries (Scotland) Act 1937 (c. 28), s. 10; Functions of clerk of the peace relating to the deposit of plans or documents now exercisable by proper officer of the local authority: Courts Act 1971 (c. 23), Sch. 8 para. 1 and Local Government Act 1972 (c. 70), Sch. 29 para. 4; References to sheriff clerk of a county to be construed as reference to sheriff clerk of sheriff court district concerned: Local Government (Scotland) Act 1973 (c. 65), Sch. 27 Pt. I para. 1(3); Preamble omitted under authority of Statute Law Revision Act 1891 (c. 67); References to Ireland to be construed as exclusive of Republic of Ireland: S.R. & O. 1923/405, art. 2; This Act is not necessarily in the form in which it has effect in Northern Ireland.
- [3](#) . S. 48 extended by Transport Act 1962 (c. 46), Sch. 9 para. 6(2)
- [4](#) . S. 35 extended by Transport Act 1962 (c. 46), Sch. 9 para. 6(2)

Modifications

s. 35	Modified by Comhairle nan Eilean Siar (Various Harbours) Harbour Revision Order 2002/410 (Scottish SI), Pt I art. 3
	Modified by Dumfries and Galloway Council (Port William) Harbour Empowerment Order 2008/188 (Scottish SI), Pt I art. 3
	Modified as incorporated with SSI 2013/308 by Whitehills Harbour and Marina (Constitution) Order 2013/308 (Scottish SI), Pt 1 art. 3(4)

Subject: Rates Other related subjects: Shipping

Keywords: Arrival; Masters' powers and duties; Misconduct; Penalties; Rates; Ships

Status:  Law In Force

Harbours, Docks, and Piers Clauses Act 1847 c. 27

Collection of rates

This version in force from: May 11, 1847 to present

(version 1 of 1)

37. Masters of vessels to give accounts of goods intended to be unshipped within the limits, &c.

When any goods are intended to be unshipped within the limits of the harbour, dock, or pier, the master of the vessel containing such goods shall, within twelve hours after the arrival of such vessel within the limits of the harbour, dock, or pier, deliver to the harbour master ~~collector of rates~~ the name of the consignee of the goods intended to be unshipped, or other person to whom the same are to be delivered, and, if the whole cargo be intended to be unshipped, a copy of the bill of lading or manifest of the cargo, or, if part only of the cargo be intended to be unshipped, the best account in writing in his power of the kinds, weights, and quantities of the several goods intended to be unshipped; and every such master shall, if required so to do by the harbour master ~~collector of rates~~, give to him twelve hours notice of the time at which the cargo of such vessel, or any part of the same, is intended to be unshipped.

[123](#)

Notes

1. Act extended by Harbours, Piers and Ferries (Scotland) Act 1937 (c. 28), s. 10; Functions of clerk of the peace relating to the deposit of plans or documents now exercisable by proper officer of the local authority: Courts Act 1971 (c. 23), Sch. 8 para. 1 and Local Government Act 1972 (c. 70), Sch. 29 para. 4; References to sheriff clerk of a county to be construed as reference to sheriff clerk of sheriff court district concerned: Local Government (Scotland) Act 1973 (c. 65), Sch. 27 Pt. I para. 1(3); Preamble omitted under authority of Statute Law Revision Act 1891 (c. 67); References to Ireland to be construed as exclusive of Republic of Ireland: S.R. & O. 1923/405, art. 2; This Act is not necessarily in the form in which it has effect in Northern Ireland.
2. S. 48 extended by Transport Act 1962 (c. 46), Sch. 9 para. 6(2)
3. S. 37 extended by Transport Act 1962 (c. 46), Sch. 9 para. 6(2)

Modifications

s. 37	Modified as incorporated into SI 2014/2935 by Able Marine Energy Park Development Consent Order 2014/2935, Pt 1 art. 3
	Modified by Loch Ryan Port (Harbour Empowerment) Order 2010/31 (Scottish SI), Pt 1 art. 3
	Modified as incorporated with SSI 2013/308 by Whitehills Harbour and Marina (Constitution) Order 2013/308 (Scottish SI), Pt 1 art. 3(4)

Subject: Rates Other related subjects: Shipping

Keywords: Accounts; Delivery; Goods; Masters; Notices; Rates; Ships

Crown Copyright material is reproduced with the permission of the Controller of HMSO and the Queen's Printer for Scotland

Status:  Law In Force

Harbours, Docks, and Piers Clauses Act 1847 c. 27

Collection of rates

This version in force from: Date not available to present

(version 1 of 1)

39. Shippers to give an account of goods intended to be shipped.

Before any person shall ship any goods on board of any vessel lying within the limits of the harbour, dock, or pier, he shall give to the harbour master collector of rates—a true account, signed by him, of the kinds, quantities, and weights of such goods; and every person who shall ship any goods in any such vessel without having given such accounts, or who shall give or sign a false account of such goods, shall for every such offence be liable to a penalty not exceeding [level 3 on the standard scale] [1](#).

[234](#) _____

Notes

- [1](#) . Words substituted by Criminal Justice Act 1982 (c.48), s. 46 and Criminal Procedure (Scotland) Act 1975 (c.21), ss. 289F, s. 289G
- [2](#) . Act extended by Harbours, Piers and Ferries (Scotland) Act 1937 (c. 28), s. 10; Functions of clerk of the peace relating to the deposit of plans or documents now exercisable by proper officer of the local authority: Courts Act 1971 (c. 23), Sch. 8 para. 1 and Local Government Act 1972 (c. 70), Sch. 29 para. 4; References to sheriff clerk of a county to be construed as reference to sheriff clerk of sheriff court district concerned: Local Government (Scotland) Act 1973 (c. 65), Sch. 27 Pt. I para. 1(3); Preamble omitted under authority of Statute Law Revision Act 1891 (c. 67); References to Ireland to be construed as exclusive of Republic of Ireland: S.R. & O. 1923/405, art. 2; This Act is not necessarily in the form in which it has effect in Northern Ireland.
- [3](#) . S. 48 extended by Transport Act 1962 (c. 46), Sch. 9 para. 6(2)
- [4](#) . S. 39 extended by Transport Act 1962 (c. 46), Sch. 9 para. 6(2)

Modifications

s. 39	Modified by Loch Ryan Port (Harbour Empowerment) Order 2010/31 (Scottish SI), Pt 1 art. 3
	Modified as incorporated with SSI 2013/308 by Whitehills Harbour and Marina (Constitution) Order 2013/308 (Scottish SI), Pt 1 art. 3(4)

Subject: Rates Other related subjects: Shipping

Keywords: Accounts; Goods; Rates; Shippers

Status:  Law In Force

Harbours, Docks, and Piers Clauses Act 1847 c. 27

Protection of the harbour, dock, and pier

This version in force from: August 1, 2000 to present

(version 2 of 2)

The text of this provision varies depending on jurisdiction or other application. See parallel texts relating to:

[England, Scotland and Wales](#) | [Other Application](#)

England, Scotland and Wales

69. Combustible matter on quays, &c., to be removed.

Every person being the owner of or having charge of any tar, pitch, resin, spirituous liquors, turpentine, oil, or other combustible thing, which shall be upon any quay, dock, or wharf belonging to the undertakers, or on the deck of any vessel within the harbour or dock, or at or near the pier, shall cause the same to be removed to a place of safety within two hours after being required so to do by notice in writing, signed by the harbour master, and if he fail so to do shall be liable on summary conviction to a fine not exceeding level 3 on the standard scale ~~forfeit a sum not exceeding [£2] Error! Hyperlink reference not valid.~~ ⁺ ~~for every hour such combustible thing shall remain in any such place as aforesaid after the expiration of two hours from the service of the said notice.~~

[\[Back to Top\]](#)

Other Application

In relation to art 3:(2):(d) of S.I. 2000/2103:

[69. Combustible matter on quays, &c., to be removed.]

Every person being the owner of or having charge of any tar, pitch, resin, spirituous liquors, turpentine, oil, or other combustible thing, which shall be upon any quay, dock, or wharf belonging to the undertakers, or on the deck of any vessel within the harbour or dock, or at or near the pier, shall cause the same to be removed to a place of safety within two hours after being required so to do by notice in writing, signed by the harbour master, and if he fail so to do shall be liable on summary conviction to a fine not exceeding level 4 on the standard scale.

] 2

[\[Back to Top\]](#)

Notes

1. Words substituted by virtue of S.R. & O. 1921/1804, art. 7(b)
2. Words substituted by Portsmouth (Tall Ships Berths) Harbour Revision Order 2000/2103 [art.3\(2\)\(d\)](#) (August 1, 2000)

Modifications

s. 69	Modified by Caledonian MacBrayne Limited (Kennacraig) Harbour Empowerment Order 2005/353 (Scottish SI) , Pt I art. 3(2)(f)
	Modified by Caledonian Maritime Assets Limited (Largs) Harbour Revision Order 2008/182 (Scottish SI) , Pt I art. 3(2)(f)
	Modified by Comhairle nan Eilean Siar (Various Harbours) Harbour Revision Order 2002/410 (Scottish SI) , Pt I art. 3
	Modified by Dumfries and Galloway Council (Garlieston) Harbour Empowerment Order 2008/190 (Scottish SI) , Pt I art. 3(2)(h)
	Modified by Dumfries and Galloway Council (Isle of Whithorn) Harbour Empowerment Order 2008/189 (Scottish SI) , Pt I art. 3(2)(h)
	Modified by Dumfries and Galloway Council (Port William) Harbour Empowerment Order 2008/188 (Scottish SI) , Pt I art. 3
	Modified by Larne Harbour Order (Northern Ireland) 1998/221 , art. 3(2)
	Modified so far as they are applicable for the purposes of, and are not inconsistent with, the provisions of 1973 c.xxi by Medway Ports Authority Act 1973 c. xxi, Pt I s. 4(iv)
	Modified by Penzance Harbour Revision Order 2009/2325 , Pt 1 art. 3(3)
	Modified in relation to the harbours of Peterhead by Peterhead Harbours Order Confirmation Act 1992 c. xii, Sch. 1 para. 1
	Modified by Poole Harbour Revision Order 2012/1777 , Pt 1 art. 3(3)(e)
	Modified by Port Babcock Rosyth Harbour Empowerment Order 2009/27 (Scottish SI) , Pt I art. 3(2)(h)
	Modified by Port Babcock Rosyth Harbour Empowerment Order 2009/27 (Scottish SI) , Pt I art. 3(2)(i)
	Modified so as to incorporate the Harbours, Docks and Piers Clauses Act 1847 by Port of Ardersier Harbour Revision Order 2014/224 (Scottish

	<u>SI), Pt 1 art. 3(4)</u>
	Modified by <u>Portsmouth (Camber Dock) Harbour Revision Order 1995/1063, art. 3(2)(d)</u>
	Modified by <u>Portsmouth (Continental Ferry Port Berth 2 Extension) Harbour Revision Order 2011/3032, Pt 1 art. 3(2)(d)</u>
	Modified by <u>Portsmouth (Millennium Waterbus Landing Stages) Harbour Revision Order 2000/2251, art. 3(2)(d)</u>
	Modified by <u>St Mary's (Isles of Scilly) Harbour Revision Order 2007/1554, art. 3(3)</u>
	Modified by <u>Whiteness Marina Harbour Revision Order 2008/361 (Scottish SI), Pt 1 art. 3(3)</u>

Subject: Shipping

Keywords: Docks; Fines; Fire precautions; Notices; Oil; Removal

Crown Copyright material is reproduced with the permission of the Controller of HMSO and the Queen's Printer for Scotland



Wylfa Newydd Project

Appendix 4b

PINS Reference Number: EN010007

4 December 2018

Revision 1.0
Examination Deadline 2

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

[This page is intentionally blank]



Trinity House

Trinity House
Tower Hill
London EC3N 4DH
United Kingdom
Tel: 020 7481 6900
Fax: 020 7480 7662
www.trinityhouse.co.uk

Sent by Email to:
REDACTED@CliffordChance.com
REDACTED@Horizonnuclearpower.com

Thursday 3rd August 2017

Dear REDACTED,

**Re: Wylfa Newydd Development Consent Order:
Harbour and Marine Provisions**

Thank you for providing Trinity House with early access to your DCO harbour and marine provisions.

As you are aware Trinity House is the General Lighthouse Authority for England, Wales, the Channel Islands and Gibraltar with functions and powers principally derived from the Merchant Shipping Act 1995 (as amended).

We welcome the opportunity to review and comment on the draft DCO. We make the following observations:

Article Number	Trinity House Comment
1	<p>Incorporation of Harbours, Docks and Piers Clauses Act 1847 –</p> <p>It is noted that you wish not to incorporate Section 28 and Section 77 of the above Act.</p> <p>s28- Exemption of vessels in her Majesty's service, &c. from rates. s77- The Undertaker shall erect lighthouses and lay down buoys, as directed Trinity House.</p> <p>Trinity House assert that aforementioned provisions are covered by Article 28 and Article 14 of the draft DCO respectively and Provisions of the Merchant Shipping Act 1995 (MSA1995).</p>

16	<p>Safety of Navigation</p> <p>Trinity House propose that minor alteration be made to clause 16 so that it reads as follows:</p> <p>(1) No marine works comprised in the authorised development are to be commenced until a scheme to secure safety of navigation has been submitted to and approved in writing by the Maritime and Coastguard Agency Following appropriate consultation with Trinity House.</p> <p>(2) The approved scheme must make provision for-</p> <ul style="list-style-type: none"> (a) additional aids to navigation and the reporting by the undertaker of aids to navigation to Trinity House; (b) retention of safety vessels; and (c) the circumstances where Her Majesty's Coastguard should be notified of any matter. <p>(3) The authorised development is to be carried out in accordance with the approved scheme except to the extent that a variation to the approved scheme is approved by the persons mentioned in paragraph (1).</p>
28	<p>Saving for Trinity House</p> <p>Noted</p>
Misc.	<p>Inclusion of Directly Applicable Legislation</p> <p>Trinity House note that the Undertaker, other than where specifically prescribed by the provisions of the Development Consent Order, will remain compliant with all relevant Legislation or Statutes enacted by Parliament</p>

Trinity House would welcome early dialogue with Horizon Limited with regard any aspects of this scheme which may affect the safety of navigation.

Yours sincerely,

REDACTED [NAME]
LEGAL ADVISOR
 Direct Dial: REDACTED
 Mobile: REDACTED
 E-Mail: REDACTED

Wylfa Newydd Project

Appendix 4c

PINS Reference Number: EN010007

4 December 2018

Revision 1.0

Examination Deadline 2

Planning Act 2008

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

[This page is intentionally blank]

REDACTED

Subject: FW: Wylfa Newydd - Engagement on SHA boundary

ProjectCode: 70-40454382

ProjectName: UK Nuclear Build

ProjectType: MATTER

ProjectEmailAddress: 70-40454382@ldtpocs.lid.cliffordchance.com

ProjectCategoryId: 0

PrincipalFilerUserId: 921765

From: REDACTED
Sent: Monday, 31 July 2017 13:42
To: REDACTED

Subject: RE: Wylfa Newydd - Engagement on SHA boundary

Dear REDACTED,

I have no comments on the draft DCO.

Regards,

REDACTED

REDACTED
Offshore Renewables Advisor
Navigation Safety Branch | Maritime and Coastguard Agency
Spring Place | 105 Commercial Road | Southampton | SO15 1EG
Tel: REDACTED | Mob: REDACTED | Email: REDACTED



From: REDACTED
Sent: 21 July 2017 10:48
To: REDACTED
Subject: RE: Wylfa Newydd - Engagement on SHA boundary

Thanks – please find attached the current draft of the marine section of the DCO. As mentioned in the meeting this is a work in progress (and remains confidential) but it would be very useful for us to get your comments at this stage.

If possible, we would appreciate it if you could send through any comments by the end of the month.

Regards,

REDACTED

Senior Associate, Clifford Chance LLP
10 Upper Bank Street, London, E14 5JJ
Direct Dial: REDACTED
Mobile: REDACTED
Switchboard: REDACTED
Fax: REDACTED

From: REDACTED
Sent: 21 July 2017 09:31
To: REDACTED
Subject: RE: Wylfa Newydd - Engagement on SHA boundary

Good Morning,

Thanks for the notes and your time on Tuesday.

We look forward to receiving the full DCO document so and will make comments later.

Best regards

REDACTED
Navigation (Examiner) Manager

Trinity House,
Tower Hill,
London,
EC3N 4DH

Tel:
Mob:
email:

From: REDACTED
Sent: 20 July 2017 08:28
To: REDACTED
Cc: REDACTED
Subject: RE: Wylfa Newydd - Engagement on SHA boundary

All,

Please find minutes from our meeting attached. Please can you either provide comment, or confirm these are accurate.

Kind regards,
REDACTED

-----Original Appointment-----

From: REDACTED
Sent: 22 June 2017 09:58
To: REDACTED
Subject: Wylfa Newydd - Engagement on SHA boundary
When: 18 July 2017 11:00-13:30 (UTC) Dublin, Edinburgh, Lisbon, London.
Where: Trinity House, Tower Hill, London, EC3N 4DH

All,

Ahead of our meeting tomorrow please see proposed agenda below:

1. Project overview
2. Marine consenting strategy
3. SHA limits
4. CHA risk assessment
5. Harbour related powers in the DCO

Kind regards,

All,

Meeting invitation as per our e-mail chain.

Are you able to confirm the location for the meeting is correct? I took the address from your signature. Please let me know if I need to invite anyone else. I will send a draft agenda closer to the time – please let me know if you would like to cover anything specific as part of this.

Regards,

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.horizzonnuclearpower.com.

This communication, together with any files or attachments transmitted with it contains information which is confidential and may be subject to legal privilege and is intended solely for the use by the named recipient. If you are not the intended recipient you must not copy, distribute, publish or take any action in reliance on it. If you have received this communication in error, please notify postmaster@thls.org and delete it from your computer systems. Trinity House reserves the right to monitor all communications for lawful purposes. Receipt of this email does not imply consent to use or provide this email address, or any others contained therein, to any third party for any purposes. The contents of this email are protected under international copyright law. This email originated from the Corporation of Trinity House of Deptford Strand which is incorporated by Royal Charter in England and Wales. The Royal Charter number is RC 000622. The Registered office is Trinity House, Tower Hill, London, EC3N 4DH.

To save energy and paper please print this email only if you really need to.

This message and any attachment are confidential and may be privileged or otherwise protected from disclosure. If you are not the intended recipient, please notify the sender immediately and delete this message and any attachment from your system. Do not copy them or disclose the contents to any other person.

Clifford Chance LLP is a limited liability partnership registered in England & Wales under number OC323571. CC Worldwide Limited is a company registered in England & Wales under number 5663642. The registered office and principal place of business of both is at 10 Upper Bank Street, London, E14 5JJ. Both are authorised and regulated by the Solicitors Regulation Authority whose rules can be accessed at <http://www.sra.org.uk/solicitors/handbook/code/content.page>. For details of our complaints procedure, and of our policy on payment of interest on any money we hold for you in a client account, see http://www.cliffordchance.com/Legal_statements.html. For further details of Clifford Chance, see our website at www.cliffordchance.com.

Email communications may be monitored by Clifford Chance, as permitted by applicable law and regulations.

This email has been scanned by the BT Assure MessageScan service
The service is delivered in partnership with Symantec.cloud

For more information please visit <http://www.globalservices.bt.com>

 Subject to the need to keep up to date file records, please consider your environmental responsibility before printing this email

 Subject to the need to keep up to date file records, please consider your environmental responsibility before printing this email

This email has been scanned by the BT Assure MessageScan service
The service is delivered in partnership with Symantec.cloud

For more information please visit <http://www.globalservices.bt.com>

[CC]70-40454382[/CC]

Wylfa Newydd Project

Appendix 6a

PINS Reference Number: EN010007

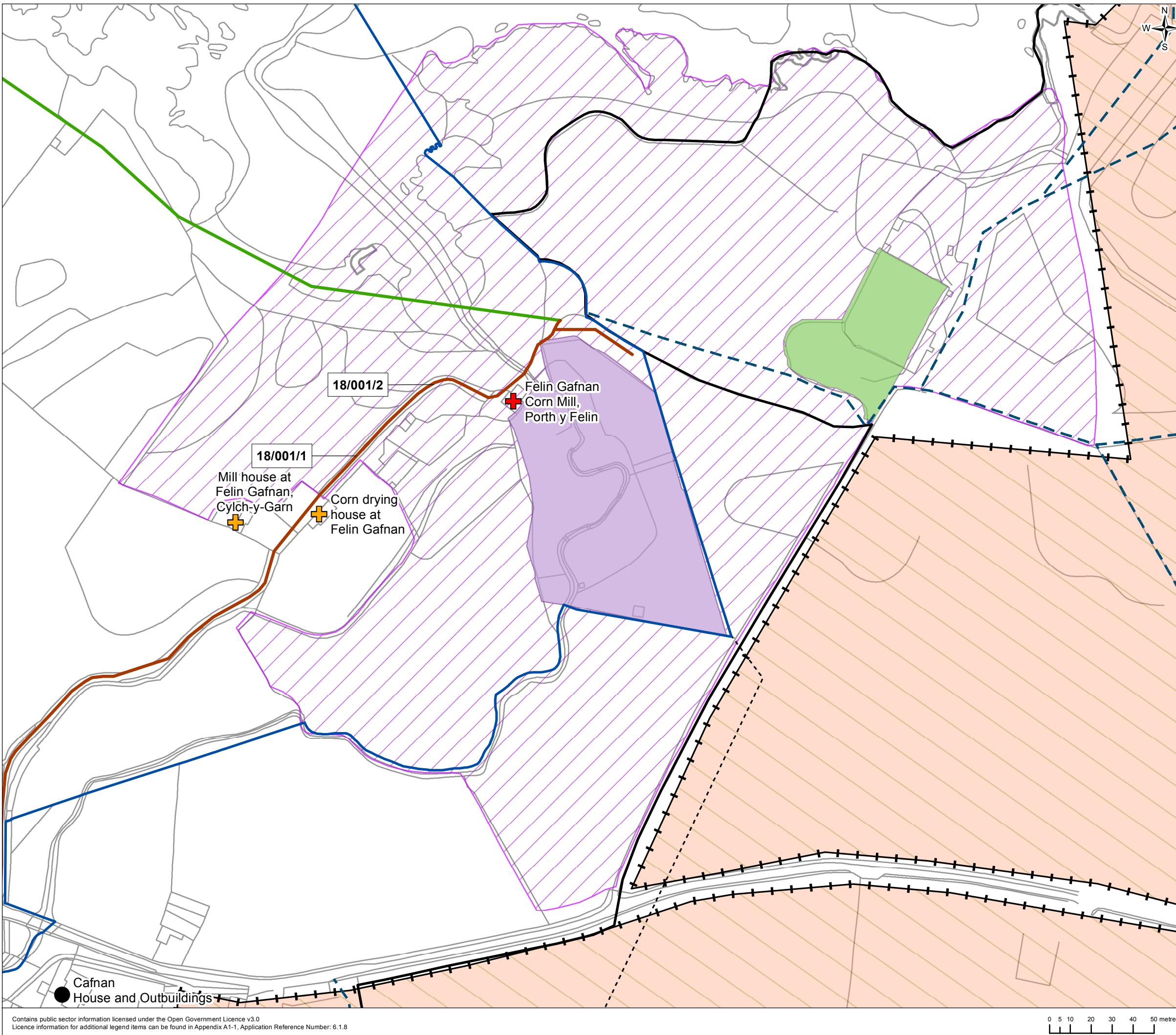
4 December 2018

Revision 1.0
Examination Deadline 2

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

[This page is intentionally blank]

FIGURE 1a



1.0	NOV 18	DCO submission	HNPWL	HNPWL	HNPWL	HNPWL
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	App'd
Client						
Project						
WYLFA NEWYDD PROJECT						
Drawing Title						
Q6.0.17 – PLAN OF HERITAGE ASSETS AND PUBLIC ACCESS WITH ILLUSTRATIVE SITE PREPARATION AND CLEARANCE ACTIVITIES						
Scale	1:1,768 @A3 and 1,250 @A4	DO NOT SCALE				
Jacobs No.	60PO80AS					
Client No.						
Drawing No.	60PO80AS_Q6.0.17_01a					
This drawing is not to be used in whole or in part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.						

Wylfa Newydd Project

Appendix 6b

PINS Reference Number: EN010007

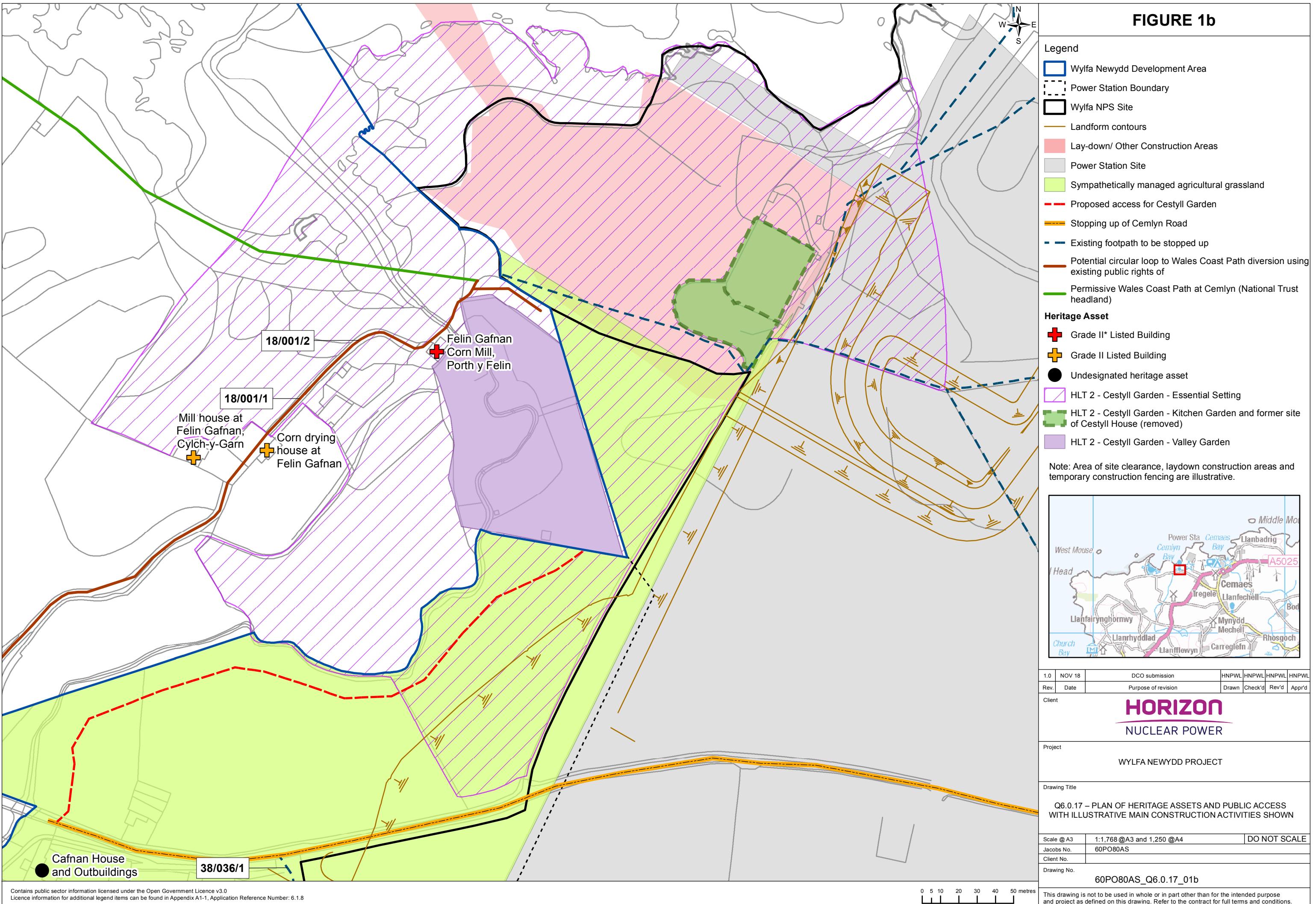
4 December 2018

Revision 1.0
Examination Deadline 2

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

[This page is intentionally blank]

FIGURE 1b



Wylfa Newydd Project

Appendix 6c

PINS Reference Number: EN010007

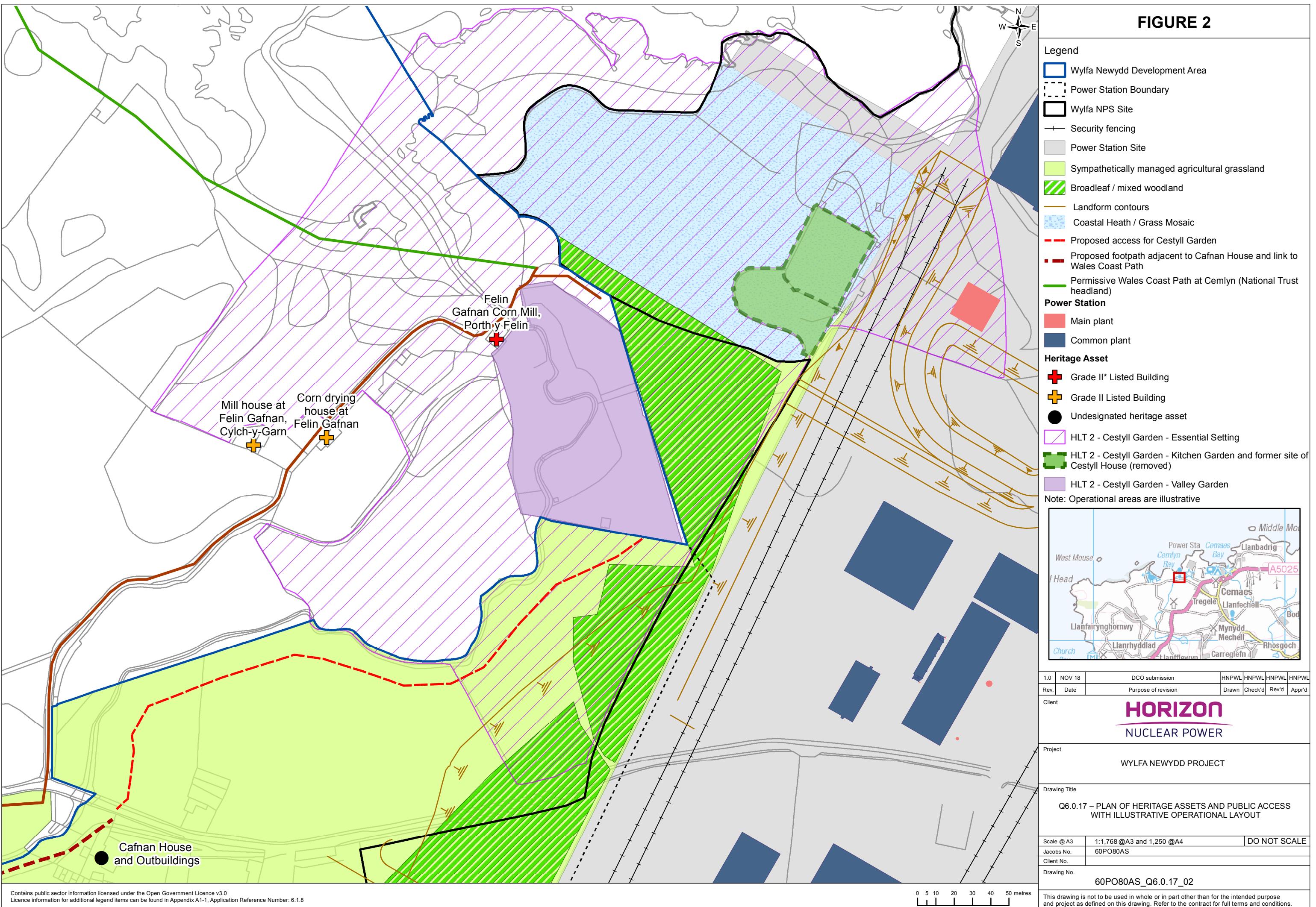
4 December 2018

Revision 1.0
Examination Deadline 2

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

[This page is intentionally blank]

FIGURE 2



Wylfa Newydd Project

Appendix 7a

PINS Reference Number: EN010007

4 December 2018

Revision 1.0
Examination Deadline 2

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

[This page is intentionally blank]

EXISTING VIEW - SUMMER

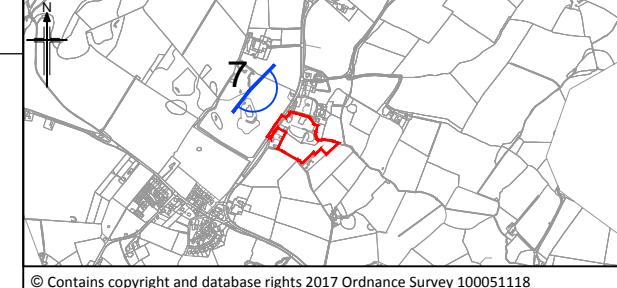


PHOTOMONTAGE - OPERATION YEAR 15 (SUMMER)



VIEWPOINT NO 7: View from footpath west of the MEEG in AONB

Date of photograph: 26.7.16
Time of photograph: 16:35
Lighting conditions: Clear, cloudy
OS grid reference: 231542, 387357
Viewpoint ground elevation: 64m
Camera height above ground level: 1.6m
Camera type: Canon EOS 5D MARK II
Camera lens size: 50mm
Aperture: f.9
ISO: 200
Shutter speed: 1/400
Included angle of photograph: 80°



Notes

1. Photomontage is to be used for illustrative purposes only.
2. Refer to the photomontage methodology within this appendix.
3. Viewpoints surveyed using handheld GPS unit.
4. Images (as printed on A3 sheet) are to be viewed at approximately 27cm from the eye.
5. Existing vegetation growth has not been represented due to uncertainty of both species, growth rates / age and also land owners maintenance regimes.
6. Graphical representations of year 1 and year 15 scenarios have been undertaken using transparent green blocks to represent mitigation / landscape planting.

1.1	NOV 18	First Written Question responses	HNPWL	HNPWL	HNPWL	HNPWL
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	App'r'd
Client						
Project						
WYLFA NEWYDD PROJECT ENVIRONMENTAL STATEMENT						

Drawing title
OFF-SITE POWER STATION FACILITIES
PHOTOMONTAGE VIEWPOINT NO.7 (YEAR 15)

Scale @ A3 AS SHOWN DO NOT SCALE

Jacobs No. 60PO8077

Client No. -

Drawing No. 60PO8077_DCO_VOL_E_APP_10_05_02

This drawing is not to be used in whole or in part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

Wylfa Newydd Project

Appendix 7b

PINS Reference Number: EN010007

4 December 2018

Revision 1.0
Examination Deadline 2

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

[This page is intentionally blank]

EXISTING VIEW - WINTER

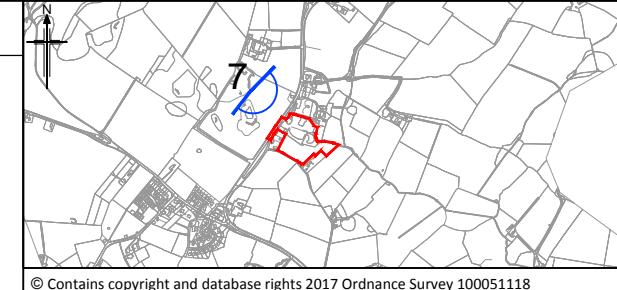


PHOTOMONTAGE - OPERATION YEAR 1 (WINTER)



VIEWPOINT NO 7: View from footpath west of the MEEG in AONB

Date of photograph: 22.3.16
Time of photograph: 10:20
Lighting conditions: Clear, cloudy
OS grid reference: 231541, 387360
Viewpoint ground elevation: 64m
Camera height above ground level: 1.6m
Camera type: Canon EOS 5D MARK II
Camera lens size: 50mm
Aperture: f.9
ISO: 200
Shutter speed: 1/250
Included angle of photograph: 80°



Notes

1. Photomontage is to be used for illustrative purposes only.
2. Refer to the photomontage methodology within this appendix.
3. Viewpoints surveyed using handheld GPS unit.
4. Images (as printed on A3 sheet) are to be viewed at approximately 27cm from the eye.
5. Existing vegetation growth has not been represented due to uncertainty of both species, growth rates / age and also land owners maintenance regimes.

© Contains copyright and database rights 2017 Ordnance Survey 100051118

1.1	NOV 18	First Written Question responses	HNPWL	HNPWL	HNPWL	HNPWL
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	App'r'd

Client	HORIZON NUCLEAR POWER					
--------	---------------------------------	--	--	--	--	--

Project	WYLFA NEWYDD PROJECT ENVIRONMENTAL STATEMENT					
---------	---	--	--	--	--	--

Drawing title
OFF-SITE POWER STATION FACILITIES
PHOTOMONTAGE VIEWPOINT NO.7 (OPENING YEAR)

Scale @ A3 AS SHOWN DO NOT SCALE
Jacobs No. 60PO8077
Client No. -

Drawing No.
60PO8077_DCO_VOL_E_APP_10_05_01
This drawing is not to be used in whole or in part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

Wylfa Newydd Project

Appendix 8a

PINS Reference Number: EN010007

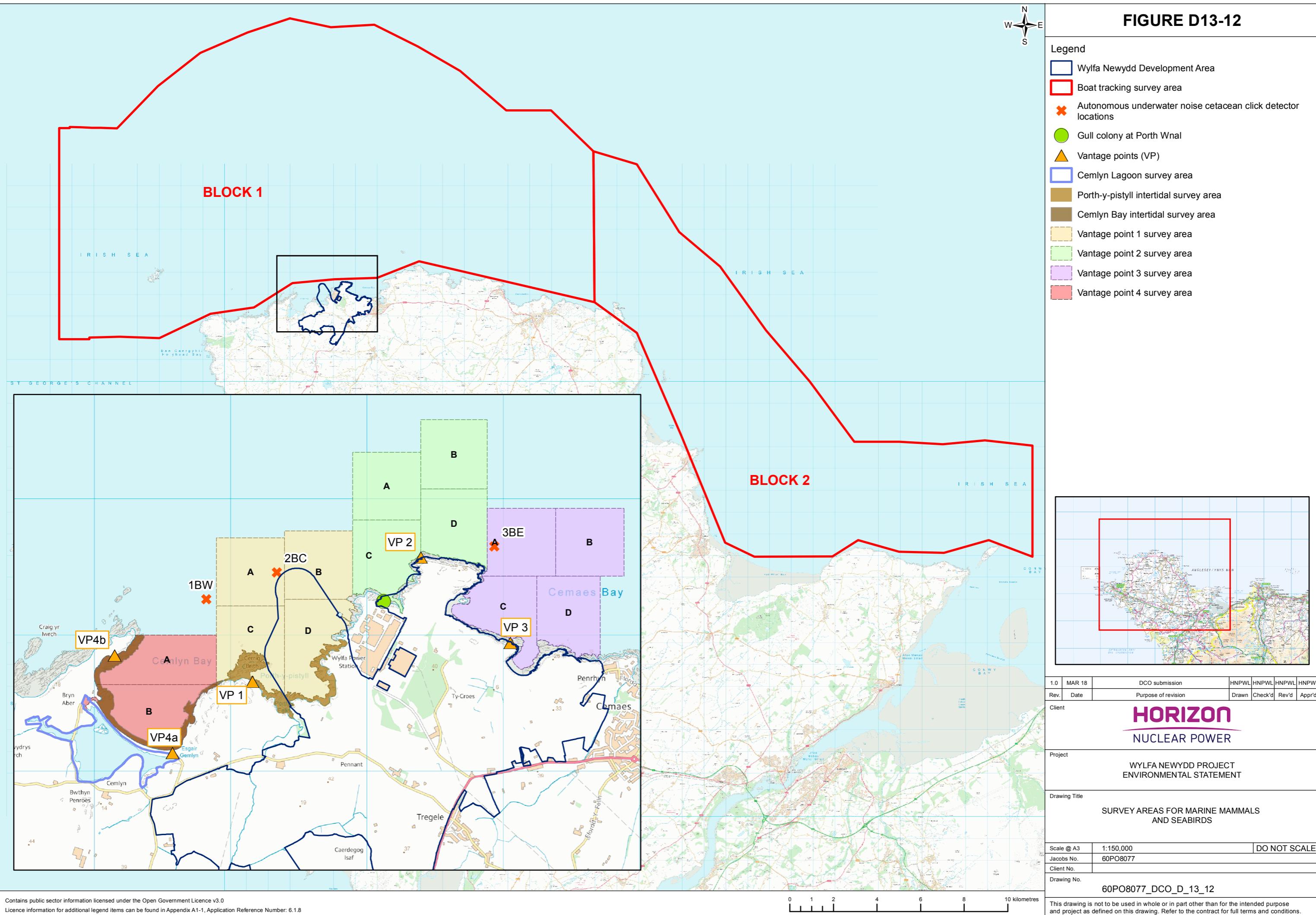
4 December 2018

Revision 1.0
Examination Deadline 2

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

[This page is intentionally blank]

FIGURE D13-12



Wylfa Newydd Project

Appendix 9a

PINS Reference Number: EN010007

4 December 2018

Revision 1.0
Examination Deadline 2

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

[This page is intentionally blank]

Receptor Details				Results with embedded and best practice mitigation				
Address	Building Use	Group	Sensitivity	Highest construction only free-field noise (L _{Aeq,1hr})		Magnitude of Change	Significance of Effect	
				Day	Night			
RIVERSIDE CARAVAN PARK, LL68 0RA	Commercial	H	Low	45.3	33.3	Negligible	Negligible	
16, HIGH STREET, LL67 0HH	Commercial	H	Low	46.7	36.5	Negligible	Negligible	
J PARRY & HUGHES, LL68 0SB	Commercial	H	Low	45.9	33.9	Negligible	Negligible	
WILLIAMS BAKERY, LL67 0HL	Commercial	H	Low	52.8	42.1	Small	Minor	
BRYN MECHELL CARAVAN PARK, LL68 0RG	Commercial	H	Low	55.6	41.7	Small	Minor	
POST OFFICE, LL68 0RA	Commercial	H	Low	47.7	35.5	Small	Minor	
THE WAREHOUSE, LL67 0ES	Commercial	H	Low	47.1	39.0	Small	Minor	
3, HIGH STREET, LL67 0HH	Commercial	H	Low	55.2	43.5	Small	Minor	
2, HIGH STREET, LL67 0HH	Commercial	H	Low	50.5	39.8	Small	Minor	
STAG INN, LL67 0EW	Commercial	H	Low	51.5	39.8	Small	Minor	
D J & J M OWEN & SON, THE GARAGE, LL68 0	Commercial	H	Low	48.1	35.7	Small	Minor	
6, MOUNTAIN ROAD, LL68 0SB	Commercial	H	Low	47.6	35.3	Small	Minor	
POST OFFICE, LL67 0HH	Commercial	H	Low	53.8	41.7	Small	Minor	
27, HIGH STREET, LL67 0HH	Commercial	H	Low	53.9	42.5	Small	Minor	
15, HIGH STREET, LL67 0HH	Commercial	H	Low	54.2	42.2	Small	Minor	
K & J DIRECT, LL67 0HH	Commercial	H	Low	54.1	41.9	Small	Minor	
L ROWLAND & CO (RETAIL) LTD, MEDICAL HAL	Commercial	H	Low	55.2	43.5	Small	Minor	
9, HIGH STREET, LL67 0HH	Commercial	H	Low	53.0	42.3	Small	Minor	

FOEL FACH LLANFECHELL,FOEL FACH, LL68 0	Commercial	H	Low	55.0	38.7	Small	Minor
PANDY BAR, LL68 0SW	Commercial	H	Low	55.6	40.9	Small	Minor
18, HIGH STREET, LL67 0HH	Commercial	H	Low	47.3	35.9	Small	Minor
CEMAES BAY DENTAL PRACTICE,1 THE OLD LO CLUB 1M FROM 1 VICTORIA ROAD. ON VICTOR	Commercial	H	Low	56.7	44.2	Small	Minor
WAEN FARM CARAVAN PARK, LL68 0RG	Commercial	H	Low	52.8	41.1	Small	Minor
THE LAUNDRY 27M FROM THE STABLES, BRYND	Commercial	H	Low	49.5	36.4	Small	Minor
GARAGE AT D J & J M OWEN & SON, THE GAR	Commercial	H	Low	47.3	35.1	Small	Minor
BRITISH TELECOM,TELEPHONE EXCHANGE, LL6	Commercial	H	Low	57.5	44.4	Medium	Minor
GARAGE 7M FROM BROOKSIDE GARAGE, 33M FR	Commercial	H	Low	58.5	41.5	Medium	Minor
BROOKSIDE GARAGE, LL67 0DA	Commercial	H	Low	59.2	42.2	Medium	Minor
OAKFIELD STORES, LL67 0DN	Commercial	H	Low	62.4	41.8	Medium	Minor
SHOP UCHAF, LL67 0DW	Commercial	H	Low	67.6	51.4	Large	Moderate
T J PRITCHARD & SONS,BRYN Y GOF, LL67 0	Commercial	H	Low	72.4	52.5	Large	Moderate
THE VILLAGE HALL, LL67 0HL	Community	B	Medium	54.0	42.1	Small	Minor
THE VILLAGE HALL, LL67 0HL COMMUNITY CENTRE 42M FROM ARWELFA 10M F	Community	B	Medium	54.0	42.1	Small	Minor
	Community	H	Medium	56.3	41.5	Small	Minor

THE VILLAGE HALL, LL67 0HL	Community	H	Medium	54.0	42.1	Small	Minor
CEFN GLAS HOTEL, LL68 0PT	Hotel	H	High	48.0	35.9	Small	Moderate
YE OLDE VIGOUR HOTEL, LL67 0HH	Hotel	H	High	50.6	40.5	Small	Moderate
WOBURN HILL HOTEL, LL67 0HU	Hotel	H	High	55.3	42.9	Small	Moderate
HARBOUR HOTEL, LL67 0NN	Hotel	H	High	54.6	42.6	Small	Moderate
GADLYS HOTEL, LL67 0LH	Hotel	H	High	58.0	44.9	Medium	Major
ELECTRICITY SUB STATION 93M FROM PEN Y	Industrial	H	Negligible	53.3	41.4	Small	Negligible
TANK 146M FROM HAUL Y GWYNT IN WYLFA PO	Industrial	H	Negligible	65.8	61.5	Medium	Negligible
TANKS 438M FROM MAGNOX ELECTRIC PLC, WY	Industrial	H	Negligible	69.5	68.9	Large	Minor
TANK 193M FROM HAUL Y GWYNT IN WYLFA PO	Industrial	H	Negligible	68.7	60.3	Large	Minor
PUBLIC CONVENIENCE 46M FROM GLASFRYN, M	N/A	H	Negligible	53.4	41.9	Small	Negligible
PUBLIC CONVENIENCE 3M FROM SALON NEWYDD	N/A	H	Negligible	47.8	36.6	Small	Negligible
TRAV C 239M FROM MAGNOX ELECTRIC PLC, W	N/A	H	Negligible	-88.0	53.3	Medium	Negligible
BOAT HOUSE 312M FROM HAUL Y GWYNT 313M	N/A	H	Negligible	65.5	55.6	Medium	Negligible
ISLE OF ANGLESEY COUNTY COUNCIL,CEMAES	Office	H	Low	56.3	44.0	Small	Minor
36, HIGH STREET, LL67 0HL	Office	H	Low	50.4	39.6	Small	Minor
MEDDYGFA CEMAES, LL67 0HH	Office	H	Low	54.0	41.8	Small	Minor

TANKS 167M FROM MAGNOX ELECTRIC PLC, WY	Office	H	Low	67.8	65.9	Large	Moderate
TANKS 285M FROM MAGNOX ELECTRIC PLC, WY	Office	H	Low	70.1	70.6	Large	Moderate
TANKS 132M FROM MAGNOX ELECTRIC PLC, WY	Office	H	Low	67.3	64.0	Large	Moderate
MAGNOX ELECTRIC PLC,WYLFA POWER STATION	Office	H	Low	71.7	59.1	Large	Moderate
SOUTH OFFICES MAGNOX ELECTRIC PLC,WYLFA	Office	H	Low	79.2	74.9	Large	Moderate
PLACE OF WORSHIP 7M FROM STONEY GATES F	Place of worship	H	Medium	54.7	42.0	Small	Minor
SUNDAY SCHOOL 3M FROM GWALIA 5M FROM UN	Place of worship	H	Medium	47.7	35.5	Small	Minor
LLANRHWYDRYS CHURCH 97M FROM TYN LLAN F	Place of worship	H	Medium	56.7	42.4	Small	Minor
CHURCH 3M FROM GORWEL ATHOL STREET. 6M	Place of worship	H	Medium	56.2	42.4	Small	Minor
ST MARY'S CHURCH 54M FROM OLD RECTORY 6	Place of worship	H	Medium	53.9	40.7	Small	Minor
ST PATRICK'S CHURCH 7M FROM TY N LLAN 2	Place of worship	H	Medium	59.2	45.6	Medium	Moderate
TY CAPEL BETHESDA, LL67 0DA	Place of worship	C	Medium	63.2	43.4	Medium	Moderate
LLANFECHELL PRIMARY SCHOOL, LL68 0SA	School	H	High	51.5	37.6	Small	Moderate
CEMAES BAY PRIMARY SCHOOL, LL67 0LB	School	H	High	57.6	44.2	Medium	Major

Wylfa Newydd Project

Appendix 10a

PINS Reference Number: EN010007

4 December 2018

Revision 1.0
Examination Deadline 2

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

[This page is intentionally blank]



Engineering: Career Route Map

Find out more at: www.horizonnuclearpower.com/careers

School / FE College

LEVEL 1

- **GCSE:** D – G
- Welsh Baccalaureate Foundation Skills Challenge Certificate (KS 4) (Applicable to Wales only)
- Engineering Learning Programme Level 1
- Essential Skills

LEVEL 2

- **GCSE:** A* – C, Maths – B, English – C
- Welsh Baccalaureate Foundation or National Skills Challenge Certificate (KS 4) (Applicable to Wales only)
- Engineering Learning Programme Level 2
- Essential Skills
- **BTEC Level 2 / NVQ 2:** Engineering, Construction and Built Environment, Science, ICT.

LEVEL 3

- **BTEC Level 3 / NVQ 3:** Engineering, Construction and Built Environment, Science, ICT.
- **A Level:** Maths, Physics, Chemistry
- Welsh Baccalaureate Foundation / National Skills Challenge Certificate (Post – 16) (Applicable to Wales only)
- Engineering Learning Programme Level 3
- Essential Skills

FE / HE Education

FE: HIGHER APPRENTICESHIP (LEVEL 4 QUALIFICATION)

Recommended areas:

- Advanced Manufacturing, Power, IT, Sustainable Technologies, Mechanical and Electrical.
- Combining workplace and learning.

FE: FOUNDATION DEGREE / HND (LEVEL 5 QUALIFICATION)

- Foundation Degree (FdEng) Energy & Power Technologies
- Foundation Degree in Nuclear Engineering (Power Generation)
- HNC General Engineering
- HNC / HND Electrical & Electronic Technology
- HNC / HND Mechanical Technology

UNDERGRADUATE DEGREE (BENG / MENG – LEVEL 6 QUALIFICATION)

Recommended areas:

- Mechanical Engineering
- Electrical Engineering
- Power Systems
- Physics
- Nuclear Engineering

Engineering Roles

FOR AN ENGINEERING ROLE A DEGREE IN THE RELEVANT ENGINEERING, TECHNICAL OR SCIENCE SUBJECT IS PREFERRED.

Engineering is vital for the safe operation of a nuclear power station and a new plant will require nuclear, mechanical, and electrical engineers as well as chemists, environmental specialists and radiation protection specialists. Engineering staff act as technical advisors to the operations team, and play a vital role in the long term health of the plant.

Examples of posts and roles:

ELECTRICAL ENGINEER

MAINTENANCE ENGINEER

NUCLEAR ENGINEER

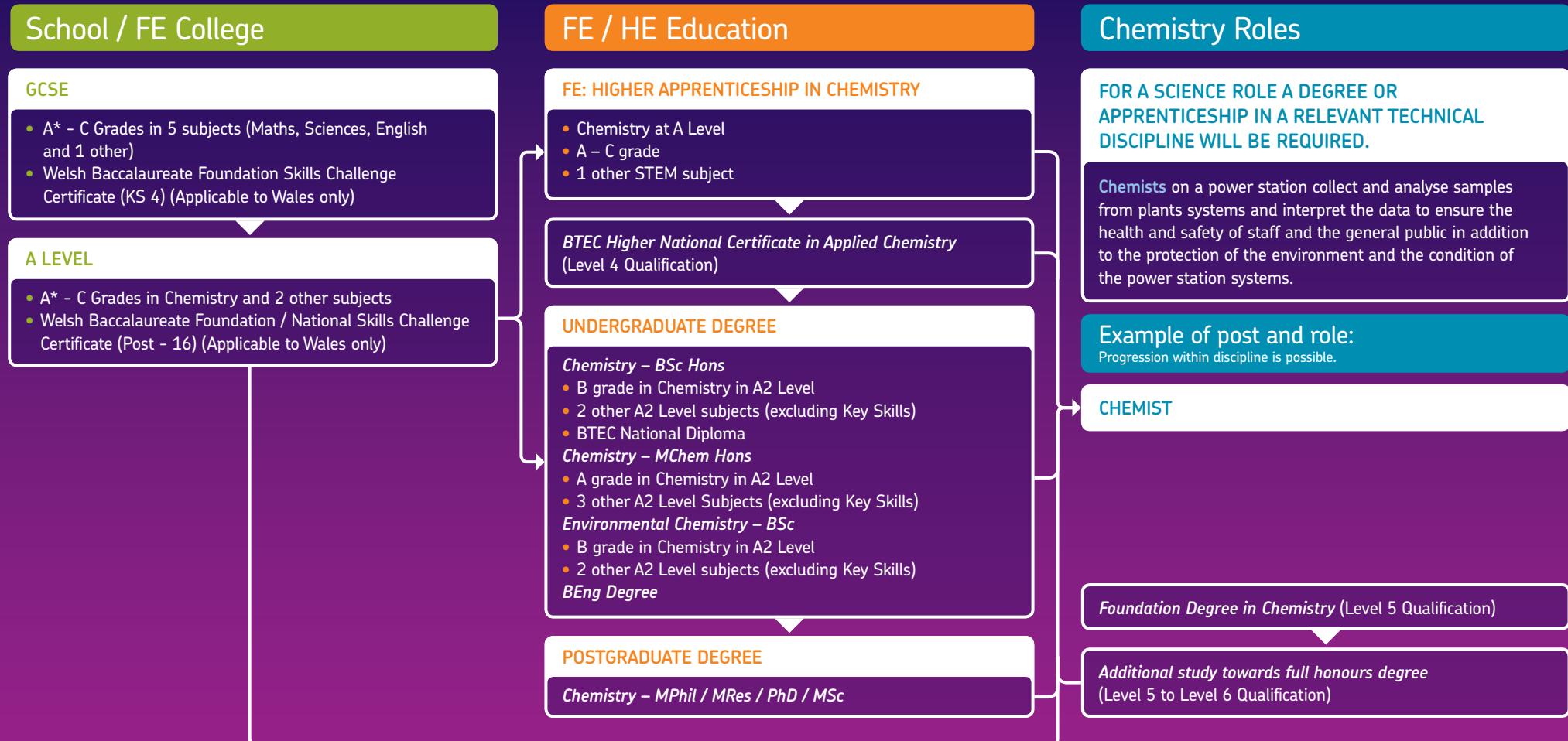
MECHANICAL ENGINEER

PROCESS CONTROL ENGINEER



Chemistry: Career Route Map

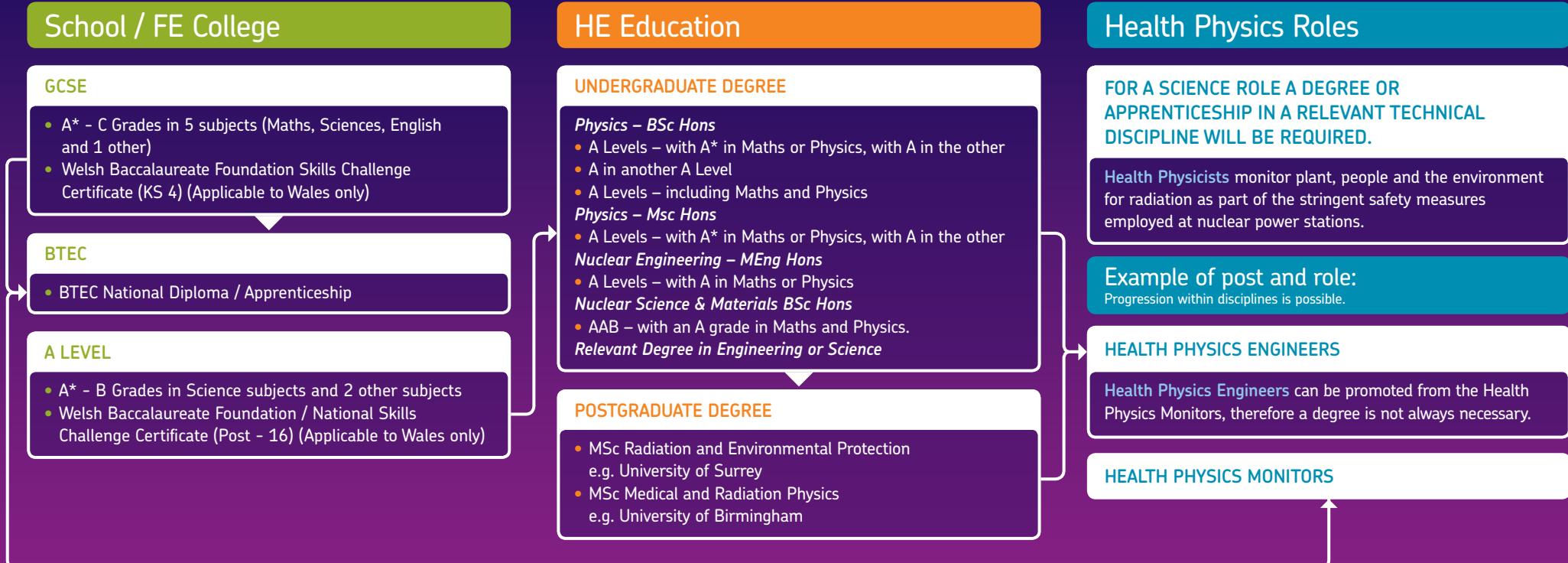
Find out more at: www.horizonnuclearpower.com/careers





Health Physics: Career Route Map

Find out more at: www.horizonnuclearpower.com/careers





Maintenance: Career Route Map

Find out more at: www.horizonnuclearpower.com/careers

School / FE College

LEVEL 1

- **GCSE:** D – G
- Welsh Baccalaureate Foundation Skills Challenge Certificate (KS 4) (Applicable to Wales only)
- Engineering Learning Programme Level 1
- Essential Skills

LEVEL 2

- **GCSE:** A* – C, Maths – B, English – C
- Welsh Baccalaureate Foundation or National Skills Challenge Certificate (KS 4) (Applicable to Wales only)
- Engineering Learning Programme Level 2
- Essential Skills
- **BTEC Level 2 / NVQ 2:** Engineering, Construction and Built Environment, Science, ICT.

LEVEL 3

- **BTEC Level 3 / NVQ 3:** Engineering, Construction and Built Environment, Science, ICT.

A LEVEL

A Level: Maths, Physics, Chemistry

- Welsh Baccalaureate Foundation / National Skills Challenge Certificate (Post – 16) (Applicable to Wales only)
- Engineering Learning Programme Level 3
- Essential Skills

FE / HE Education

FE

- BTEC Level 3 Subsidiary Diploma in Engineering.
- BTEC Level 3 Diploma in Operations and Maintenance Engineering.

ADVANCED / HIGHER APPRENTICESHIP

Recommended areas:

- Advanced Manufacturing, Power, IT, Electrical, C&I, Mechanical.
- Combining workplace and learning.

UNDERGRADUATE DEGREE

- Control and Instrumentation (C&I) Engineering
- Electronic Engineering / Electrical Engineering
- Mechanical Engineering
- Materials Science

Maintenance Roles

FOR SKILLED ROLES INCLUDING MAINTENANCE, A TECHNICAL VOCATIONAL QUALIFICATION IS PREFERRED, SUCH AS A RELEVANT APPRENTICESHIP.

Maintenance staff provide support to the power station to ensure the smooth operation of the facility. Maintenance workers on a nuclear power station perform a wide range of important roles that are critical to the everyday running of the plant.

Examples of posts and roles:

MECHANICAL MAINTENANCE TECHNICIANS

ELECTRICAL MAINTENANCE TECHNICIANS

PROCESS COMPUTING MAINTENANCE TECHNICIANS

MAINTENANCE ENGINEERS

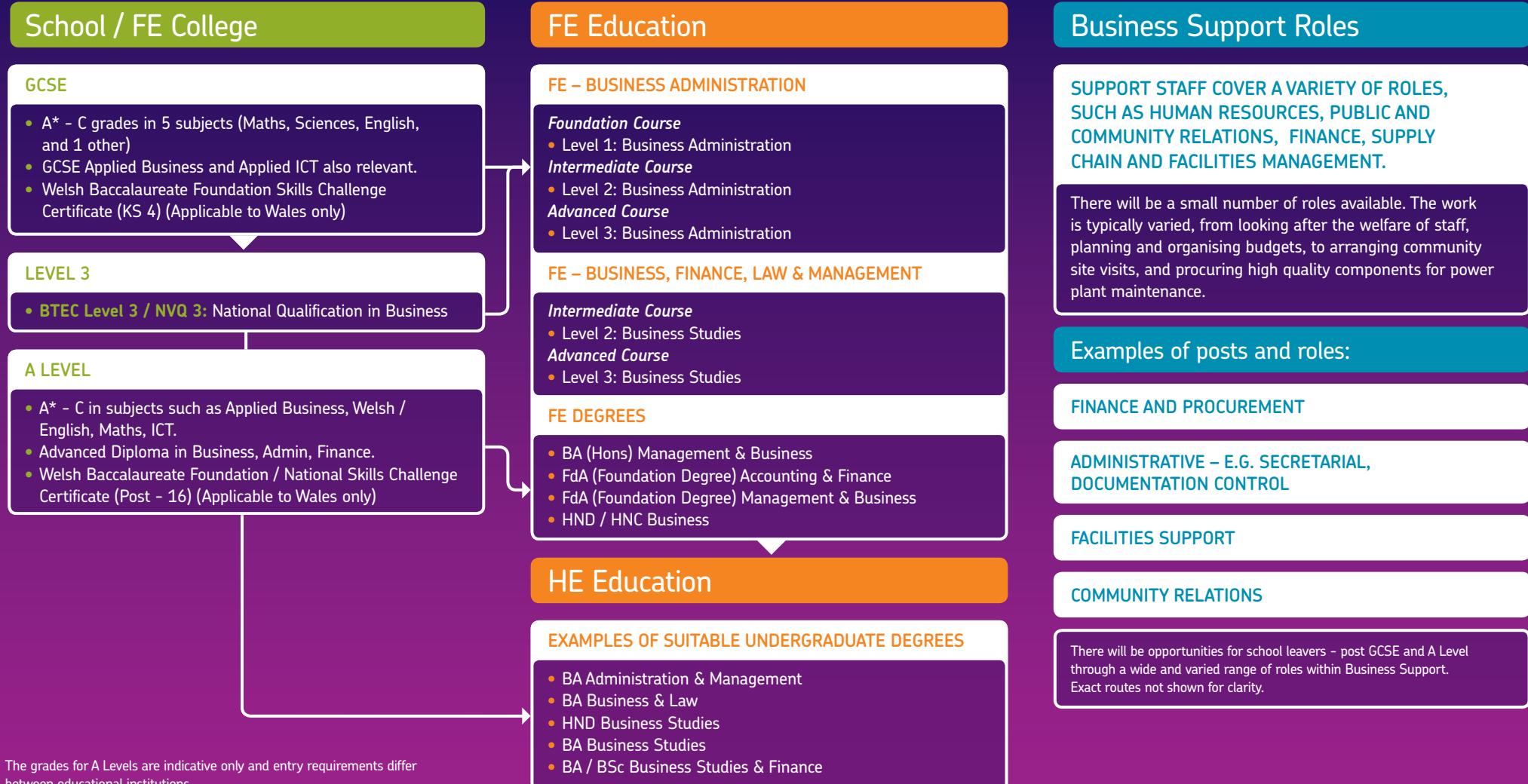
Maintenance Engineers can be promoted from the Maintenance Technicians, therefore a degree is not always necessary.

Engineering – with exception of Physics and Nuclear Engineering



Business Support: Career Route Map

Find out more at: www.horizonnuclearpower.com/careers





WYLFA NEWYDD

Operational: Career Route Map

Find out more at: www.horizonnuclearpower.com/careers

School / FE College

GCSE

- A* – C grades in 5 subjects (Maths, Sciences, English, and 1 other)
- BTEC Level 2 Engineering
- Welsh Baccalaureate Foundation Skills Challenge Certificate (KS 4) (Applicable to Wales only)

LEVEL 3

- **BTEC Level 3:** Engineering

A LEVEL

- A* – C Grades in at least one subject such as Design & Technology, Engineering or IT.
- Welsh Baccalaureate Foundation / National Skills Challenge Certificate (Post - 16) (Applicable to Wales only)

FE Education

FE

- BTEC Level 3 in relevant technical subjects, e.g. Subsidiary Diploma in Engineering and Diploma in Operations and Maintenance Engineering.

ADVANCED / HIGHER APPRENTICESHIP

Recommended areas:

- Advanced Manufacturing, Power, IT, Electrical, C&I.
- Combining workplace and learning.

HE Education

UNDERGRADUATE DEGREE

Recommended areas:

- Mechanical Engineering
- Electrical Engineering
- Power Systems
- Physics
- Nuclear Engineering
- Chemistry

Operational Roles

Operations staff operate the nuclear reactor, steam turbine and other items of plant on a shift system, covering 24 hours a day, 7 days a week. Such activities are essential to the day-to-day running of the plant. Operations staff run the reactors, steam turbines and ancillary plant on a shift rota.

Work experience gained in a variety of relevant technical / engineering posts at a nuclear power station can also be an entry point to training for operational posts.

In company training programme: up to two years with continual assessment.

Example of post and role:

Progression within disciplines is possible.

FIELD OPERATOR

OPERATIONS SUPPORT

CONTROL ROOM OPERATOR

Control Room Operators can be promoted from the Field Operators, therefore a degree is not always necessary.

Wylfa Newydd Project

Appendix 10b

PINS Reference Number: EN010007

4 December 2018

Revision 1.0
Examination Deadline 2

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

[This page is intentionally blank]



WYLFA NEWYDD

Peirianneg: Trywydd Gyrfaol

Cewch ragor o wybodaeth yn: www.horizonnuclearpower.com/Gyrfaoedd

Ysgol / Coleg Addysg Bellach

LEFEL 1

- TGAU: D – G
- Tystysgrif Her Sgiliau Sylfaenol Baglriaeth Cymru (CA 4) (Perthnasol i Gymru'n unig)
- Rhaglen Dysgu Peirianneg Lefel 1
- Sgiliau Hanfodol

LEFEL 2

- TGAU: A* – C, Mathemateg – B, Saesneg – C
- Sylfaen Baglriaeth Cymru neu Dystysgrif Her Sgiliau Cenedlaethol (CA 4) (Perthnasol i Gymru'n unig)
- Rhaglen Dysgu Peirianneg Lefel 2
- Sgiliau Hanfodol
- BTEC Lefel 2 / NVQ 2: Peirianneg, Adeiladu a'r Amgylchedd Adeiledig, Gwyddoniaeth, TGCh

LEFEL 3

- BTEC Lefel 3 / NVQ 3: Peirianneg, Adeiladu a'r Amgylchedd Adeiledig, Gwyddoniaeth, TGCh

- Lefel A: Mathemateg, Ffiseg, Cemeg
- Sylfaen Baglriaeth Cymru / Tystysgrif Her Sgiliau Cenedlaethol (Ôl 16 oed) (Perthnasol i Gymru'n unig)
- Rhaglen Dysgu Peirianneg Lefel 3
- Sgiliau Hanfodol

Addysg Bellach / Uwch

ADDYSG BELLACH: PRENTISIAETH UWCH (CYMHWYSTER LEFEL 4)

Meysydd sy'n cael eu hargymhell:

- Gweithgynhyrchu Uwch, Pŵer, TG, Technolegau Cynaliadwy, Mecanyddol a Thrydanol
- Cyfuno'r gweithle a dysgu

ADDYSG BELLACH: GRADD SYLFAEN / HND (CYMHWYSTER LEFEL 5)

- Gradd Sylfaen (FdEng) Technolegau Ynni a Phŵer
- Gradd Sylfaen mewn Peirianneg Niwclear (Cynhyrchu Pŵer)
- HNC Peirianneg Gyffredinol
- HNC / HND Technoleg Drydanol ac Electronig
- HNC / HND Technoleg Fecanyddol

GRADD ISRADDDEDIG (BENG / MENG – CYMHWYSTER LEFEL 6)

Meysydd a argymhellir:

- Peirianneg Fecanyddol
- Peirianneg Drydanol
- Systemau Pŵer
- Ffiseg
- Peirianneg Niwclear

Rolau Peirianyddol

AR GYFER RÔL BEIRIANYDDOL MAE GRADD YN Y PWNC PEIRIANYDDOL, TECHNEGOL NEU WYDDONIAETH PERTHNASOL YN DDYMUOL.

Mae Peirianneg yn hanfodol i weithredu gorsaf pŵer niwclear yn ddiogel ac mewn gorsaf newydd bydd angen peirianyddion niwclear, mecan yddol a thrydanol yn ogystal â chemegwyr, arbenigwyr amgylcheddol ac arbenigwyr diogelu rhag ymbelydredd. Mae staff peirianyddol yn gweithredu fel cyngorwyr technegol i'r tîm gweithrediadau, ac maent yn chwarae rôl hanfodol yn iechyd tymor hir yr orsaf.

Enghreifftiau o swyddi a rolau:

PEIRIANYDDION TRYDANOL

PEIRIANYDDION CYNAL A CHADW

PEIRIANYDDION NIWCLEAR

PEIRIANYDDION MECANYDDOL

PEIRIANYDDION RHEOLI PROSESAU



WYLFA NEWYDD

Cemeg: Trywydd Gyrfaol

Cewch ragor o wybodaeth yn: www.horizonnuclearpower.com/Gyrfaoedd

Ysgol / Coleg Addysg Bellach

TGAU

- Graddau A* - C mewn 5 pwnc (Mathemateg, Gwyddorau, Saesneg ac 1 arall)
- Tystysgrif Her Sgiliau Sylfaenol Baglriaeth Cymru (CA 4) (Perthnasol i Gymru'n unig)

LEFEL A

- Graddau A* - C mewn Cemeg a 2 bwnc arall
- Sylfaen Baglriaeth Cymru / Tystysgrif Her Sgiliau Cenedlaethol (Ôl - 16 oed) (Perthnasol i Gymru'n unig)

Addysg Bellach / Uwch

ADDYSG BELLACH: PRENTISIAETH UWCH MEWN CEMEG

- Cemeg Lefel A
- Gradd A - C
- 1 pwnc STEM arall

Tystysgrif Genedlaethol Uwch BTEC mewn Cemeg Gymhwysol (Cymhwyster Lefel 4)

GRADD ISRADDEDIG

Cemeg - BSc Anrh

- Gradd B mewn Cemeg mewn Lefel A2
- 2 bwnc Lefel A2 arall (ac eithrio Sgiliau Allweddol)
- Diploma Genedlaethol BTEC

Cemeg - MChem Anrh

- Gradd A mewn Cemeg mewn Lefel A2
- 3 pwnc Lefel A2 arall (ac eithrio Sgiliau Allweddol)

Cemeg Amgylcheddol - BSc

- Gradd B mewn Cemeg mewn Lefel A2
- 2 bwnc Lefel A2 arall (ac eithrio Sgiliau Allweddol)

Gradd BEng

GRADD ÔL-RADDEDIG

Cemeg - MPhil / MRes / PhD / MSc

Rolau Cemeg

AR GYFER RÔL WYDDONIAETH BYDD ANGEN GRADD NEU BRENTISIAETH MEWN DISGYBLAETH DECHNEGOL BERTHNASOL.

Mewn gorsaf bŵer mae **cemegwyr** yn casglu ac yn dadansoddi samplau o systemau'r orsaf ac yn dehongli data i sicrhau iechyd a diogelwch staff a'r cyhoedd yn ogystal â gwarchod yr amgylchedd a chyflwr systemau'r orsaf bŵer.

Enghreifftiau o swyddi a rolau:

Mae datblygiad o fewn disgyblaeth yn bosibl.

CEMEG

Gradd Sylfaen mewn Cemeg (Cymhwyster Lefel 5)

Astudiad pellach tuag at radd anrhydedd lawn Cymhwyster Lefel 5 i Lefel 6)



Ffiseg lechyd: Trywydd Gyrfaol

Cewch ragor o wybodaeth yn: www.horizonnuclearpower.com/Gyrfaoedd

Ysgol / Coleg Addysg Bellach

TGAU

- Graddau A* – C mewn 5 pwnc (Mathemateg, Gwyddorau, Saesneg ac 1 arall)
- Tystysgrif Her Sgiliau Sylfaenol Baglriaeth Cymru (CA 4) (Perthnasol i Gymru'n unig)

BTEC

- Diploma Genedlaethol BTEC / Prentisiaeth

LEFEL A

- Graddau A* – B mewn pynciau Gwyddoniaeth a 2 bwnc arall
- Sylfaen Baglriaeth Cymru / Tystysgrif Her Sgiliau Cenedlaethol (Ôl – 16 oed) (Perthnasol i Gymru'n unig)

Addysg Uwch

GRADD ISRADDIEDIG

Ffiseg – BSc Anrh

- Lefelau A – gydag A* mewn Mathemateg neu Ffiseg, gydag A yn y llall
- A mewn Lefel A arall
- Lefelau A– gan gynnwys Mathemateg a Ffiseg

Ffiseg – Msc Anrh

- Lefelau A – gydag A* mewn Mathemateg neu Ffiseg, gydag A yn y llall

Peirianneg Niwclear – MEng Anrh

- Lefelau A – gydag A mewn Mathemateg neu Ffiseg
- Gwyddoniaeth a Deunyddiau Niwclear – BSc Anrh
- AAB – gyda gradd A mewn Mathemateg a Ffiseg

Gradd Berthnasol mewn Peirianneg neu Wyddoniaeth

GRADD ÔL-RADDEDIG

- MSc Ymbelydredd a Diogelu'r Amgylchedd e.e. Prifysgol Surrey
- MSc Ffiseg Feddygol ac Ymbelydredd e.e. Prifysgol Birmingham

Rolau Ffiseg lechyd

BYDD ANGEN GRADD NEU BRENTISIAETH MEWN DISGYBLAETH DECHNEGOL BERTHNASOL AR GYFER RÔL WYDDONIAETH.

Mae Ffisegwyr lechyd yn monitro peiriannau, pobl a'r amgylchedd ar gyfer ymbelydredd fel rhan o'r mesurau diogelwch caeth a ddefnyddir mewn gorsafoedd pŵer niwclear.

Enghraifft o swyddi a rolau:

Mae datblygiad o fewn disgyblaeth yn bosibl.

PEIRANYDDION FFISEG IECHYD

Gall Peiranyddion Ffiseg lechyd gael dyrchafiad o swyddi Monitoriaid Ffiseg lechyd, felly nid yw gradd yn angenrheidiol bob amser.

MONITORIAID FFISEG IECHYD



WYLFA NEWYDD

Cynnal a Chadw: Trywydd Gyrfaoedd

Cewch ragor o wybodaeth yn: www.horizonnuclearpower.com/Gyrfaoedd

Ysgol / Coleg Addysg Bellach

LEFEL 1

- TGAU: D - G
- Her Sgiliau Sylfaenol Baglriaeth Cymru (CA 4) (Perthnasol i Gymru'n unig)
- Rhaglen Dysgu Peirianneg Lefel 1
- Sgiliau Hanfodol

LEFEL 2

- TGAU: A* - C Mathemateg B – Saesneg – C
- Sylfaen Baglriaeth Cymru neu Dystysgrif Her Sgiliau Cenedlaethol (CA 4) (Perthnasol i Gymru'n unig)
- Rhaglen Dysgu Peirianneg Lefel 2
- Sgiliau Hanfodol
- BTEC Lefel 2 / NVQ 2:** Peirianneg, Adeiladu a'r Amgylchedd Adeiledig, Gwyddoniaeth, TGCh

LEFEL 3

- BTEC Lefel 3 / NVQ 3:** Peirianneg, Adeiladu a'r Amgylchedd Adeiledig, Gwyddoniaeth, TGCh

LEFEL A

- Lefel A:** Mathemateg, Ffiseg, Cemeg
- Sylfaen Baglriaeth Cymru / Tystysgrif Her Sgiliau Cenedlaethol (Ôl 16 oed) (Perthnasol i Gymru'n unig)
- Rhaglen Dysgu Peirianneg Lefel 3
- Sgiliau Hanfodol

Addysg Bellach / Uwch

ADDYSG BELLACH

- Is-ddiploma BTEC Lefel 3 mewn Peirianneg
- Diploma BTEC Lefel 3 mewn Gweithredoedd a Pheirianneg Cynnal a Chadw

UWCH BRENTISIAETH / PRENTISIAETH UWCH

Meysydd a argymhellir:

- Gweithgynhyrchu Uwch, Pŵer, TG, Trydanol, C&I, Mecanyddol
- Cyfuno'r gweithle a dysgu

GRADD ISRADDDEDIG

- Peirianneg Rheoli ac Offeryniaeth (C&I)
- Peirianneg Electronig / Peirianneg Drydanol
- Peirianneg Fecanyddol
- Gwyddoniaeth Deunyddiau

Rolau Cynnal a Chadw

AR GYFER SGILIAU MEDRUS, GAN GYNNWYS
CYNNAL A CHADW, MAE CYMHWYSTER
GALWEDIGAETHOL TECHNEGOL YN DDYMUNOL,
FEL PRENTISIAETH BERTHNASOL.

Mae staff cynnal a chadw yn rhoi cymorth i'r orsaif bŵer i sicrhau bod y cyfleusterau'n rhedeg yn esmywyd. Mae gweithwyr cynnal a chadw mewn gorsaf pŵer niwclear yn cyflawni amrywiaeth o rolau pwysig sy'n hanfodol i redeg yr orsaif o ddydd i ddydd.

Enghreifftiau o swyddi a rolau:

TECHNEGWYR CYNNAL A CHADW MECANYDDOL

TECHNEGWYR CYNNAL A CHADW TRYDANOL

TECHNEGWYR CYNNAL A CHADW CYFRIFIANNU PROSESAU

PEIRIANYDDION CYNNAL A CHADW

Gellir dyrchafu Peirianyddion Cynnal a Chadw o blith y Technegwyr Cynnal a Chadw, felly nid yw gradd yn angenheidiol bob tro.

Peirianneg – ac eithrio Ffiseg a Pheirianneg Niwclear.



Cymorth Busnes: Trywydd Gyrfaol

Cewch ragor o wybodaeth yn: www.horizonnuclearpower.com/Gyrfaoedd

Ysgol / Coleg Addysg Bellach

TGAU

- Graddau A* – C mewn 5 pwnc (Mathemateg, Gwyddorau, Saesneg ac 1 arall)
- TGAU Busnes Cymhwysol a TGCh Cymhwysol hefyd yn berthnasol
- Tystysgrif Her Sgiliau Sylfaenol Bagloriaeth Cymru (CA 4) (Perthnasol i Gymru'n unig)

LEFEL 3

- BTEC Lefel 3 / NVQ 3: Cymhwyster Cenedlaethol mewn Busnes

LEFEL A

- Graddau A* – C mewn pynciau fel Busnes Cymhwysol, Cymraeg / Saesneg, Mathemateg, TGCh
- Diploma Uwch mewn Busnes, Gweinyddu, Cyllid
- Sylfaen Bagloriaeth Cymru / Tystysgrif Her Sgiliau Cenedlaethol (Ôl – 16 oed) (Perthnasol i Gymru'n unig)

Addysg Bellach

ADDYSG BELLACH – GWEINYDDU BUSNES

- Cwrs Sylfaen
 - Lefel 1: Gweinyddu Busnes
 - Cwrs Canolradd
 - Lefel 2: Gweinyddu Busnes
 - Cwrs Uwch
 - Lefel 3: Gweinyddu Busnes

ADDYSG BELLACH – BUSNES, CYLLID, Y GYFRITH A RHEOLI

- Cwrs Canolradd
 - Lefel 2: Astudiaethau Busnes
 - Cwrs Uwch
 - Lefel 3: Astudiaethau Busnes

GRADDAU ADDYSG BELLACH

- BA (Anrh) Rheoli a Busnes
- FdA (Gradd Sylfaen) Cyfrifyddu a Chyllid
- FdA (Gradd Sylfaen) Rheoli a Busnes
- HND / HNC Busnes

Addysg Uwch

ENGHREIFFTIAU O RADDAU ISRADDDEDIG ADDAS

- BA Gweinyddu a Rheoli
- BA Busnes a'r Gyfraith
- HND Astudiaethau Busnes
- BA Astudiaethau Busnes
- BA / BSc Astudiaethau Busnes a Chyllid

Rolau Cymorth Busnes

MAE STAFF CYMORTH YN GYFRIFOL AM AMRYWIAETH O ROLAU, FEL ADNODDAU DYNOL, CYSLLTIADAU CYHOEDDUS A CHYMUEDOL, CYLLID, Y GADWYN GYFLENWI A RHEOLI CYFLEUSTERAU.

Bydd nifer fach o rolau ar gael. Bydd y gwaith yn dueddol o fod yn amrywiol, o edrych ar ôl lles staff, cynllunio a threfnu cyllidebau, i drefnu ymweliadau cymunedol â'r safle, a chaffael cydrannau o ansawdd uchel i gynnal a chadw offer yr orsaf.

Enghreiffiau o swyddi a rolau:

CYLLID A CHAFFAEL

GWEINYDDOL – E.E. YSGRIFENYDDOL, RHEOLI DOGFENNAETH

CYMORTH CYFLEUSTERAU

CYSLLTIADAU CYMUNEDOL

Bydd cyfleoedd i rai sy'n gadael ysgol – ar ôl TGAU a Lefel A drwy amrywiaeth eang o rolau mewn Cymorth Busnes. Ni ddangosir llwybrau manwl er mwyn i gadw eglurder.



Gweithrediadau: Trywydd Gyrfaol

Cewch ragor o wybodaeth yn: www.horizonnuclearpower.com/Gyrfaoedd

Ysgol / Coleg Addysg Bellach

TGAU

- Graddau A* - C mewn 5 pwnc (Mathemateg, Gwyddorau, Saesneg ac 1 arall)
- Lefel 2 BTEC mewn Peirianneg
- Tystysgrif Her Sgiliau Sylfaenol Bagloriaeth Cymru (CA 4) (Perthnasol i Gymru'n unig)

LEFEL 3

- Lefel 3 BTEC: Peirianneg

LEFEL A

- Graddau A* - C mewn o leiaf un pwnc fel Dylunio a Thechnoleg, Peirianneg neu TG.
- Sylfaen Bagloriaeth Cymru / Tystysgrif Her Sgiliau Cenedlaethol (Ôl - 16 oed) (Perthnasol i Gymru'n unig)

Addysg Bellach

ADDYSG BELLACH

- BTEC Lefel 3 mewn pynciau technegol perthnasol e.e. Is-ddiploma mewn Peirianneg a Diploma mewn Peirianneg Gweithrediadau a Chynnal a Chadw

UWCH BRENTISIAETH / PRENTISIAETH UWCH

Meysydd a argymhellir:

- Gweithgynhyrchu Uwch, Pŵer, TG, Trydanol, C&I.
- Cyfuno'r gweithle a dysgu

Addysg Uwch

GRADD ISRADDDEDIG

Meysydd a argymhellir:

- Peirianneg Fecanyddol
- Peirianneg Drydanol
- Systemau Pŵer
- Ffiseg
- Peirianneg Niwclear
- Cemeg

Rolau Gweithrediadol

Mae staff gweithrediadau'n gweithredu'r adweithydd niwclear, y tybin ager a pheiriannau drwy weithio system shifftiau, yn weithredol 24 awr y ddyl, 7 diwrnod yr wythnos. Mae gweithgarwch o'r fath yn hanfodol i redeg y peiriannau o ddydd i ddydd. Mae staff gweithrediadau'n rhedeg yr adweithyddion, y tyrbinau ager a pheiriannau ategol ar rota shifftiau.

Gall profiad gwaith a gafwyd mewn amrywiaeth o swyddi technegol / peiriannyddol perthnasol mewn gorsaf pŵer niwclear hefyd fod yn bwyt mynediad i hyfforddiant ar gyfer swyddi gweithrediadau.

Rhaglen hyfforddi fewnol cwmnïau: hyd at ddwy flynedd gydag asesiad parhaus.

Enghraifft o swyddi a rolau:

Mae datblygiad o fewn disgyblaethau'n bosibl.

GWEITHREDYDD MAES

CYMORTH GWEITHREDIADAU

GWEITHREDYDD YSTAFELLOEDD RHEOLI

Gall Gweithredwyr Ystafelloedd Rheoli gael ei dyrchafu o swydd Gweithredwyr Maes, felly nid yw gradd yn angenrheidiol bob amser.

Wylfa Newydd Project

Appendix 15a

PINS Reference Number: EN010007

4 December 2018

Revision 1.0
Examination Deadline 2

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

[This page is intentionally blank]

Characteristic	Soil association	
	East Keswick 1	Brickfield 2
Land use	Neutral and acid pastures, deciduous woodlands and acid communities such as bracken and gorse in the uplands supporting stock rearing on permanent grassland.	Seasonally wet pastures and woodlands. Dairying and stock rearing on permanent or short-term grassland; some cereals in drier areas.

7.3.6 In addition to these soil associations, peaty soils are known to be present within the Tre'r Gof Site of Special Scientific Interest (SSSI) and within the area proposed for the realignment of the Nant Porth-y-pistyll to the north of Caerdeog Isaf (see chapter D1, Application Reference Number: 6.4.1 for details), based on the results of the IOnGI; see appendix D7-1 (Application Reference Number: 6.4.24) for more details.

Agricultural Land Classification (ALC)

7.3.7 The ALC system set out within *Agricultural Land Classification of England and Wales. Revised Guidelines and Criteria for Grading the Quality of Agricultural Land* [RD2] defines six grades of soils:

- Grade 1 (excellent quality);
- Grade 2 (very good quality);
- Subgrade 3a (good quality);
- Subgrade 3b (moderate quality);
- Grade 4 (poor quality); and
- Grade 5 (very poor quality).

7.3.8 Grades 1 and 2 and Subgrade 3a are determined as BMV land. BMV agricultural land is the most flexible in terms of the range of crops that can be grown, the level and consistency of yield and the cost of obtaining it, and offers the best prospect for both food and non-food crop production. ALC grades are determined by the most limiting factor present, based on physical or chemical characteristics which pose long-term limitations to agricultural use.

ALC within the Wylfa Newydd Development Area

7.3.9 The 2015 ALC survey [RD3] (provided in appendix D7-1, Application Reference Number: 6.4.24) was completed at a density of one observation per four hectares and is thus considered a semi-detailed survey rather than a detailed survey [RD4]. This approach was adopted because, based on a review of desk-based information (including provisional ALC data), the survey was expected to find land predominantly not classed as BMV, i.e. Grade 3b or below.

7.3.10 Five areas were identified as potential BMV land during the semi-detailed survey. Therefore, a detailed survey was undertaken in these areas in

February 2016 [RD5] (provided in appendix D7-1, Application Reference Number: 6.4.24) to determine the extent of BMV land with greater confidence and further characterise the soil resources.

7.3.11 The ALC surveys were limited in extent to the Wylfa Newydd Development Area, as no effects are expected to occur on soils within the 250m buffer as part of the construction, operation or decommissioning of the WNDA Development. The only way in which soils could be affected within the 250m buffer would be as a result of the migration of contamination, but this is very unlikely based on the nature and spatial distribution of existing contamination, and the nature of the proposed activities for the WNDA Development.

7.3.12 The surveys identified that most of the soils within the Wylfa Newydd Development Area are Subgrade 3b, with large areas of Grade 5, and smaller areas of Grade 2 and Subgrade 3a land. A very small area of Grade 4 land was identified northeast of Tregele. Non-agricultural land was mapped for several areas of the site, including the former Wylfa Sports and Social Club, woodland, roads and buildings. It should be noted that, although some of these areas likely contain soil that could be returned to agricultural use, soil in these locations is not considered within the assessment of effects; it is considered likely that the soils would be non-BMV, based on the mapped grades in their vicinity. The locations and extents of ALC grades are shown on figure D7-2 (Application Reference Number: 6.4.101).

7.3.13 Table D7-3 presents a summary of ALC grade, area and relative percentage of the encountered grades across the Wylfa Newydd Development Area from the two ALC surveys. The total area surveyed does not add up to the total area of the Wylfa Newydd Development Area (approximately 410ha) for two reasons:

- the Wylfa Newydd Development Area has extended since the survey was conducted; and
- the Wylfa Newydd Development Area includes several areas which were not assigned ALC grades, including the sea, shoreline and Tre'r Gof SSSI.

7.3.14 However, it is considered that these areas would likely be Subgrade 3b or non-agricultural based on the classifications adjacent to them or their current/past land use.

7.3.15 For comparison purposes, table D7-3 also presents a summary of the provisional ALC grades across the entire Isle of Anglesey, where the total area of Anglesey has been taken as 71,361 hectares. The provisional ALC data for Wales [RD6] provide no differentiation between Subgrades 3a and 3b.

Table D7-3 ALC grades – spatial coverage (adapted from [RD5])

Grade/ Subgrade	Description	Wylfa Newydd Development Area		Anglesey	
		Area (ha)	Percentage (%)	Area (ha)	Percentage (%)
1	Excellent quality	0	0	0	0

Grade/ Subgrade	Description	Wylfa Newydd Development Area		Anglesey	
		Area (ha)	Percentage (%)	Area (ha)	Percentage (%)
2	Very good quality	6.5	2.0	1,116.9	1.6
3a	Good quality	18.0	5.6	27,559.3	38.6
3b	Moderate quality	224.3	69.5		
4	Poor quality	0.1	<0.1	27,213.8	38.1
5	Very poor quality	38.0	11.8	10,398.4	14.6
-	Non-agricultural	35.8	11.1	5,072.6	7.1

ALC within the 250m buffer of the study area

7.3.16 The provisional ALC data [RD6] indicate that the 250m buffer of the Wylfa Newydd Development Area comprises mainly Grade 3 and Grade 4 soils, although an area of Grade 5 soils is also mapped to the east of Tregele. See figure D7-2 (Application Reference Number: 6.4.101) for the locations of these provisional ALC grades.

Identification of soil quality receptors

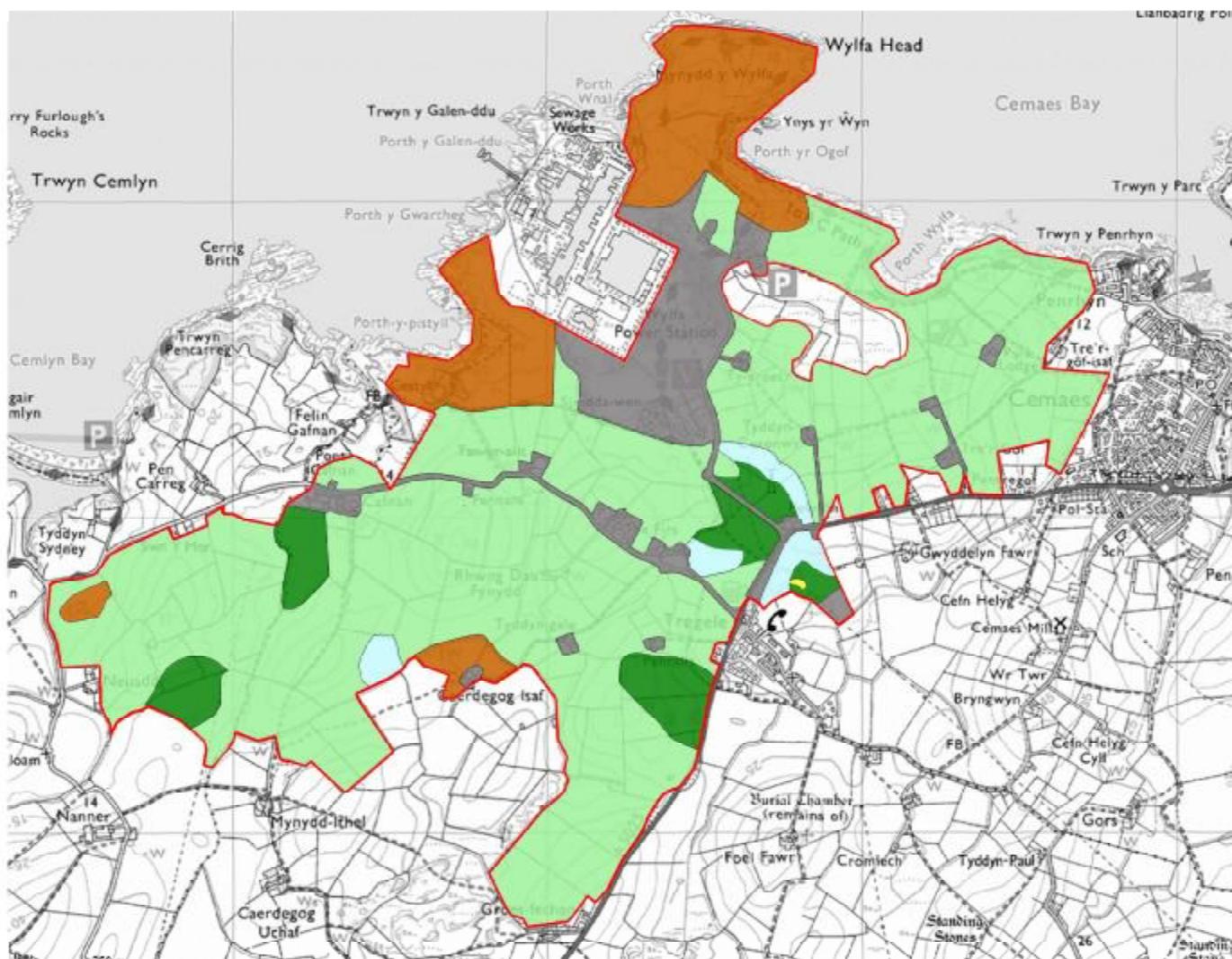
7.3.17 The value of soil as a receptor in this assessment relates to its ALC grade, with each grade classified as a receptor. Particular focus is given to BMV land (Grade 1 to Subgrade 3a) which has been allocated the highest sensitivity.

7.3.18 The assessment of potential effects on soil receptors has been limited to the Wylfa Newydd Development Area, as any potential effects on soil would be restricted to this area, rather than affecting the land within the 250m buffer (as previously discussed).

7.3.19 The extent of Grade 4 soils is very limited within the Wylfa Newydd Development Area, and the location in which they occur is unlikely to be affected significantly by the proposed activities; therefore, they have not been identified as a receptor. As such, ALC Grades/Subgrades 2, 3a, 3b and 5 comprise the receptors within the Wylfa Newydd Development Area.

7.3.20 Potential effects upon soil receptors from land contamination are discussed under the 'land contamination receptors' headings within section 7.5.

7.3.21 Effects related to the loss of ALC land in relation to land use and the economy are discussed within chapter D3 (socio-economics, Application Reference Number: 6.4.3).



Plan reproduced from Ordnance Survey map with the permission of the Controller of Her Majesty's Stationery Office. Crown Copyright Reserved.
Ordnance Survey Copyright Licence Number: 100005584



- ★ Grade 1 - excellent quality
- Grade 2 - very good quality
- Subgrade 3a - good quality
- Subgrade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-Agricultural
- * Not Present

Best and most versatile land

DRAWING TITLE

RAC6753-4: Agricultural Land Classification

CONTRACT

Wylfa Nuclear Power Station,
Isle of Anglesey

Reading Agricultural Consultants Ltd
Gate House
Beechwood Court
Long Tall
Woodcote
RG6 0RR
Tel: 01491 634232 Fax: 01491 636600
www.readingagricultural.co.uk



Scale 1:20,000 @ A4
March/2016

Wylfa Newydd Project

Appendix 16a

PINS Reference Number: EN010007

4 December 2018

Revision 1.0
Examination Deadline 2

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

[This page is intentionally blank]



Proposed New NPS for Nuclear Power Submission by Horizon Nuclear Power

**To support a submission as part of Annex A: New
NPS Listing Guidance 'Wylfa Site: Supplementary
Information Report'**

August 2018

[This page is intentionally blank]

Contents

1	Introduction.....	1
1.1	Purpose of the Report.....	1
1.2	Horizon Nuclear Power.....	1
1.3	Scope of submission.....	2
2	Site Information.....	4
2.1	Introduction.....	4
2.2	B1 and B2 - Site description and boundary	4
2.3	B3 - Timetable for deployment.....	6
3	Siting Assessment Criteria.....	11
3.1	Introduction.....	11
3.2	C1 - Flooding, Tsunami and Storm Surge	12
3.3	C2 - Coastal processes	18
3.4	C3 - Proximity to major hazard sites and major accident hazard pipelines....	20
3.5	C4 - Proximity to civil aircraft movements.....	22
3.6	C5 - Demographics.....	23
3.7	C6 - Proximity to military facilities	24
3.8	C7 - Internationally designated sites of ecological importance	24
3.9	C8 - Nationally designated sites of ecological importance.....	26
3.10	C9 - Cultural heritage.....	28
3.11	C10 - Areas of amenity and landscape value	30
3.12	C11 - Areas of groundwater protection	33
3.13	C12 - Size of site to accommodate operation	33
3.14	C13 - Access to suitable sources of cooling	34
4	Conclusion.....	38

List of Tables

Table 3-1 Baseline erosion rates.....	20
---------------------------------------	----

List of Figures

Figure 2-1 National Policy Statement Boundary	9
---	---

[This page is intentionally blank]

1 Introduction

1.1 Purpose of the Report

- 1.1.1 The Government is proposing a new National Policy Statement (NPS) for nuclear power, applicable to single reactor capacity over 1 gigawatt deployable by 2035. Government's view is that those sites listed in EN-6 continue to be those sites which can deploy the soonest and are likely to be the only sites capable of deployment by 2035. Government's approach therefore is to carry the list of potentially suitable sites from EN-6 through to the new NPS subject to them meeting updated siting criteria and updates of their environmental assessments.
- 1.1.2 In December 2017, the Government carried out a consultation on the process and proposed criteria for the re-assessment of the sites. In July 2018 it published its response to the consultation (the "*Government Response*"), setting out, at Annex I, the finalised strategic siting criteria that the Government will use to assess whether sites listed in EN-6 should continue to be listed in the new NPS.
- 1.1.3 With the exception of Hinkley Point (which has already obtained its Development Consent Order (DCO), developers of the sites listed within NPS EN-6 were invited to submit information to support the new assessments.
- 1.1.4 Horizon submitted its Nuclear Site Licence application to the Office for Nuclear Regulation (ONR) in March 2017, with a decision anticipated in late 2018. An application for Development Consent Order (DCO) for Wylfa Newydd was submitted on 1 June 2018 and accepted for examination on 28 June 2018.
- 1.1.5 Wylfa was listed in NPS EN-6 as one of the eight sites that the Government determined were potentially suitable for deployment before the end of 2025. Horizon confirms that it wishes for the site at Wylfa to remain listed in the new NPS.
- 1.1.6 Accordingly, this '**Wylfa Supplementary Information Report**' has been prepared to demonstrate why the Wylfa site continues to meet the updated siting criteria and that it is reasonable to conclude that the site can be licensed, constructed and deployed by 2035.

1.2 Horizon Nuclear Power

- 1.2.1 Horizon is a UK energy company developing a new generation of nuclear power stations. The company was established in 2009 following the UK Government's announcement that new nuclear energy would be a core element of the future electricity mix. The company was acquired by Hitachi in late 2012.
- 1.2.2 Horizon Nuclear Power Group owns two of the eight sites designated in the UK for new build in the National Policy Statement for Nuclear Power Generation (NPS EN-6, 2011).

1.2.3 Horizon Nuclear Power Group plans to provide at least 5,800MW(e) of new power station capacity to the UK – enough to power some 11 million homes – between the two sites with the first project to be located at Wylfa on Anglesey (Wylfa Newydd). Horizon plans to deliver two Hitachi-GE UK Advanced Boiling Water Reactors (UK ABWRs) at the Wylfa Newydd site, each generating an average of up to 1,527 MW(e) (nominal gross electrical capacity).

1.2.4 Horizon Nuclear Power Group anticipates main construction of Wylfa Newydd beginning around 2020, with the first unit to be operational around 2027. The projects at Wylfa Newydd and our second site at Oldbury, South Gloucestershire represent an investment of at least £20 billion, up to 60% of which could be spent in the UK. Each project will see a peak construction workforce of around 9,000, with some 850 jobs at each site during the subsequent 60 year operational phase.

1.3 Scope of submission

1.3.1 The Government Response states that “following the publication of this response Government will write to the lead developers of the remaining EN-6 sites to ask if they wish them to remain listed in the new NPS and to ask them to submit any additional information required to update the assessment of their sites against the updated strategic criteria” (paragraph 1.14 and II.8).

1.3.2 Paragraph II.10 then notes that “in confirming that there is a wish to remain listed there should be an explanation of why it is reasonable to conclude that the site can be licensed, constructed and deployed by 2035. There should be an indication of the likely timescales and progress to date in relation to commissioning and site planning. Information should also be provided in relation to the potential timing of any transmission and distribution infrastructure needed to make the site operational and an explanation of the reasoning behind any estimates. The evidence provided should, as far as possible, focus on the characteristics of a particular site, rather than any generic expectation of deployability, and give as much practical detail on dates and timelines as is possible”.

1.3.3 These matters (B2 and B3) are addressed in section 2 of this report, before addressing each of the revised siting criteria (C1 – C13) in section 3.

1.3.4 No additional technical data is submitted, though further information is provided via cross reference to relevant components of the DCO and Site Licence application submissions. These documents can be viewed at <https://infrastructure.planninginspectorate.gov.uk/projects/wales/wylfa-newydd-nuclear-power-station/?ipcsection=docs> and <https://www.horizonnuclearpower.com/our-sites/wylfa-newydd/site-licence> respectively.

1.3.5 The documents which form part of the DCO submission which are referred to in this report are:

- Order Limits (Application Reference Number: 2.1).
- Environmental Statement Figure Booklet – Volume A (Application Reference Number: 6.1.10).

- Grid Connection Statement (Application Reference Number 7.1).
- Environmental Statement Appendix D8.4 WNDA Flood Consequences Assessment (FCA) (Application Reference Number: 6.4.29).
- Environmental Statement Chapter D8 – Surface water and groundwater (Application Reference Number: 6.4.8).
- Environmental Statement Appendix D8.8 Summary of preliminary design for surface water drainage (Application Reference Number: 6.4.33).
- Environmental Statement Appendix D12.1 (Application Reference Number: 6.4.80).
- Planning Statement (Application Reference Number: 6.1).
- Environmental Statement Chapter D12 – Coastal processes (Application Reference Number: 6.4.12).
- Shadow HRA Report (Application Reference Number 5.2).
- Environmental Statement Appendix D9.23 SSSI Compensation Strategy Volume 1 (Application Reference Number 6.4.56).
- Environmental Statement Appendix D9.24 SSSI Compensation Strategy Volume 1 (Application Reference Number 6.4.57).
- Environmental Statement Chapter D11 – Cultural heritage (Application Reference Number: 6.4.11).
- Environmental Statement Chapter D10 – Landscape and visual (Application Reference Number: 6.4.10).
- Environmental Statement Chapter B1 – Introduction to the assessment process (Application Reference Number 6.2.1).
- Design and Access Statement – Volume 2 (Application Reference Number 8.2).
- Consultation Report (Application Reference 5.1).

1.3.6 The documents which form part of the Site Licence Application which are referred to in this report are:

- Nuclear Site Licence Application – Overview Document.

1.3.7 The Wylfa Newydd Project involves development over a number of different geographical locations during construction and operation. It is appropriate, however, for the purposes of the strategic considerations relating to site nomination to address only the site that would accommodate the power station. The location and nature of additional land and sites away from the Wylfa site are matters for consideration through the detailed DCO examination. The various geographical areas adopted in the DCO submission, and their relationship with the nominator site as included in EN-6 are set out in the following section.

2 Site Information

2.1 Introduction

- 2.1.1 This section of the report provides confirmation of the site boundary and information on timetable and progress, to confirm why it is reasonable to conclude that the site can be deployed by 2035 (see figure 2-1).
- 2.1.2 Annex II of the Government Response confirms that it is not necessary for the EN-6 listed sites to include a letter of support from a Credible Nuclear Power Operator (CNPO) or undertake any specific further local engagement. Significant consultation has, however, been undertaken in relation to the DCO submission.

2.2 B1 and B2 - Site description and boundary

- 2.2.1 A brief description of the site is provided at paragraph C.9.1 of EN-6, with reference to the nominator map of the site provided at the time of nomination).
- 2.2.2 Paragraph II.9 of the Government Response asks whether developers wish to propose any modifications to the site boundaries as part of confirming that they wish the site to remain listed. Further guidance is provided at paragraphs 2.3.3 and 2.3.4 of EN-6.
- 2.2.3 Paragraph 2.3.3 notes that the boundary of the nominated area may vary from the site boundary that is proposed for development consent (as it was not considered reasonable to expect nominators to have established detailed site layouts for the whole for development proposals including land needed for construction or decommissioning). Paragraph 2.3.4 therefore confirms that the SSA (Strategic Siting Assessment) was carried out on the basis that applications for development consent may also include land additional to the boundary of the listed site for other elements, including land needed for construction, decommissioning, car parks, marine landing facilities and access roads.
- 2.2.4 The nominator plan for Wylfa issued in 2009¹ included only the area proposed for nuclear new build activities and excluded the area required for the Marine Off-Loading Facility (MOLF) and cooling water intakes and outfalls. It also excluded land required for most Associated Development in the vicinity of the power station site.
- 2.2.5 The Order Limit Plans submitted with the DCO application (Application Reference Number 2.1) now show, in detail, the full extent of land within which it is proposed the authorised development may be constructed, operated and maintained. This includes all land required for:

¹ Later referred to as the Wylfa NPS Site (which is how it is described in the DCO submission).

- The Power Station: the proposed new nuclear power station, including two UK Advanced Boiling Water Reactors (UK ABWRs) to be supplied by Hitachi GE Nuclear Energy Ltd., supporting facilities, buildings, plant and structures, and radioactive waste, spent fuel storage buildings and the Grid Connection;
- Other on-site development: including landscape works and planting, drainage, surface water management systems, public access works including temporary and permanent closures and diversions of public rights of way, new Power Station Access Road and internal site roads, car parking, construction compounds and temporary parking areas, laydown areas, working areas and temporary works and structures, temporary construction viewing area, diversion of utilities, perimeter and construction fencing, and electricity connections;
- Marine Works comprising:
 - Permanent Marine Works: the Cooling Water System, Marine Off-Loading Facility (MOLF), breakwater structures, shore protection works, surface water drainage outfalls, waste water effluent outfall (and associated drainage of surface water and waste water effluent to the sea), fish recovery and return system, fish deterrent system, navigation aids and dredging; and
 - Temporary Marine Works: temporary cofferdams, a temporary access ramp, navigation aids, temporary outfalls and a temporary barge berth.
- Off-Site Power Station Facilities: comprising the Alternative Emergency Control Centre, Environmental Survey Laboratory and a Mobile Emergency Equipment Garage; and
- Associated Development: including on site temporary worker accommodation (the “*Site Campus*”); a temporary Park and Ride facility for construction workers; a temporary Logistics Centre; highway improvements on the A5025; and off-site wetland habitat creation and enhancement works.

2.2.6 Various terms are used to describe the different geographical areas used in the Wylfa Newydd Project, which comprise the total area of land within the Order Limits. These include:

- Power Station Site – this is the indicative area of land and sea within which the majority of the permanent Power Station, Marine Works and other on-site development would be situated.
- Wylfa Newydd Development Area (WNDA) – this is the indicative areas of land and sea including the Power Station Site and the surrounding areas that would be used for construction and operation of the Power Station, the Marine Works, the Site Campus and other on-site development. This area is representative of the maximum area that would be physically affected by Power Station Main Construction activities and used to form the setting and features of the operational Power Station.

- Wylfa NPS Site – this is the nominator site identified in EN-6. This is smaller than the WNDA.
- Off-site – the areas of land needed for the Wylfa Newydd Project that fall outside of the WNDA.
- Ecology mitigation areas - comprising a Notable Wildlife Enhancement Site and a Reptile Receptor Site which are contiguous with the WNDA boundary.

2.2.7 The plans contained within the Environmental Statement (ES) Figure Booklet - Volume A (Application Reference Number: 6.1.10) show the components of the Wylfa Newydd Project and demonstrate the difference between the areas of the Power Station Site, the WNDA and the Wylfa NPS Site. The WNDA is larger than the Wylfa NPS Site because it includes the area for the Marine Works and additional land required for mounding, the power station access road and junction, and an area for a construction plaza and Training & Simulator Building.

2.2.8 Some of these areas are included within the Power Station Site, which therefore also extends beyond the Wylfa NPS Site in places.

2.2.9 The plans also show the indicative power station layout and demonstrates that all of the Main Plant and Common Plant would be accommodated within the Wylfa NPS Site. This is also demonstrated by the extent of the proposed Nuclear Licensed Site (in the Nuclear Site Licence application submitted in spring last year) which is entirely contained within the Wylfa NPS Site.

2.2.10 EN-6, as noted above, recognises that the boundary of listed sites, for the purposes of nomination, can exclude additional land required for construction and decommissioning. Given all land required for the Power Station will be accommodated within the Wylfa NPS Site, it is not necessary to modify this boundary for the purposes of the new SSA. Horizon do not therefore propose any modifications to the site boundary to that included in EN-6.

2.3 B3 - Timetable for deployment

2.3.1 Given the very substantial progress made towards obtaining the relevant consents, it is considered that it is more than reasonable to conclude that the site can be licensed, constructed and deployed by 2035 (in accordance with paragraph II.10 of the Government Response).

2.3.2 Horizon submitted its Nuclear Site Licence application for the proposed Wylfa Newydd Power Station to the Office for Nuclear Regulation (ONR) in March 2017, with a decision anticipated in late 2018.

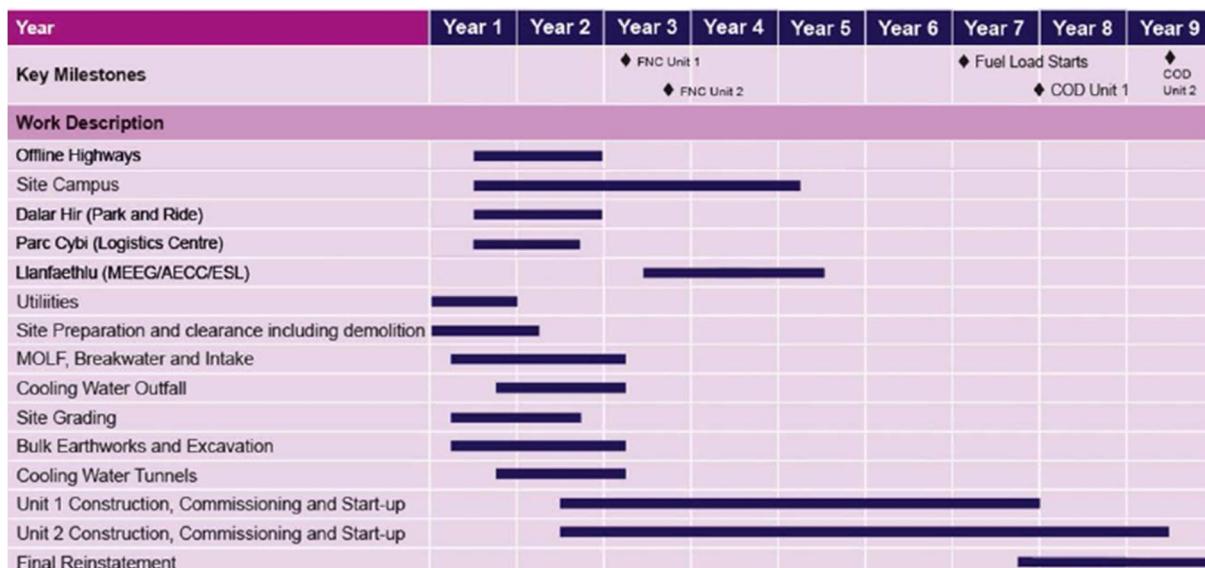
2.3.3 Horizon then submitted the application for a DCO on 1 June 2018 and it was accepted for examination on 28 June 2018. Horizon's application for a Marine Licence, Operations Combustion permit, Operations Water Discharge permit and Construction Water Discharge permit have also been "*duly made*" by Natural Resources Wales (NRW).

2.3.4 Horizon has also, in June 2018, received a positive Opinion from the European Commission under Article 37 of the Euratom Treaty which stated that the station will not have significant health or environmental impacts on other Member States.

2.3.5 Horizon has also submitted two separate applications for enabling works under the Town and Country Planning Act 1990. Planning permission for the 'On-line Highways' improvements (involving improvements to the existing A5025 between Valley and the Wylfa Newydd site) was granted by the Isle of Anglesey County Council in July 2018. A planning application was also submitted for Site Preparation and Clearance works in November 2017 and is anticipated to be considered later this year.

2.3.6 The UK ABWR has successfully completed the Generic Design Assessment (GDA) process.

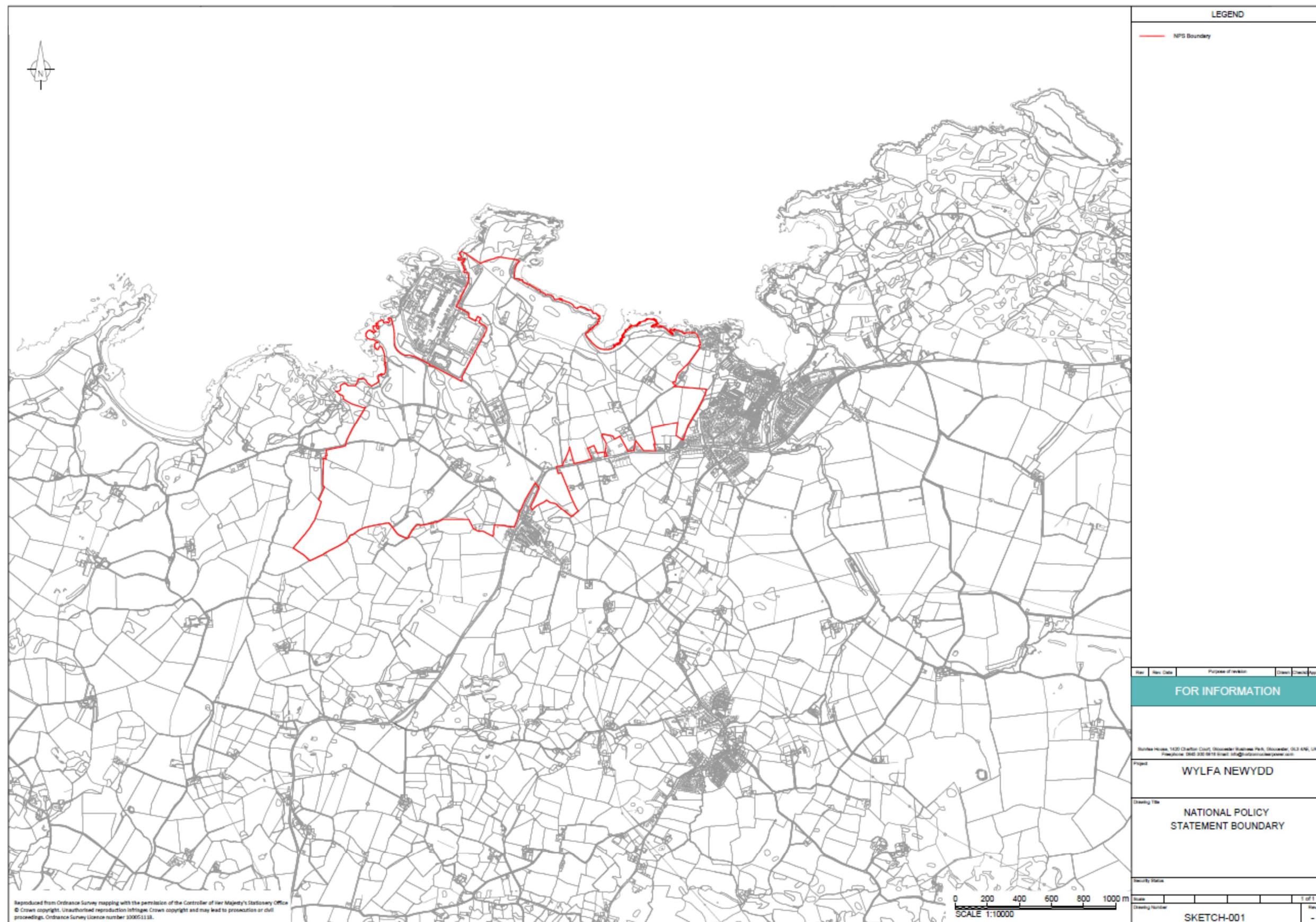
2.3.7 The Power Station construction programme is anticipated to commence in the first year following the grant of a development consent order. The Main Construction phase is anticipated to take approximately seven years, and it is anticipated that the first reactor would be deployed around 2027 and the second operational around two years later. The anticipated construction timeline is shown below:



KEY: based on reference construction schedules

2.3.8 Paragraph II.10 also seeks information in relation to the potential timing for any transmission and distribution infrastructure required. The electrical energy generated by the Wylfa Newydd Power Station would be transferred to the National Grid via the existing 400kV substation. The connection from the 400kV substation into the National Grid at Pentir near Bangor on the Welsh mainland is a separate DCO project, known as the North Wales Connection Project and is being separately taken forward by National Grid Electricity Transmission plc. It is anticipated that this application will be submitted in Autumn 2018.

2.3.9 Agreements between Horizon and National Grid Electricity Transmission plc provide a contractual basis for the connection of the Power Station to the National Electricity Transmission System (NETS). This currently provides for connection with a transmission entry capacity of 1400MW in 2024 and an additional 1400MW in 2025. Horizon is currently seeking a modification to the agreement to allow for the additional output achieved during design development of the power station, to achieve a revised net power output of 2,940MW (this is slightly lower than the nominal gross capacity as some power is consumed by the power station auxiliary equipment). This is confirmed in the Grid Connection Statement (Application Reference Number 7.1) submitted in support of the DCO application.

Figure 2-1 National Policy Statement Boundary

[This page is intentionally blank]

3 Siting Assessment Criteria

3.1 Introduction

3.1.1 The finalised strategic siting criteria set out at Annex I of the Government Response will be used to assess whether sites listed in EN-6 should continue to be listed in the new NPS. These exclusionary and discretionary criteria are based on those used in the original strategic siting assessment process in 2009, updated to be consistent with current law and policy, as well as responses provided during consultation.

3.1.2 Horizon note and welcome that the Government proposes to maintain a dialogue as appropriate during this assessment period to discuss any aspects of the nomination that require any further clarification (paragraph II.13 of the Government Response).

3.1.3 As Horizon stated in its representations to the December 2017 consultation, it is crucial that the distinction is made between the strategic level assessment for the purposes of NPS designation and the more detailed consideration of specific matters through the DCO process. This clearly entails a huge level of consultation, scrutiny, assessment, investigation and examination, and has now commenced following the acceptance of the DCO application. Whilst this report refers to specific documents and details in the DCO application, the appropriate forum for the consideration of much of this detail is the DCO examination process.

3.1.4 This is recognised at paragraph I.2 of the Government Response, which notes that the strategic criteria

“do not prejudge the stringent planning and regulatory processes that developers must undertake before beginning development, but act as an initial and high level sift to ensure sites are broadly suitable from a safety, environmental and operational perspective”.

3.1.5 As in 2009, Exclusionary criteria are those that if breached would categorically exclude a site from further consideration. Discretionary criteria are those which could potentially make a site unsuitable but which need to be carefully considered in order to conclude on a site’s strategic suitability.

3.1.6 The Government Response notes at paragraph I.10 that in reaching a decision on whether to include a site that relates to one or more discretionary criteria, the Government will consider i) whether the nominator has demonstrated there is a reasonable prospect of appropriately mitigating any potential adverse impacts or, ii) where potentially adverse impacts cannot be mitigated whether the potential adverse impact prevents the site from being considered suitable at a strategic level, taking into account the overall need for nuclear.

3.1.7 There is sufficient certainty, in advance of the detailed consideration through the DCO examination process that the Wylfa site continues – as it did in 2009 – to satisfy the updated siting criteria at the strategic level.

3.2 C1 - Flooding, Tsunami and Storm Surge

3.2.1 The assessment of this criterion for EN-6 concluded that, based on the understanding of flood risk at the time, any potential new nuclear power station on the site could be protected against flood risk throughout its operational lifetime, including the effects of climate change, storm surge and tsunami (paragraph C.9.22). It also noted that the Environmental Agency (EA)² advised that access and egress is possible during extreme flood events and that it is very unlikely that any development would have any adverse impact with respect to flooding on the surrounding area.

3.2.2 Detailed flood modelling has now been undertaken and FCAs prepared for the entire Wylfa Newydd Project. The WNDA FCA (Appendix D8-4 of the Environmental Statement) (Application Reference Number: 6.4.29) assesses the flood risk posed to the WNDA as well as any changes to flood risk arising from the developments within the WNDA.

Information required from nominators

3.2.3 The Government Response notes that if nominated sites are not able to comply with the four criteria set out at paragraph I.17 of Annex I, at a strategic level, they may be considered unsuitable.

3.2.4 Paragraph I.19 then sets out information that nominators are expected to outline in relation to flooding, namely:

- a. the protection measures they believe would be appropriate to protect the site against flooding and confirmation that these are adaptable over the lifetime of the site to accommodate uncertainties in future projections of the effect of climate change;
- b. whether the protection measures would affect other designated ecological areas;
- c. the assumptions that have been made about off-site flood protection and water management and, in particular, the reliance on flood protection measures which are in the control of other parties, such as neighbouring landowners or government bodies;
- d. the potential for flooding to impede access to the site in respect of both normal operations and emergency services;
- e. whether the development of a new nuclear station on the site (including any likely mitigation measures) is likely to increase flood risk elsewhere, and if so potential mitigation to the increased flood risk; and
- f. the predicted effects of the development and any flood protection measures on coastal and fluvial processes and subsequent impacts on communities and the environment.

² The original siting process preceded the formation of Natural Resources Wales which now perform the former role of the Environment Agency Wales.

3.2.5 Paragraph I.27 of Annex I requires nominators of sites on or near the coast to provide additional information with regard to the potential risks of tsunami and storm surge, namely:

- a. the coastal protection measures that they believe would be appropriate to protect the site against these risks;
- b. the dependencies on coastal protection measures which may currently be out of the nominator's control; and
- c. the potential for these hazards to impede access and egress to/from the site in respect of both normal operations and emergency services.

Horizon response

Flooding

3.2.6 This section addresses the points listed in paragraph I.19 in relation to the WNDA with reference to the FCA submitted in support of the DCO. As noted in Section 2 the WNDA extends beyond the Wylfa NPS Site boundary.

3.2.7 Flood modelling for the WNDA is described at section 5 of the WNDA FCA (Application Reference Number 6.4.29). This includes reference to the publicly available flood maps for the site from NRW and Welsh Government (in accordance with I.22 of the Government Response).

3.2.8 The TAN 15 Development Advice Map indicates that the WNDA is predominantly at low risk of fluvial and coastal flooding (Zone A) except for the following areas:

- Low lying areas inland of Porth-y-pistyll in Zone C where extreme sea levels result in inland flooding.
- Along the main Afon Cafnan channel southwards to Ty-croes, and along the downstream end of the Nant Caerdegog Isaf, where areas within fluvial Flood Zone C2 are shown.
- Five low lying marshy areas, including one inland of Porth Wylfa associated with Tre'r Gof Sites of Special Scientific Interest (SSSI), that are shown to be within Zone B.

3.2.9 Both coastal and tidal flood modelling and fluvial and pluvial modelling have been undertaken for the WNDA, as described in the WNDA FCA.

3.2.10 The WNDA FCA sets out the flood risk assessment methodology (section 6) identifies sensitive receptors and screens potential flood sources (section 7) before providing an assessment of flood risk during construction, operational and decommissioning phases. Section 12 of the report then outlines proposed embedded and additional mitigation and residual risks. This summarises, in conclusion, that:

“Hydraulic modelling has been conducted for fluvial and pluvial scenarios up to the 0.1% AEP³ event for the construction, operation and decommissioning phases, including allowances for climate change where relevant over the lifetime of the development. Generally, the modelled extents have shown only minor changes in flood extents, minor differences in flood depths with no additional receptors at risk compared to the baseline. The embedded mitigation measures largely address the flood risks, with suggested additional mitigation measures to be developed during the development of a detailed drainage design that are expected to result in neutral impacts on key offsite receptors”.

“In light of the above, no additional residual risks are anticipated during the construction, operation and decommissioning phases from a fluvial, pluvial or groundwater flood risk perspective”.

3.2.11 The required information from nominators as listed in Annex I are addressed in turn below.

a) *the protection measures they believe would be appropriate to protect the site against flooding and confirmation that these are adaptable over the lifetime of the site to accommodate uncertainties in future projections of the effect of climate change;*

3.2.12 Section 12 of the WNDA FCA outlines the proposed embedded, good practice and additional mitigation measures during construction, operation and decommissioning of the Power Station, and identifies the residual risks.

3.2.13 Section 13 of the WNDA FCA provides the overall conclusions on flood risk for the construction, operational and decommissioning stages. This concludes that during construction, operation and decommissioning the flood risk is considered low from the majority of sources. Where risks are identified that are greater than low mitigation is either proposed to reduce the risk or is not required (for example the water compatible Marine Works located in Flood Zone C2).

3.2.14 The modelling which underpins the WNDA FCA makes allowances for the potential effects of climate change. The Welsh Government has provided guidance on how the UK climate change projections (UKCP09) should be used to determine the future flood consequences for developments in Wales and must be incorporated in all FCAs produced after December 2016. This information has therefore been incorporated into this FCA. Horizon has therefore considered the most up to date climate projections and guidance. Paragraph I.25 of the Government Response notes that the potential impacts of climate change will be reviewed in more detail as part of any site licensing process and through a FCA supporting an application for development consent. The way that climate change has been accounted for in the Environmental Impact Assessment (EIA) of the Wylfa Newydd Project is summarised at section 1.4 of chapter B1 of the ES (Application Reference Number 6.2.1). This confirms that climate change has been considered through the EIA of the Wylfa Newydd Project, with regard to design resilience

³ Annual Exceedance Probability

and also having regard to the effects of the Wylfa Newydd Project on processes that may contribute to climate change.

b) whether the protection measures would affect other designated ecological areas;

3.2.15 The preliminary design for surface water drainage is contained in appendix D8-8 (Application Reference Number: 6.4.33) of the DCO submission, which is summarised in section 12.2 of the WNDA FCA. The drainage design incorporates various features which are designed to provide mitigation to protect the Tre'r Gof SSSI, which is located within the WNDA.

3.2.16 Even though all reasonable mitigation is proposed to be put in place, there remains uncertainty over the effects on Tre'r Gof SSI. Therefore adopting a precautionary approach the Environmental Statement concludes that there is a potential for significant adverse effects during construction as a result of water quality and quantity changes. New areas of off-site habitat creation are proposed as compensation for potential effects on the SSSI. This is considered further below at section 3.9 of this report.

c) the assumptions that have been made about off site flood protection and water management and, in particular, the reliance on flood protection measures which are in the control of other parties, such as neighbouring landowners or government bodies;

3.2.17 The mitigation strategy as set out in the Wylfa FCA does not include any off site protection measures.

d) the potential for flooding to impede access to the site in respect of both normal operations and emergency services;

3.2.18 As demonstrated in the WNDA Flood Risk Assessment (FRA), the risk of flooding within the WNDA is low during construction, operation and decommissioning. No impediment to access would therefore occur from flooding.

3.2.19 The fluvial flood modelling undertaken shows that there would be no flooding of the access road under any circumstances. The modelling does show that under 1000 year rainfall events there is some overland flow that crosses the access road. This is mainly shallow and are likely to reflect the fact that drainage systems associated with the road have not been physically incorporated within the model. The maintenance of flow paths beneath the access road would be picked up at the detailed design stage.

e) whether the development of a new nuclear station on the site (including any likely mitigation measures) is likely to increase flood risk elsewhere, and if so potential mitigation to the increased flood risk;

3.2.20 Section 13 of the WNDA FCA identifies locations where the off-site risks of flooding are considered to be greater than low.

3.2.21 During construction and operation, moderate and high risks have been identified from fluvial and pluvial sources to Cemaes village and Cemlyn Road, but based on professional judgement these have been reduced to low.

3.2.22 During both construction and operation there are high risks of flooding to properties upstream of Cemaes village and further mitigation is required to mitigate these risks. The mitigation proposed would include modifications to the drainage design and re-modelling to check that the effects have been reduced so they are no longer significant.

3.2.23 During decommissioning the only risks identified as greater than low are to properties upstream of Cemaes village. Similar mitigation measures would be used during decommissioning to those used during construction which would be expected to adequately mitigate any effect.

f) *the predicted effects of the development and any flood protection measures on coast and fluvial processes and subsequent impacts on communities and the environment;*

3.2.24 The predicted effects of the development are addressed in detail in the WNDA FCA and chapter D8 of the ES (Surface and Groundwater) (Application Reference Number: 6.4.8). The latter describes the residual effects for surface water and groundwater having taken into account the embedded, good practice and additional mitigation described above. No significant adverse effects were identified for fluvial geomorphology, surface water (decommissioning) and groundwater (operation). Findings with regard to coastal processes are summarised below in section 3.3.

3.2.25 The information contained within the DCO submission, therefore, demonstrates that with appropriate design and mitigation in place the Wylfa site can be protected against flood risk throughout its lifetime without increasing flood risk elsewhere to an unacceptable level. This addresses the first three criteria of paragraph I.17.

3.2.26 The fourth bullet point of paragraph I.24 also asked nominators, for sites in Wales, to outline how they would meet the justification test set out in section 6 of TAN 15. This relates to a sequential approach to the location of development and requires that new development should be directed away from zone C and towards suitable land in zone A, otherwise to zones B. In zone C the tests in sections 6 and 7 of TAN 15 are applicable. TAN 15 advises that highly vulnerable development and Emergency Services should not be permitted in zone C2 and all other new development should only be permitted within zones C1 and C2 if determined by the planning authority to be justified in that location.

3.2.27 EN-1 applies a similar sequential approach, specifically in relation to nationally significant infrastructure projects. Paragraph 5.7.9 of EN-1 requires that in determining an application for development consent, the decision maker should be satisfied that the sequential test has been applied as part of site selection and a sequential approach has been applied at the site level to minimise risk by directing the most vulnerable uses to areas of lowest flood risk. If it is not possible for the project to be located in zones of lower probability nationally significant infrastructure projects can be located in Zone C subject to the Exceptions Test (as set out at paragraphs 5.7.4 – 5.7.17 of EN-1).

3.2.28 As noted above, the vast majority of the WNDA and surrounding area is located in the lowest risk zone (Flood Zone A). Critical infrastructure associated with the development is located in Flood Zone A. Certain elements of the construction do, however, need to take place in Flood Zone C and during operation various components of the Marine Works will be located within Flood Zone C2.

3.2.29 The Planning Statement (Application Reference Number: 6.1) demonstrates that the Exceptions Test is passed in accordance with paragraph 5.7.16 of EN-1 and paragraph 3.6.13 of EN-6. The site level sequential approach is also in accordance with paragraph 3.6.11 of EN-6 (and paragraph 5.7.23 of EN-1), as the proposals require works during construction and operation within high flood risk areas due to the nature of the development within and adjacent to the Irish Sea. The Marine Works are water compatible uses and would remain operational and safe for users in times of flood. As such they can be appropriately located in an area at risk of flooding.

Tsunami and storm surge

3.2.30 An assessment of risk from tidal flooding (storm surge, spring tide and wave overtopping causing overland flooding), is provided in the WNDA FCA, for the construction, operational and decommissioning phases. This addresses the criteria listed at paragraph I.27 as summarised below:

a) *the coastal protection measures that they believe would be appropriate to protect the site against these risks;*

3.2.31 The WNDA FCA concludes that during construction the risk of tidal flooding to construction activities within the WNDA is low, other than a moderate risk in the onshore elements of the MOLF.

3.2.32 During operation the risk of tidal flooding for the Power Station (and the onshore elements of the MOLF) are low. Whilst a moderate risk is assessed for coastal areas of the WNDA the increased risk of flooding is caused by climate change rather than the development, so no mitigation of this risk is required.

3.2.33 The same conclusions are reached for the decommissioning stage (i.e. the land of the former power station site having a low risk, and other coastal areas having a moderate risk due to climate change).

3.2.34 No additional mitigation is therefore proposed in relation to the potential effects of tidal flooding.

b) *the dependencies on coastal protection measures which may currently be out of the nominator's control;*

3.2.35 No coastal protection measures are proposed on third party land.

c) *The potential for these hazards to impede access and egress to/from the site in respect of both normal operations and emergency services;*

3.2.36 There are tidal flooding scenarios where the MOLF could potentially not be operated. Access would be restricted in these scenarios. The MOLF is not essential infrastructure during operation (with the ES assuming only around one vessel per year during operation).

3.2.37 As above, there is no flooding predicted that would affect the main site access road.

Conclusion

3.2.38 The Wylfa DCO submission provides a significant level of detail, beyond the requirements of the nomination stage. This detailed information addresses the information required from nominators, which demonstrate that at the strategic level the WNDA site can be protected against flood risk, tsunami and storm surge throughout its lifetime, and with mitigation in place that it would not increase flood risk elsewhere to an unacceptable level.

3.2.39 The detail of these assessments will, rightly, be considered through the DCO examination process.

3.3 C2 - Coastal processes

3.3.1 The strategic criteria for coastal processes will consider whether it is reasonable to conclude, at a strategic level, that the nominated site can be protected against coastal erosion and other landscape change scenarios, including the potential effects of climate change, for the lifetime of the station, taking into account possible countermeasures and mitigating actions. It will also consider, at a strategic level, effects that a development of a nominated site could have on coastal processes and communities elsewhere.

3.3.2 The Government will assess sites at a strategic level against up to date UK climate projections and the planning framework in TAN 15 and NRW flood and coastal erosion maps.

3.3.3 The AoS (Appraisal of Sustainability) for EN-6 noted that the Wylfa site is predominantly located on higher ground with hard bedrock, concluding that the risks from coastal flooding, sea level rise and erosion are low. Paragraphs C.9.31 and C.9.32 of EN-6 notes that the EA advised that development of the site could avoid or mitigate the effects of coastal erosion over its lifetime. The overall assessment conclusion at C.9.33 was that given the low level of risk the site passed this criterion and that “it is reasonable to conclude that the site could be protected against coastal erosion, including the effects of climate change, for the lifetime of the site”.

Information required from nominators

3.3.4 Paragraph I.31 of Annex I states that, for the new NPS, nominators should outline:

- a. the countermeasures that could be taken to protect any new nuclear power station within the nominated site from the effects of coastal erosion or other landscape change scenarios, and the likely impact of these on flood risk and coastal processes elsewhere;

- b. the dependencies on coastal protection measures that may be under the control of other parties, such as neighbouring landowners or government bodies;
- c. the potential for these risks to impede access and egress to/from the site in respect of both normal operations and emergency services; and
- d. the potential impacts of site development on coastal processes and existing coastal management arrangements, and possible measures that could be taken to limit these impacts.

3.3.5 In addressing these points, or otherwise, paragraph I.33 advises that nominators should demonstrate that they have taken account of:

- a. the wider impacts of any coastal protection countermeasures on areas surrounding the development of a new nuclear power station in particular any designated habitats;
- b. interaction with the local and regional plans for coastal change management and protection and watercourse management; and
- c. any reliance on third party schemes for protection that is being assumed.

Horizon response

3.3.6 Annex C of EN-6 notes (paragraph C.9.34 and C.9.35) that relevant guidance on coastal processes is provided in EN-1 and in Part 3 of EN-6. These policies are assessed at the site level through the DCO submission.

3.3.7 The topic of coastal processes and coastal geomorphology is considered in chapter D12 of the ES (Application Reference Number: 6.4.12) and assessed against the relevant policy context in the Planning Statement (Application Reference Number: 6.1).

3.3.8 This site level assessment enables a broader conclusion at the strategic level that the Wylfa site continues to satisfy the coastal processes criterion.

3.3.9 Chapter D12 of the ES identifies that the Anglesey coastline is predominantly composed of exposed hard rock and is therefore highly resistant to erosion. This is addressed in ES Appendix D12.1 (Application Reference Number: 6.4.80).

3.3.10 The West of Wales Shoreline Management Plan 2 (SMP2) published in 2011 estimates baseline erosion rates from both monitoring and historical maps. It makes a distinction between basic erosion of the shoreline and cliff recession, affecting the crest of cliffs and coastal slopes. SMP units within the study area include Cemaes Bay, Wylfa Head and Cemlyn Bay and headland. Table 3-1 indicates baseline erosion rates for the Cemlyn and Cemaes units provided within SMP2.

Table 3-1 Baseline erosion rates

Coastal unit	Rate of erosion (m/year)	Comments	100-year range for erosion (m)
Cemlyn	0.05-0.1	Roll back of shingle ridge, sensitive to sea level rise	20-45
Cemaes	0.2	Defended frontage	20-70

- 3.3.11 The site is situated in an area where hard rock cliffs are prevalent with rates of erosion that are likely to be substantially lower than the 0.05m/year erosion rate cited in table 3-1 which includes softer gravel areas.
- 3.3.12 Chapter D12 of the ES demonstrates that in light of the mitigation proposed, construction, operation and decommissioning of the power station including the Marine Works (e.g. the MOLF, breakwaters, Cooling Water System and dredging activities), will not have a significant adverse effect on coastal processes and coastal geomorphology such that erosion of the site is expected to increase above baseline.
- 3.3.13 Proposed mitigation includes a monitoring programme (to determine any changes would be carried out throughout the construction phase and into the operational phase) and during decommissioning analysis of historic monitoring data.
- 3.3.14 The EIA takes account of climate change in accordance with paragraph 5.5.10 of EN-1 and paragraph 2.10.3 of EN-6.

Conclusion

- 3.3.15 Having regard to matters listed in paragraphs I.31 and I.33, the measures proposed through mitigation will ensure that the power station site is protected from coastal erosion and result in no significant residual effects elsewhere. These measures are not reliant on third party land and would have no impact on emergency access.
- 3.3.16 The detail of the relevant assessments and mitigation measures will be considered through the DCO examination process.

3.4 C3 - Proximity to major hazard sites and major accident hazard pipelines

- 3.4.1 Based on the advice of the Health and Safety Executive (HSE), ONR and Natural Resource Wales (NRW), Government will assess nominated sites to ensure it can be protected against potential risk arising from proximity to major hazard sites throughout its lifetime. This is a discretionary criterion.
- 3.4.2 Annex I notes that a site may be unsuitable if it is within consultation distances of any existing or proposed hazardous facility or pipeline, and that with countermeasures in place the risks would pose a serious risk to human health and the environment.

3.4.3 Annex I also notes that existing power stations or sites undergoing decommissioning may be a major hazard site. It continues to note that it is unlikely that such proximity will rule out a nominated site where appropriate mitigation measures can be put in place.

3.4.4 Through the original siting assessment, EN-6 concluded that the ONR had advised that “it is reasonable to conclude that any likely power station development within the site boundary can be protected against risk arising from proximity to hazardous facilities through its lifetime”.

3.4.5 The assessment section made reference to the proposed shore based Canatxx LNG, and that the Wylfa site was located beyond the land use planning outer zone of the proposed facility (paragraph C.9.8). It also noted that based on HSE records the Wylfa site is not in the vicinity of any Control of Major Accident Hazards (COMAH) establishments. It also notes that as with all sites during licencing, the ONR will need to take into account the need for countermeasures to protect nuclear operations from any hazards and risks from any nearby notified major hazard pipelines.

3.4.6 The original EN-6 siting assessment concluded that the Wylfa site passed the criterion.

Information required from nominators

3.4.7 Annex I advises that nominators are not expected to provide any further information with regard to this criterion, beyond the description and location of the site (addressed above in section 2). It does however encourage nominators to check the proximity of hazardous facilities available in the public domain.

Horizon response

3.4.8 Based on the HSE records⁴ the site is not in the vicinity of any establishments that are covered by the COMAH Regulations 2015.

3.4.9 The proposed Canatxx LNG facility referred to in EN-6, is a former bromide processing plant known as Octel. A new planning consent was granted in July 2016, though has not been constructed. The scheme would provide the capacity to re-gasify LNG at a rate of 3Bn cubic feet per day and transport the resultant gas to the National (gas) Transmission System (NTS). The pipeline connection from Anglesey to the NTS in Lancashire would be subject to separate planning applications and permits.

⁴ <https://notifications.hse.gov.uk/COMAH2015/Search.aspx>. Checked 13th July 2017

3.4.10 The existing Magnox power station, commissioned in 1971, was closed down on 30 December 2015. The site is currently undergoing the completion of defueling and shipping spent fuel to Sellafield for reprocessing. Once the reactors are empty, and all the fuel elements have been dispatched to Sellafield, over 99 per cent of the site's radiological hazard will have been removed. The defueling stage is likely to be completed by December 2019 before entering into Care and Maintenance (C&M) phase in 2026 following a first stage of decommissioning.

Conclusion

3.4.11 The assessment of this criterion will be based on advice from the HSE, NRW and ONR. There is, however, no reason to believe that any different conclusion will be reached to the original EN-6 siting assessment.

3.5 C4 - Proximity to civil aircraft movements

3.5.1 This discretionary criterion involves the consideration of whether it is reasonable to conclude that any nuclear power station development within the nominated site can be protected against the risks from civil aircraft movement and that the effects on air traffic and aerodromes can be potentially mitigated.

Information required from nominators

3.5.2 Annex I notes that not all of the information required for this criterion will be in the public domain and nominators would not be required to provide this information themselves.

3.5.3 No further information is required from nominators beyond the description and location of the site.

Horizon response

3.5.4 In assessing the Wylfa site for inclusion in EN-6 the Civil Aviation Authority (CAA) advised that it's potentially reasonable to conclude that any power station development at the site can be protected against risks from civil aircraft movement, with which the ONR agreed.

3.5.5 The CAA noted that the existing Power Station has an associated Restricted Area, and that it was potentially reasonable to conclude that neighbouring aerodromes and air traffic control areas can mitigate any effects arising from a Restricted Area around the new nominated site.

3.5.6 The Wylfa site therefore passed this criterion.

Conclusion

3.5.7 The assessment of this criterion would be again undertaken by the CAA and ONR. There is, however, no reason to believe that any different conclusion will be reached to the original EN-6 siting assessment.

3.6 C5 - Demographics

- 3.6.1 Sites will be assessed against the “semi urban” demographic criterion that was used to assess sites listed in EN-6.
- 3.6.2 EN-6 concluded that the Wylfa site does not exceed the semi-urban criterion.
- 3.6.3 The area surrounding the Wylfa site is sparsely populated, and with regard to the local demographics, particularly vulnerable groupings of people such as at schools and hospitals, it should be noted that the Existing Power Station operated on Anglesey between 1971 and 2015.

Information required from nominators

- 3.6.4 Annex I does not ask nominators of sites listed in EN-6 to provide any further information beyond the description and location of the site.
- 3.6.5 It does however expect nominators to provide a high level description of the practicality of development appropriate emergency planning arrangements, because emergency planning will be a critically important consideration at the site licensing and development consent stages (paragraph I.54).

Horizon response

- 3.6.6 Horizon’s key strategic focus for emergency preparedness is to ensure that the public, workers, environment and the plant are protected and to maintain security of the Nuclear Licensed Site, during an event. Horizon’s approach to emergency preparedness at Wylfa is set out in the Nuclear Site Licence Application – Overview Document (section 6.6). This includes an overview of Horizon’s emergency arrangements, off site arrangements and the Existing Power Station.
- 3.6.7 During construction an Emergency Preparedness Consultative Committee (EPCC) sub-group will provide a forum for the integrated and coordinated approach to ensuring robust emergency preparedness arrangements as determined by the risks of the construction phase that have the potential to lead to an event affecting or arising from Wylfa Newydd Site. The EPCC Construction Sub-Group will include local authorities as a key stakeholder and is designed to meet six monthly and enable specific discussions between Horizon and local emergency stakeholders on specific issues relating to the project or construction at the site.

Conclusion

- 3.6.8 The Government will again undertake the assessment of the site against the semi urban criterion and also the discretionary assessment in paragraph I.55. There is, however, no reason to believe that any different conclusion will be reached to the original EN-6 siting assessment.
- 3.6.9 Horizon are developing appropriate emergency planning arrangements as demonstrated in the Nuclear Site Licence application and through the work of the EPCC.

3.7 C6 - Proximity to military facilities

3.7.1 Annex I sets out discretionary and exclusionary criteria against which sites will be assessed, based on the advice of the Ministry of Defence (MoD) and ONR.

Information required from nominators

3.7.2 Annex I advises that no specific information will be required from nominators about the proximity of the site to military activities as it will be assessed by the MOD on the basis of the description of the site and nominated site boundary.

Horizon response

3.7.3 EN-6 (paragraphs C.9.14 - C.9.1.8) confirmed that the MoD previously advised that the Wylfa site does not occupy any MoD areas or is in proximity to any MoD assets or activities that would suggest the site should be ruled out. The MoD also confirmed that, on a strategic level, it is reasonable to conclude that any power station within the Wylfa site boundary can be protected against the risk of external hazards created by military activity and would not adversely affect the capability of the armed forces throughout its lifetime.

3.7.4 The MoD also specifically confirmed that the site does not occupy the Military Air Traffic Zones that surround RAF Mona and RAF Valley (located around 18km from the Wylfa site to the south east and south respectively).

Conclusion

3.7.5 The assessment of this criterion would again be based on the advice of the Ministry of Defence and ONR. There is, however, no reason to believe that any different conclusion will be reached to the original EN-6 siting assessment.

3.8 C7 - Internationally designated sites of ecological importance

3.8.1 Paragraph I.65 of Annex I notes that it would be preferable for sites to be nominated in areas unlikely to cause an adverse effect on the integrity of any internationally designated sites of ecological importance. It confirms however that proximity to internationally designated sites should not rule out nominated sites and where there is a potential for any adverse effect, the nominator should set out what they able to do to avoid, minimise or mitigate these effects.

Information required from nominators

3.8.2 Paragraph I.70 asks nominators to “identify any Natura 2000 and Ramsar sites (including their qualifying features and specific vulnerabilities) that have the potential to be either directly impacted (e.g. land take) or indirectly impacted (e.g. discharge of cooling water from river or sea on bird prey availability) by the development of a new nuclear power station on a nominated site”. It then states that “if Natura 2000 and Ramsar sites were impacted in this way, the Government would expect nominators to comment on the likely level of impact and indicate why, at a strategic level, it should be possible to avoid or mitigate any such impact in line with the standards set by the Habitats Directive”.

Paragraph 1.71 then encourages the results of discussions with relevant consultees and nature conservation bodies.

Horizon response

3.8.3 An assessment of the Wylfa site on a strategic level was made when including it as a potentially suitable site in EN-6. These conclusions were drawn from the Habitat Regulations Assessment for Wylfa (October 2010). This found that taking a precautionary approach, at the strategic stage, the potential for adverse effects on site integrity at six European Sites could not be ruled out⁵. The October 2010 HRA proposed a suite of potential avoidance and mitigation measures that would be considered in detail in the project level HRA.

3.8.4 The Government concluded that, in advance of more detailed site level studies to consider the effectiveness of proposed mitigation, it could not at that stage rule out the potential for adverse impacts on sites of European nature conservation importance. Government concluded, however, at the strategic level that there was an Imperative Reason of Overriding Public Interest that favoured the inclusion of Wylfa in EN-6, despite the inability to rule out effects on European Sites at the strategic stage.

3.8.5 That assessment took into account the need for sites to be available for potential deployment by the end of 2025 and the lack of alternatives. This need and lack of alternatives remains true in considering Wylfa against the siting criteria for the new NPS. The Government recognise that the sites already listed in EN-6 are likely to be those which can deploy the soonest and are the only sites capable of deploying a nuclear power station by 2035.

3.8.6 The submission of the DCO now provides significantly more detail at a site-specific level, from which broader conclusions at the strategic level can be drawn.

3.8.7 The European Designated Sites in close proximity to the WNDA are identified in the Shadow HRA Report (Application Reference Number 5.2).

3.8.8 The Shadow HRA Report concludes that, with mitigation in place, any adverse effect on the integrity of European Designated Sites or their qualifying interest features would not arise due to the effects from the Project in its construction, operation or decommissioning phases, either alone or in-combination with other plans and projects. In the event that an alternative conclusion was to be reached, Horizon agrees with the Government's previous conclusions in EN-6 that Imperative Reasons of Overriding Public Interest (IROPI) exist at a strategic level (paragraph 1.8.2, NPS EN-6) and appropriate compensation would need to be secured. This is again appropriately considered through the DCO process and the Secretary of State's Appropriate Assessment.

3.8.9 The proposed mitigation measures would be secured through the DCO, Marine Licence and Environmental Permits and is, appropriately, a matter for detailed consideration through these processes.

⁵ Note that between 2010 and the DCO application in 2018 the European Sites in the vicinity of the site changed, in particular with the addition of the Anglesey Terns SPA and North Anglesey Marine SAC.

3.8.10 Details of meetings with key stakeholders to inform Horizon's approach to HRA are set out in Section 3 of the Shadow HRA Report. This includes engagement with the Planning Inspectorate, relevant statutory nature conservation bodies and non-statutory interest groups. This engagement was principally facilitated through a HRA Working Group comprising the Planning Inspectorate, Natural Resource Wales (NRW) and the Isle of Anglesey County Council.

Conclusion

3.8.11 The Shadow HRA Report identifies the European Designated Sites in proximity of the WNDA and concludes on the likely level of impact. The proposed mitigation measures would be fully assessed and secured through the DCO, Marine Licence and Environmental Permit. For the purposes of the strategic siting assessment, the findings demonstrate that, at a strategic level, it should be possible to avoid or mitigate any impacts.

3.9 C8 - Nationally designated sites of ecological importance

3.9.1 Paragraph I.72 of Annex I adopts the same approach to nationally designated sites of ecological importance to that for international sites i.e. it would be preferable for sites to be nominated in areas unlikely to cause adverse impact but that sites should not be ruled out where there is potential for an adverse effect.

3.9.2 Annex I notes that the Government will undertake a strategic level assessment of the impact of deployment of a new nuclear power station on nationally designated sites of ecological importance. Paragraph I.74 notes that it will not always be possible to rule out adverse impacts at the strategic stage, but that would not necessarily result in a site being considered unsuitable.

Information required from nominators

3.9.3 Paragraph I.76 states that "where a nomination might cover an area that includes, or is likely to impact, a nationally designated site of ecological importance, the Government will expect nominators to comment on the likely level of impact and indicate why, at a strategic level, it should be possible to avoid or mitigate any such impact. Government will also expect a nominator to have taken the views of any statutory bodies responsible for the management of these designations into account in considering the potential avoidance, minimisation and mitigation countermeasures".

3.9.4 The strategic assessment on nationally designated sites of ecological importance for EN-6 concluded that there could be potential significant effects on SSSI at Tre'r Gof (within the site boundary) and Cemlyn Bay and Cae Gwyn. It was concluded at that stage that the scope for mitigation of biodiversity effects enabled a reasonable conclusion that it may be possible to avoid or mitigate impacts to an extent.

Horizon response

3.9.5 At paragraph C.9.61 EN-6 states that the Government considered that given the need to ensure sufficient sites are available for development it was not considered that the issues in relation to this criterion were sufficient to justify not including Wylfa in the NPS, and therefore passed the criterion. It noted that there would be further assessment at the project level in accordance with the policies of EN-1.

3.9.6 This more detailed project level assessment is contained within the DCO application. The ES identifies all relevant ecological receptors with the potential to be affected by the Wylfa Newydd Project and fully assesses these, recommending mitigation and compensation where appropriate. It is only appropriate and necessary to consider the assessment of impacts arising from the WNDA, rather than each of the separate Off-Site components.

3.9.7 Embedded, good practice and additional mitigation measures have been designed to conserve and, wherever practicable, enhance biodiversity and follow the hierarchy of mitigation in terms of avoidance and minimising effects.

3.9.8 Where adverse effects cannot be avoided, additional mitigation has been designed to reduce adverse effects to levels which are not significant.

3.9.9 Despite measures to avoid significant harm to biodiversity interests there remains potential for residual major adverse effects on rich fen habitat at the Tre'r Gof SSSI during the construction period. New areas of off-site habitat creation are therefore proposed as compensation for potential effects on the SSSI. This includes approximately 49.5ha of land at Cae Canol-dydd, Cors Gwawr and Tŷ du. These sites provide approximately 13.8ha of land that is suitable for rich-fen habitat creation and approximately 20ha for the enhancement of existing but unmanaged or degraded fen and mire habitat. These sites are covered in detail in the SSSI Compensation Strategy at appendices D9-23 and D9-24 of the ES (Application Reference Numbers 6.4.56 and 6.4.57).

3.9.10 This approach is assessed against the relevant policies of EN-1 in the Planning Statement (Application Reference Number 6.1) which concludes that the proposed approach and residual effects and approach to compensation, are compliant with EN-1 and EN-6.

3.9.11 Annex I suggests that adherence to this siting criterion at the strategic level will be largely assessed through the AoS to be undertaken on the finalised siting process. It is reasonable to assume, given the conclusions of the detailed assessments for the DCO, that the AoS will conclude that it may not be possible to avoid significant effects on Tre'r Gof. The Government Response, at paragraph 2.60, confirms that as a last resort

“compensation is an important part of any large scale infrastructure project where it is not possible to fully avoid, minimise or mitigate environmental impacts” (paragraph 2.60). It continues, to confirm that “Government will consider the feasibility of compensation should it ultimately prove necessary as part of the discretionary assessment of a site's suitability”.

Conclusion

3.9.12 The detail and adequacy of the compensation and mitigation proposed will be fully considered through the DCO process, though the details of the site level assessment facilitates the strategic conclusion that the Wylfa site continues to satisfy this criterion, by demonstrating that whilst adverse impacts cannot be ruled out, appropriate compensation measures can be delivered.

3.10 C9 - Cultural heritage

3.10.1 Annex I, at paragraph I.77, notes that the Government's view is that it would be undesirable to propose the development of a new nuclear power station in an area likely to cause significant adverse impact on designated heritage assets, unless there are clear strategic reasons for doing so and the nominators can confirm that they are able to avoid, minimise or mitigate these effects.

3.10.2 The potential impacts of deployment of a new nuclear power station on designated heritage assets, and whether it is reasonable to conclude at a strategic level, that it may be possible to avoid or mitigate such impact will be assessed using the AoS and the current planning framework. Paragraph I.80 notes that an assessment at the strategic level will not always be possible to rule out adverse impacts. If that is the case it will not necessarily result in the site being unsuitable.

3.10.3 The AoS for EN-6 identified potential adverse effects on Scheduled Monuments (the Bronze Age standing stones 1km to the south), registered garden (Cestyll Garden to the west of the site) and three Grade II listed buildings in Cafnan to the west of the site and listed buildings around Cemaes. The AoS found that it should be possible to mitigate against the potential adverse effects on schedule d monuments although notes that further detailed assessment at the project level will be required (paragraph C.9.69).

Information required from nominators

3.10.4 Paragraph I.81 of Annex I identifies the information that it would expect from nominators at the strategic level for the new NPS, namely:

"If a site is nominated in an area which may affect a designated heritage asset, Government would expect nominators to outline how they could avoid, minimise or mitigate the possible effects of their site on that designated heritage asset and its setting, as well as the cumulative impacts on the area and any possible enhancement of the historic environment. Similarly, nominators would also need to consider adverse impacts, including cumulative impacts, on locally designated or non-designated heritage assets and their setting as well as any possible enhancements of these. Government will also expect nominators to outline how they intend to meet the relevant tests in the planning framework at the time of nomination. For designated heritage assets paragraphs 128 to 141 of the NPPF (National Planning Policy Framework) apply. For Wales TAN 24 and PPW (Planning Policy Wales) applies. Prior to nomination, Government would also expect the nominator of a site to take into account the views of Historic England and

Cadw in considering the potential countermeasures to avoid, minimise and mitigate the effects, as well as any possible enhancement of the historic environment".

Horizon response

3.10.5 The relevant tests set out in EN-1 and EN-6, and in Welsh national and development plan policy, in relation to the historic environment are assessed in detail at the site level in the DCO submission addresses these in detail. This analysis covers the matters set out in paragraph I.81.

3.10.6 In summary, construction, operation and decommissioning impacts on cultural heritage receptors have been assessed for all aspects of the Wylfa Newydd Project. The EIA of development within the WNDA on historic environment matters is set out chapter D11 of the ES (Application Reference Number: 6.4.11) and assessed against the relevant policy at appendix A of the Planning Statement (Application Reference Number: 6.1).

3.10.7 A programme of embedded and good practice mitigation measures are proposed to reduce the effects on the historic environment. This includes measures that would be secured through a Landscape and Habitat Management Strategy (Application Reference Number: 8.16) and appropriate landscape measures to restore and/or enhance the former location of the Cestyll Garden kitchen garden (secured through a planning obligation).

3.10.8 During construction, the detailed assessment at the DCO stage, concludes that there is likely to be:

- moderate and major residual adverse residual effects at Felin Gafnan Corn Mill (Grade II* Listed Building located immediately to the west of the WNDA);
- a moderate adverse residual effect at St. Patrick's Church in Llanbadrig; and
- a major adverse residual effect is identified at Cestyll Garden, due to the permanent removal of the kitchen garden, the plot of land where Cestyll House formerly stood, and parts of its Essential Setting.

3.10.9 The operational phase would also result in effects on historic assets (with regard to loss of amenity and visual intrusion) which cannot be mitigated due to their location on the landscape. These are listed at Appendix A of the Planning Statement (Application Reference Number 6.1).

3.10.10 The Planning Statement provides a detailed assessment of these likely impacts against relevant NPS, national and development plan policy. With regard to Cestyll Gardens, this demonstrates why the need for the location of the construction laydown area (which results in this loss) justifies exceptional circumstances (required for compliance with paragraph 5.8.14 of NPS EN-1) for the substantial harm to a Grade II Registered Historic Park and Garden. The loss is necessary to achieve the substantial public benefits of delivering the Power Station. There are no alternative locations that could accommodate the construction laydown area that would result in the loss. The substantial harm and loss identified to Cestyll Gardens is therefore compliant with

paragraph 5.8.15 of EN-1, as it is necessary to achieve the substantial public benefits of delivering the Power Station. This detailed siting also remains to be considered through the DCO examination and does not affect the potentially suitability of the site for designation in the NPS.

3.10.11 Adverse impacts on other heritage assets, including the significant residual adverse effect on Felin Gafnan Corn Mill, are not considered to constitute substantial harm (because the effect would not result in a permanent and substantial loss of the significance of this heritage asset).

3.10.12 Horizon has consulted with Cadw throughout the pre-application process including as part of the Engagement Framework Working Group for the environment and cultural heritage. The details of engagement are set out in the Consultation Report (Application Reference Number 5.1) and chapter D11 of the ES (Application Reference Number: 6.4.11).

Conclusion

3.10.13 The Wylfa DCO submission provides a significant level of detail, beyond the requirements of the nomination stage, addressing the relevant policies relating to heritage assets and likely impacts and mitigation measures.

3.10.14 At the strategic stage, it is sufficient to draw the same conclusion as the original siting assessment, that the avoidance of significant adverse impacts at Cestyll Gardens may not be possible. This should not however preclude the site from being retained as a potentially suitable site, and these details will be assessed in full through the DCO examination.

3.11 C10 - Areas of amenity and landscape value

3.11.1 Annex I, at paragraph I.83, notes that the Government's view is that it would be undesirable to propose the development of a new nuclear power station in an area likely to cause significant adverse impact on designated sites of amenity and landscape value, unless there are clear strategic reasons for doing so and the nominators can confirm that they are able to avoid, minimise or mitigate these effects.

3.11.2 In assessing the site previously for nomination in EN-6 the Government concluded that Wylfa passed this criterion at the strategic level. EN-6 recognises that given the likely scale of development there are likely to be some long lasting adverse effects on landscape character and visual impacts on the Anglesey Area of Outstanding Natural Beauty (AONB) (even considered in the context of the existing power station and taking into account potential for mitigation). It states that further assessment required at the project level (paragraphs C.9.71 and C.9.72).

3.11.3 EN-6 also noted that whilst scope for total avoidance and mitigation on impacts on the Snowdonia National Park is limited, the site passes this criterion (C.9.73).

Information required from nominators

3.11.4 Paragraph I.87 of Annex I sets out the information expected from nominators if a site is nominated in an area which may affect a formally designated site of high amenity, historic or landscape value, namely:

“...Government would expect nominators to outline how they could avoid, minimise or mitigate the possible effects of their site on that designated area and setting as well as the cumulative impacts on the area and any possible enhancement of the natural and historic environment, including landscape. Similarly, nominators would also need to consider adverse impacts, including cumulative impacts, on locally designated or non-designated areas of landscape value, landscape character, tranquillity and distinctiveness and their setting, as well as any possible enhancements of these. Government will also expect nominators to outline how they intend to meet the relevant tests in the planning framework at the time of nomination. For National Parks and Areas of Outstanding Natural Beauty (AONBs) these are currently paragraph 116 of the NPPF in England and section 5.5.6 of PPW. Prior to nomination, Government would also expect the nominator of a site to take into account the views of any statutory bodies responsible for the management of these designations in considering the potential countermeasures to avoid, minimise and mitigate the environmental effects, as well as any possible enhancement of the natural and historic environment and setting, including landscape”.

Horizon response

3.11.5 The relevant tests set out in EN-1 and EN-6, and in Welsh national and development plan policy, in relation to the historic environment are assessed in detail at the site level in the DCO submission addresses these in detail.

3.11.6 The assessment of development within the WNDA on landscape and visual matters is set out in chapter D10 of the ES (Application Reference Number: 6.4.10) and considered against the above policy context at Appendix A of the Planning Statement.

3.11.7 In summary, this concludes that due to the scale and nature of the Power Station, the residual effects remain significant following additional mitigation for nearly all of the landscape and visual receptors. This is the case despite substantial measures to reduce the impact.

3.11.8 With regard to the potential for impacts on the AONB (as referred to in EN-6), the directly affected areas of the AONB (which comprise only a very small part of the AONB) will receive a major significant residual adverse landscape impact during the construction period due to the construction of a landscaped mound within the AONB (though as the landscaping matures, the impact on the directly affected areas of the AONB is likely to reduce to a moderate adverse impact). The special qualities of the AONB are also likely to be adversely affected in other ways. Major adverse impacts on localised areas of the Heritage Coast have also been identified for the duration of the construction and operation periods due to the presence of the construction

project and Power Station. The Wylfa Newydd Project would not have an impact on National Parks.

3.11.9 The policy implications of these potential impacts are addressed in the DCO submission. In accordance with paragraph 5.9.10 of EN-1, development consent may be granted in nationally designated landscapes, such as AONB and Heritage Coast, in exceptional circumstances. The development must be demonstrably in the public interest. The Planning Statement (Application Reference Number 6.1) explains why the benefits of the Wylfa Newydd Project, the approach to site selection and the specific need for development within the AONB represent exceptional circumstances which justify the elements of the Wylfa Newydd Project that are located within the AONB and North Anglesey Heritage Coast. In summary:

- the majority of the development in the WNDA is located outside of the nationally designated areas;
- the development that encroaches into the AONB is a proposed landscaped earth mound, which is itself a mitigation measure to minimise the impacts of the Power Station on the AONB;
- the encroachment on the Heritage Coast is required in order to deliver infrastructure critical to the delivery of the Wylfa Newydd Project and to reduce adverse traffic and transport effects that would have otherwise occurred; and
- the extent of the effect of the Power Station on the designated landscapes has been moderated through the proposed landscaped earth mound and other mitigation measures.

3.11.10 These are rightly matters for detailed consideration through the DCO examination, rather than at the strategic site nomination stage.

3.11.11 Horizon has consulted with the Isle of Anglesey County Council, NRW, the National Trust and North Wales Wildlife Trust throughout the pre application period and through the ongoing Statement of Common Ground process. Details of engagement are set out in the Consultation Report (Application Reference Number 5.1) and chapter D10 of the ES (Application Reference Number: 6.4.10).

Conclusion

3.11.12 At the strategic stage, it is sufficient to draw the same conclusion as the original siting assessment, that long lasting adverse effects on the AONB are likely given the scale of the project. This should not however preclude the site from being retained as a potentially suitable site, and these details will be assessed in full through the DCO examination.

3.12 C11 - Areas of groundwater protection

3.12.1 Annex I introduces a new criterion in relation to areas of groundwater protection.

Information required from nominators

3.12.2 Paragraph I.94 states that where a nomination might cover an area that includes or is likely to impact a Source Protection Zone the Government expects nominators to comment on likely level of impact.

Horizon response

3.12.3 Having regard to the data provided by Natural Resources Wales, there are no Source Protection Zones on the Isle of Anglesey.

Conclusion

3.12.4 This criterion is not therefore applicable to Wylfa.

3.13 C12 - Size of site to accommodate operation

Information required from nominators

3.13.1 Paragraph I.102 states that nominators should describe the area where it is expected that additional land will be required for construction and decommissioning and an indication of additional work that would be needed prior to the development consent stage.

Horizon response

3.13.2 The Wylfa NPS Site is around 232 hectares, which the ONR previously confirmed was sufficient land for the safe and secure operation of at least one new nuclear power station.

3.13.3 A description of the different geographical areas (including the relationship between the Wylfa NPS Site, the WNDA and Power Station Site) is provided at section 2, with reference to the plans which support the DCO. Section 2 also provides a description of the additional areas required for Off-site works during construction and operational phases (satisfying the requirements of paragraph 2.93 of the 2017 consultation).

3.13.4 The application for development consent order has been submitted and accepted for examination.

Conclusion

3.13.5 Horizon are not proposing any changes to the Wylfa NPS Site boundary (as included in EN-6) and there is no reason to expect that any other conclusion will be reached than that the site is large enough to safely accommodate the operation of a modern nuclear power station.

3.14 C13 - Access to suitable sources of cooling

3.14.1 The Government will assess, at the strategic level whether it is reasonable to conclude that there are suitable sources of cooling for a new nuclear power station, based on advice from the relevant regulators.

Information required from nominators

3.14.2 Annex I notes that the Government will expect nominators to offer information about cooling technologies that are feasible for likely nuclear power station developments within the nominated site (paragraph I.106), addressing the following matters:

- Whether there are suitable sources of cooling for a new nuclear power station at the nominated site;
- If water-based cooling is to be employed, the nominator believes that there is sufficient water for this purpose or other measures that need to be put in place;
- What impacts (including visual impact) there are likely to be from the need for cooling and why it is reasonable to conclude that these impacts are manageable or able to be mitigated;
- Whether, at a strategic level and subject to local considerations, it is reasonable to conclude that a new nuclear power station on the nominated site will be able to be operated within normal environmental and regulatory requirements;
- Any issues that may affect cooling over the lifetime of the new nuclear station (including changes in meteorology, climate etc); and
- Potential impacts on the environment, including designated and non-designated sites.

Horizon response

3.14.3 The Cooling Water System (CWS) proposed at Wylfa is set out in Volume 2 of the Design and Access Statement (Application Reference Number 8.2). It is comprised of three individual components (a circulating water system, reactor building service water system and turbine building service water system) which share a common intake structure.

3.14.4 The circulating water would be used primarily to condense the steam leaving the steam turbine as well as the reactor. The CWS incorporates the following:

- Cooling water intake structure and pump house (to draw Cooling Water in from the sea), including screening and Fish (and invertebrate) Return and Recovery systems.
- Circulating water system pipes from the intake structure and pump house to the turbine buildings, which would be routed underground – there would be a set of these for each Unit.

- Reactor building service water system/turbine building service water system pipes from the intake structure to the heat exchanger building where both the pumps and heat exchangers are located.
- Seal pits (required for the hydraulic system design and mixing), one for each Unit where the Cooling Water would be returned after cooling prior to discharge back to the sea.
- Outfall tunnels, to transfer Cooling Water from the seal pits to the outfall structure. These structures would be buried – there would be a set of these for each Unit.
- Cooling Water outfall (to return Cooling Water to the Irish Sea).

3.14.5 Volume 2 of the Design and Access Statement provides further detail on the requirements for the CWS intake and outfall.

3.14.6 The DCO Requirements will require detailed design associated with development within the Power Station Site to be submitted and approved in accordance with a series of parameters and design principles. There are various design principles that will control the detailed design of the various components of the CWS.

3.14.7 Annex I states that it does not expect specific reactor designs though lists six bullet points with details that nominators will be asked to address. These are dealt with in turn below:

Whether there are suitable sources of cooling for a new nuclear power station at the nominated site;

3.14.8 Horizon has elected for a once-through circulating water system, using seawater abstracted from the Irish Sea.

If water-based cooling is to be employed, the nominator believes that there is sufficient water for this purpose or other measures that need to be put in place;

3.14.9 The supply of water abstracted from the Irish Sea will be sufficient for this purpose.

3.14.10 The design of the cooling water system will be such that it can be demonstrated that the cooling water pumps can deliver a sufficient flow rate under all conditions.

What impacts (including visual impact) there are likely to be from the need for cooling and why it is reasonable to conclude that these impacts are manageable or able to be mitigated;

3.14.11 The visual impacts of the development within the Wylfa Newydd Development are assessed as a whole in the DCO application submission. By adopting the selected cooling system technology (circulating water system supplied from the Irish Sea) the need for large cooling towers are avoided. The selected technology is therefore significantly better from a visual perspective than some of the alternatives.

3.14.12 Appropriate design measures will also mitigate other potential impacts of the CWS, including a maximum intake velocity of 0.3m/s in front of the intake opening, screening in the form of coarse rake bars, an Acoustic Fish Deterrent (AFD) and Fish Recovery and Return system (FRR).

3.14.13 As set out in volume 2 of the Design and Access Statement (Application Reference Number: 8.2.2) the Cooling Water outfall would be designed to increase the momentum of the discharge, to help propel the thermal plume, and promote mixing and dispersal of associated biocide products to the north of Wylfa Head where the offshore currents will aid dispersion and decay, and reduce the risk of recirculation.

Whether, at a strategic level and subject to local considerations, it is reasonable to conclude that a new nuclear power station on the nominated site will be able to be operated within normal environmental and regulatory requirements;

3.14.14 The Wylfa nuclear powers station will be operated within normal environmental and regulatory requirements.

3.14.15 Extensive engagement has taken place with the regulators and Environmental Permit applications have been submitted.

Any issues that may affect cooling over the lifetime of the new nuclear station (including changes in meteorology, climate etc);

3.14.16 Chapter B1 of the ES (Application Reference Number: 6.2.1) explains how climate change has been considered with regard to design resilience and the effects of climate change on the project. For example, the Cooling Water System has been designed so as not to be affected by sea level rise. The likelihood of drought, sea temperature change, increase in precipitation and changes in wind speed, air temperature and humidity have all been considered during the design of the Wylfa Newydd Project.

Potential impacts on the environment, including designated and non-designated sites;

3.14.17 The potential environmental effects of the CWS are assessed through the EIA. The ES outlines various effects and mitigation measures proposed, including:

- Damage to the Porth Wnal Regionally Important Geodiversity Site (RIGS) as a result of the construction of the cooling water outfall, and reduced accessibility and value of the RIGS as an educational resource. Additional proposed mitigation includes the erection of interpretation boards explaining the RIGS;
- Construction of the cooling water outfall tunnel could change groundwater levels and flows. No additional mitigation is proposed as the significance of residual effects would be minor;
- Effects of Total Residual Oxidants (TRO) from Cooling Water Discharge during operation. No additional mitigation is proposed as the significance of residual effects would be minor;

- Potential adverse effects to Arfordir Mynydd y Wylfa - Trwyn Penrhyn Wildlife Site and chough as a result of the construction of the cooling water outfall. As far as practicable, Horizon will manage of grassland at the Arfordir Mynydd y Wylfa - Trwyn Penrhyn Wildlife Site to support the re-establishment of high quality coastal grassland which will support foraging chough through natural regeneration within the cooling water outfall work area; and
- Potential disruption caused by removal of structures including the cooling water intake and outfall during decommissioning. Embedded mitigation during decommissioning would be based upon standard construction best practice applicable at that time.

3.14.18 These matters, and their policy implications, are appropriately assessed through the detailed DCO examination process.

Conclusion

3.14.19 The information provided in the DCO submission, and summarised above, demonstrates that cooling technologies are feasible at the Wylfa site.

4 Conclusion

- 4.1.1 Horizon confirms that it wishes for the site at Wylfa to remain listed in the new NPS, and that it is not considered necessary to make any changes to the Wylfa NPS Site boundary established in EN-6.
- 4.1.2 Given the very substantial progress made towards obtaining the relevant consents, it is considered that it is more than reasonable to conclude that the site can be licensed, constructed and deployed by 2035.
- 4.1.3 The DCO application has been submitted and accepted, which provides a substantial level of detail beyond the level of detail typically required at the strategic nomination.
- 4.1.4 There is sufficient certainty, in advance of the detailed consideration of through the DCO examination process that the Wylfa site continues – as it did in 2009 – to satisfy the siting criteria at the strategic level.