

Wylfa Newydd Project

8.2.1 Design and Access Statement

Vol 1: Project-wide

PINS Reference Number: EN010007

Application Reference Number: 8.2.1

25 March 2019

Revision 4.0

Examination Deadline 8

Regulation Number: 5(2)(q). Overarching National Policy Statement ('NPS') for Energy (EN-1) - 4.5

Planning Act 2008

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

[This page is intentionally blank]

Contents

Executive Summary	1
Crynodeb (Welsh language)	16
1 Introduction	31
1.1 Purpose of the document.....	31
<i>Parameters approach</i>	31
<i>Control documents</i>	32
1.2 The Wylfa Newydd Project	33
<i>Licensable Marine Activities</i>	36
1.3 Relationship with DAS volumes 2 and 3	36
1.4 Structure of this document.....	37
1.5 Conformity with DAS guidance	38
2 Vision and objectives	40
2.1 Introduction.....	40
2.2 Vision	40
2.3 Objectives.....	40
<i>Project-wide</i>	40
3 Project context	42
3.1 Introduction.....	42
3.2 Planning policy overview	42
3.3 Operational requirements	53
3.4 Physical context.....	54
3.5 Social and cultural context.....	58
3.6 Summary	59
4 Consultation and design evolution	61
4.1 Introduction.....	61
4.2 PAC 1	62
4.3 PAC 2	63
4.4 PAC 3	64
4.5 Summary	65
5 Project-wide strategies	67
5.1 Introduction.....	67
5.2 Sustainability.....	67
5.3 Integrated Traffic and Transport Strategy	69
<i>Approach</i>	69
5.4 Worker Accommodation Strategy	71
<i>Approach</i>	72
6 The development proposals	74
6.1 Introduction.....	74
6.2 Enabling Works.....	74
<i>Site Preparation and Clearance</i>	74
6.3 Power Station Site	75

<i>Power Station</i>	75
<i>Other on-site development</i>	76
<i>Marine Works</i>	76
6.4 Licensable Marine Activities	77
6.5 Off-Site Power Station Facilities	77
6.6 Associated Development	78
7 Post Operational use	83
7.1 Introduction	83
7.2 Wylfa Newydd Development Area	83
7.3 Off-Site Power Station Facilities	84
7.4 Highways improvements.....	84
7.5 Associated Development	84
7.6 Summary	85
8 Parameters for implementation.....	86
8.1 Introduction	86
8.2 Guidance	86
8.3 Proposed approach	87
8.4 Power Station Site	89
8.5 Off-Site Power Station Facilities	89
8.6 Associated Development	90
<i>Site Campus</i>	90
<i>Park and Ride facility and Logistics Centre</i>	90
<i>A5025 Off-line Highway Improvements</i>	90
9 Conclusions	92
10 Reference Table	93

List of Figures

Figure 0-1 Location Plan	2
Figure 0-2 Power Station opportunities and constraints	4
Figure 0-3 Indicative layout for the Power Station	47
Figure 0-4 Aerial impression of the Power Station	47
Figure 0-5 Aerial impression of the Site Campus	47
Figure 0-6 Indicative layout for the Site Campus.....	47
Figure 0-7 Aerial impression of the Off-site Power Station Facilities	47
Figure 0-8 Indicative layout for the Off-site Power Station Facilities.....	47
Figure 0-9 Aerial impression of the Logistics Centre	47
Figure 0-10 Indicative layout of the Logistics Centre.....	47
Figure 0-11 Aerial impression of the Park and Ride facility	47
Figure 0-12 Indicative layout for the Park and Ride facility.....	47
Figure 0-13 Cynllun o'r lleoliad.....	16

Ffigur 0-14	Cyfleoedd a chyfngiadau'r Orsaf Bŵer	47
Ffigur 0-15	Argraff o'r awyr o'r Orsaf Bŵer.....	19
Ffigur 0-16	Cynllun dangosol ar gyfer yr Orsaf Bŵer.....	20
Ffigur 0-17	Argraff o'r awyr o Campws y Safle	47
Ffigur 0-18	Cynllun dangosol Campws y Safle.....	47
Ffigur 0-19	Argraff o'r awyr o'r Cyfleusterau Oddi ar Safle'r Orsaf Bŵer	47
Ffigur 0-20	Cynllun dangosol y Cyfleusterau Oddi ar Safle'r Orsaf Bŵer	47
Ffigur 0-21	Argraff o'r awyr o'r Ganolfan Logisteg	47
Ffigur 0-22	Cynllun dangosol y Ganolfan Logisteg	47
Ffigur 0-23	Argraff o'r awyr o'r cyfleuster Parcio a Theithio	47
Ffigur 0-24	Cynllun dangosol ar gyfer y cyfleuster Parcio a Theithio.....	47
Figure 1-1	Site locations.....	35
Figure 3-1	PPW good design	47
Figure 3-2	Wylfa Newydd Development Area.....	55

[This page is intentionally blank]

Executive Summary

Introduction

This document is the Design and Access Statement ('DAS') summary submitted in support of the development consent application for the Wylfa Newydd DCO Project (the 'DCO Project').

The DCO Project will be located on the Isle of Anglesey, which is situated off the north-west coast of Wales, separated from Bangor on the mainland by the Menai Strait.

The DCO Project comprises:

- Power Station;
- Marine Works;
- other on-site development;
- Off-Site Power Station Facilities;
- Associated Development:
 - Site Campus;
 - Park and Ride facility at Dalar Hir;
 - Logistics Centre at Parc Cybi;
 - A5025 Off-line Highway Improvements; and
 - compensatory wetland habitat creation and enhancement works at Tŷ Du, Cors Gwawr and Cae Canol-dydd.

A more detailed description of the DCO Project is set out in this Volume and the locations of DCO Project sites are shown on Figure 0-1.

The DAS seeks to clearly communicate the process undertaken to demonstrate that both design quality and inclusive access have been given sufficient consideration in the planning process in accordance with national and local planning policy.

Figure 0-1 Location plan



ALLWEDD / KEY

■ Ardal Datblygu Wylfa Newydd Wylfa Newydd Development Area	■ Ffyrdd "A" / "A" roads
■ A Ardalod mewn bylchau – meysydd ymgynghori Boxed areas – areas of consultation	■ Aneddiadau / Settlements
— Newidiadau sy'n cael eu cynnig i'r briffordd Proposed Off-Line highway improvements	+---+ Rheilffyrrd / Railway lines
A Cynefin corsiog presennol i'w wella Existing fen habitat to be enhanced	■ Afonydd/lynnoedd / Rivers/lakes
B Cynefinoedd corsiog i'w creu neu eu gwella Fen habitat to be created or enhanced	■ Gorsafodd Rheilffyrrd / Railway stations
C Ardalod Iliniariu ecologol Wylfa Newydd Wylfa Newydd ecological mitigation areas	
ARDALOEDD FFIN NEWIDIADAU I BRIFFORDD YR A5025 A5025 OFF-LINE HIGHWAY BOUNDARY AREAS	
D Adran 1 - Y Fali / Section 1 - Valley	F Adran 5 - Llanfaethlu / Section 5 - Llanfaethlu
E Adran 3 - Llanfachraeth / Section 3 - Llanfachraeth	G Adran 7 - Cefn Coch / Section 7 - Cefn Coch
	H Cyfeusteriau Oddi ar Safle'r Orsaf Bŵer Off-site Power Station Facilities
	I Canolfan Logisteg - Parc Cybi Logistics Centre - Parc Cybi
	J Cysylltiad â'r Grid Cenedlaethol National Grid connection

Design principles and parameters

The DAS contains details of design principles and parameters, which subsequent detailed designs will need to accord with.

The DAS also presents illustrative design proposals that demonstrate how the developments could be delivered in accordance with the principles and parameters.

Structure of the Design and Access Statement

The DAS is split into three volumes.

- **Volume 1 – Wylfa Newydd DCO Project** – provides an overview of project-wide strategies and approaches which have influenced the approach to design.
- **Volume 2 – Power Station Site** – sets out design principles for the Power Station Site and provides illustrative design proposals showing how the Power Station could be delivered.
- **Volume 3 – Associated Development and Off-Site Power Station Facilities** – sets out design principles for each of the Associated Development sites and the Off-Site Power Station Facilities site. It also provides illustrative design proposals showing how each of the developments could be delivered.

Landscape and habitat design principles for the Wylfa Newydd Development Area (WNDA), excluding the Power Station Site and Site Campus, are contained within the Landscape and Habitat Management Strategy.

Consultation and design evolution

Horizon has undertaken four main stages of consultation, as set out below:

- Stage One Pre-Application Consultation (PAC 1): September – December 2014;
- Stage Two Pre-Application Consultation (PAC 2): August – October 2016;
- Stage Three Pre-Application Consultation (PAC 3): May – June 2017;
- Pre-Application Consultation on Additional Land: January 2018.

Details of how Horizon has used consultation to inform the design process and refine the DCO Project are set out in the DAS.

Summary of the design process

Power Station Site

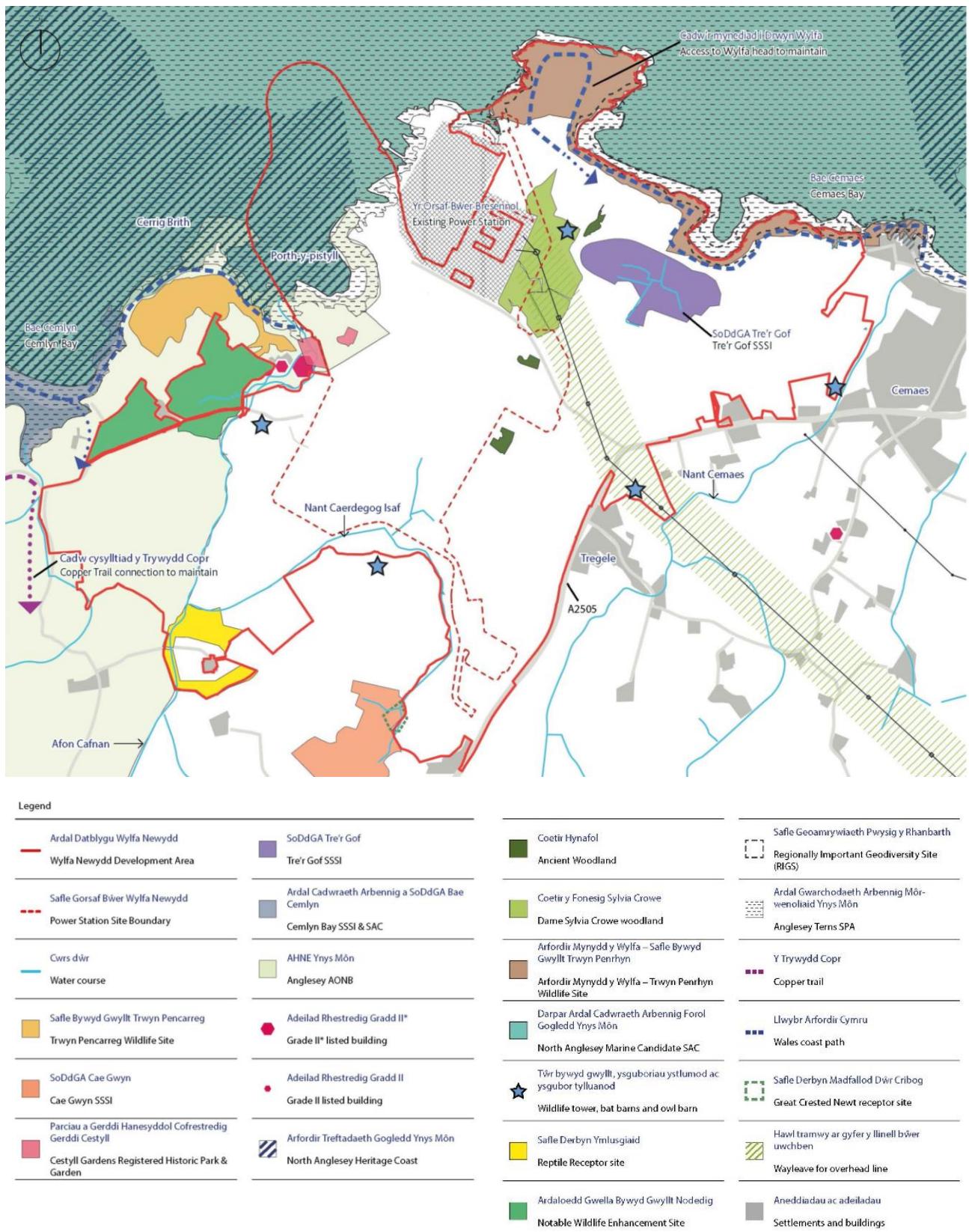
Existing context

The Power Station Site is predominantly agricultural with an irregular field pattern subdivided by a variety of hedgerows, traditional cloddiau (a stone-faced earth bank) or

dry stone walls, and post and wire fencing. The site also extends out into the Irish Sea to facilitate construction of the Marine Works.

The Existing Power Station is located a short distance from the Power Station Site within the WNDA. A summary of the opportunities and constraints within the WNDA are shown in Figure 0-2.

Figure 0-2 Power Station opportunities and constraints

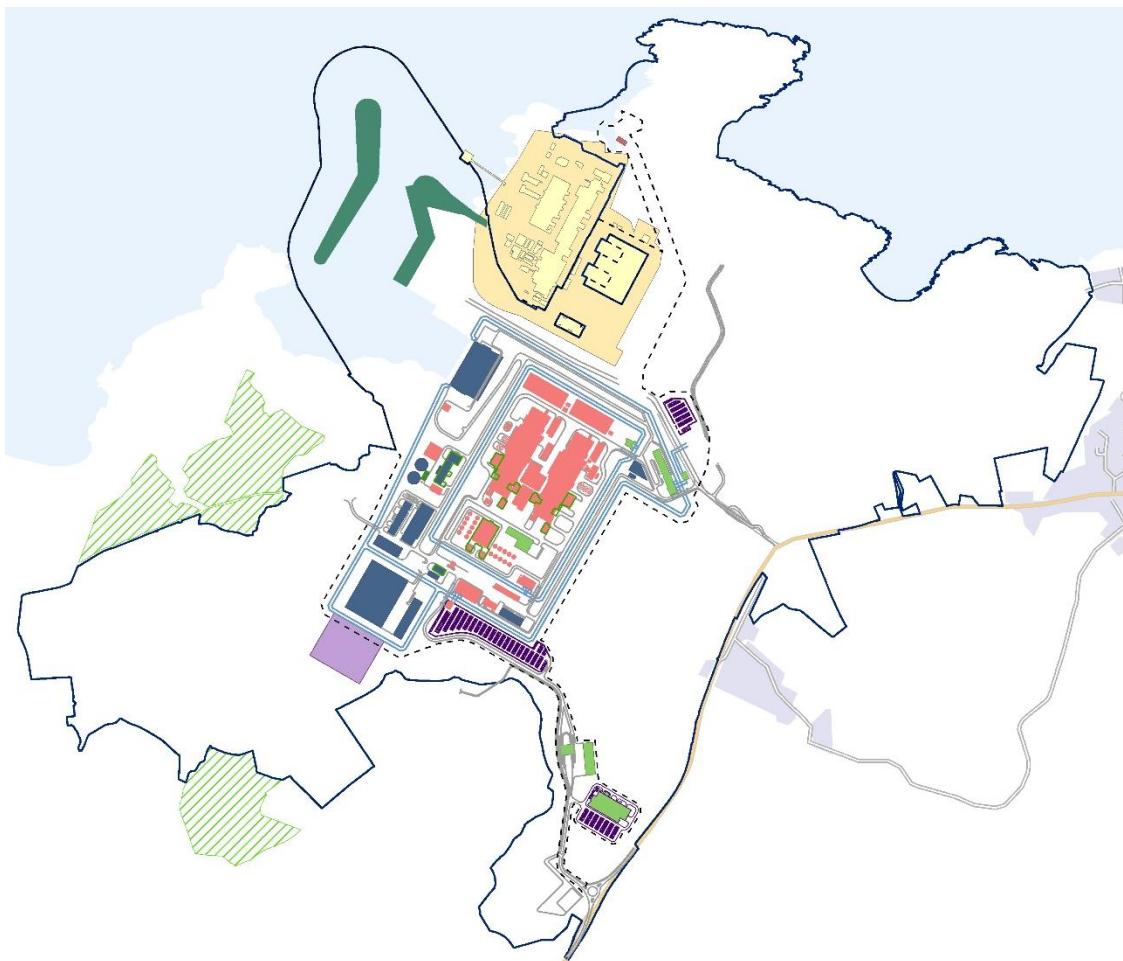


Design development

As would be expected, the Office for Nuclear Regulation requires that any new nuclear power stations built in the UK meets high regulatory standards. The design, scale and layout of the Power Station is therefore largely driven by these standards. Within which, the Power Station design has evolved to combine buildings and structures were practical, reducing the total area of the site and increasing the distance to local communities and the A5025.

Drawings for how the Power Station could look are shown on Figures 0-3 and 0-4.

Figure 0-3 Indicative layout for the Power Station



Legend

Wylfa Newydd Development Area	Common plant
Power Station Site	Supporting facilities, buildings, structures and features
Existing Magnox power station	Preferred location of decommissioning waste storage and processing facilities
Existing Magnox power station buildings	Combustion Installation Boundary
A5025	Power Station internal road layout
Existing roads	Settlements
Settlements	Ecology Mitigation Areas
Ecology Mitigation Areas	Power Station
Power Station	Main plant
Main plant	Marine off-loading facility and breakwaters
	Power Station fences
	Car parking
	Cooling Water System Outfall

Figure 0-4 Aerial impression of the Power Station



Site Campus

Existing context

The Site Campus site lies parallel to the coast near Wylfa Head in the WNDA.

There is an area of ancient woodland within the eastern boundary. The Tre'r Gof Site of Special Scientific Interest (SSSI), a small basin mire, is located south-east of the site.

The topography is generally a combination of undulating curves rising to the promontory at Wylfa Head.

Design development

The proposals seek to accommodate up to 4,000 residents, in a phased development. Accommodation buildings are arranged sensitively in the undulating landscape, around a central amenity area.

The site layout has evolved to locate buildings and roads away from sensitive receptors. Building heights and colour finishes have been developed to integrate them into the surrounding landform, providing a coherent setting in both views from a distance and from close up.

Drawings showing how the Site Campus could look are shown on Figures 0-5 and 0-6.

Figure 0-5 Aerial impression of the Site Campus



Figure 0-6 Indicative layout for the Site Campus



Allwedd Legend

- Ffin Ardal Datblygu Wylfa Newydd
WNDA Boundary
- Wyneb y ffordd
Road surface
- Wyneb lwybr troed / lwybr i gerddwyr
Footway / pedestrian route surface
- Tirweddol meddal
Soft landscaping
- Llystyflant presennol i'w gadw
Existing vegetation retained
- Creigiau brig presennol i'w gadw
Existing rock outcrop retained
- Oi-troed arfaethedig adeilad
Proposed building footprint
- ◀ Mynedfa / pwnt mynediad adeilad
Building access point / entrance
- Draenau arfaethedig
Proposed drainage
- Efens (2.4m math Paladin)
Fenceline (2.4m paladin type)
- Efens (1.8m math byrddau pren agos at ei gilydd)
Fenceline (1.8m timber close board type)
- Efens (3m math chwaraeon MUGA)
Fenceline (3m MUGA sports type)
- Wal gerrig bresennol i'w chadw
Existing stone walling retained
- ✓ Rhwystr mynediad i gerbydau
Vehicle access barrier
- Rhwystr mynediad i gerddwyr
Pedestrian access barrier
- Croesfan i gerddwyr gyda marciani llinell
Pedestrian crossing - white line markings
- Ardal sydd ei hangen ar gyfer draenio
Area required for sustainable drainage

Adeiladau - Nifer mwyaf o loriau Buildings - Maximum storeys

- MATH A 4 Llawr + Ystafell Offer ar y To
TYPE A 4 Storeys + Rooftop Plantroom
- MATH B 5 Llawr + Ystafell Offer ar y To
TYPE B 5 Storeys + Rooftop Plantroom
- MATH C 6 Llawr + Ystafell Offer ar y To
TYPE C 6 Storeys + Rooftop Plantroom
- MATH D 7 Llawr + Ystafell Offer ar y To
TYPE D 7 Storeys + Rooftop Plantroom
- MATH E Is-orsaf ac uned gaeeddig ar gyfer biniau
TYPE E Substation and bin enclosure
- MATH F Adeilad amwynder
TYPE F Amenity building
- MATH G Ysgubor ystumod presennol
TYPE G Existing bat barn
- MATH H Adeilad diogelwch
TYPE H Security building
- MATH I Adeilad y pwmp chwistrelu,
cywasgwgr a storfa biniau
allanol ar gyfer yr adeilad
amwynder
- TYPE I Sprinkler pumphouse,
compactor and external bin
store for amenity building
- MATH J Ystafell Swtch Foltedd Uchel
TYPE J HV Switchroom
- MATH K Storfa beics
- TYPE K Cycle store
- MATH L Compound offer ar gyfer MUGAs
TYPE L Equipment compound for MUGAs

Allwedd meysydd parcio Car parking legend

- P1 Parcio (16 lle hygrych a 16 lle ar
gyfer cerbydau danfon/bysiau
mini neu 1 gerbyd mwyddau trwm)
- P1 Parking (10No. accessible spaces
and 10No. delivery vehicles /
minibuses or 1 HGV)

Allwedd amwynder Amenity legend

- S1 Ardal gemau sawl defnydd sy'n addas
ar gyfer pêl-droed pump bob ochr
- S1 Multi use games area suitable for
five-a-side football

Off-Site Power Station Facilities

Site context

The site is north of Llanfaethlu and bounded by the A5025 to the west, residential/storage buildings to the north and south-west, and farmland to the south and east

The northern part of the site is a former bus depot and the southern part is predominately open farmland. A bund is present in the middle of the site, which bisects the site.

There are hedgerows to the southern and eastern boundaries and an evergreen shelterbelt to the north.

Design development

The Off-Site Power Station Facilities comprise a Mobile Emergency Equipment Garage (MEEG), Alternative Emergency Control Centre (AECC) and Environmental Survey Laboratory (ESL). Originally, the AECC and ESL proposals were located at different sites.

The current proposals locate the MEEG and AECC at the centre of the site and the ESL at the north-west. The arrangement of new buildings mimics the existing pattern.

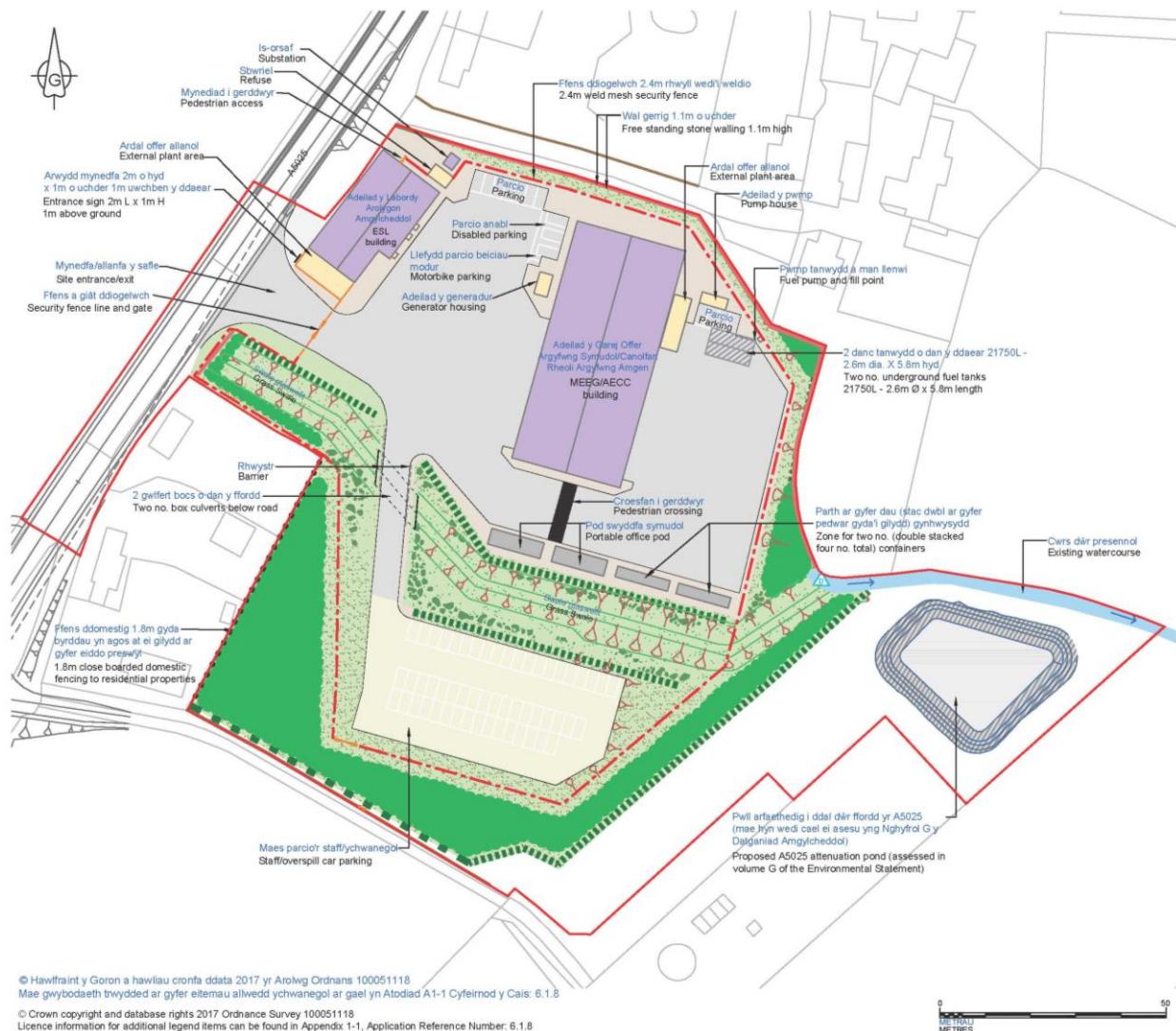
Vehicle circulation has been designed either side of the MEEG/AECC building. An overspill car park has been designed at the south of the site.

Drawings showing how the Off-Site Power Station Facilities could look are shown on Figures 0-7 and 0-8.

Figure 0-7 Aerial impression of the Off-Site Power Station Facilities



Figure 0-8 Indicative layout for the Off-Site Power Station Facilities



ALLWEDD LEGEND

- Order Limits
- Gwaith Tirweddu Meddal - Presennol**
- Softworks - Existing
- Gwrychoedd sy'n cael eu cadw
-  Retained hedgerow

Gwaith Tirwedd - Arfaethedig
Softworks - Proposed

Plannu gwrychoedd Hedgerow planting

Plannu llwyni brodorol

Native shrub planting

Glaewlwr - rhwysogaethau cyfeithgar

Glaswelli - Mywogaethau cyfoedd
Grassland - species rich

Plannu coeder

Native tree and shrub planting

Gwaith Tirweddau Cal Hardworks Existing

Gwaith Tirwedd Caled - Arfaethedig

HardWorks - Proposed

Proposed stone walling

 Llinell ffin ddiogel
Secure boundary line

 Ffens ddomestig gyda byrddau'n agos at ei gilydd
Close boarded domestic fencing

 Glat/pwynt mynediad drogelwch
Security gate/access point

Vehicle surfacing, non-permeable

Wyneb i gerddwyr Bedrock surface

Cwrs Dŵr - Presennol Watercourse - Existing

Watercourse - Existing

Cwrs Dŵr - Arfaethedig Watercourse - Proposed

Watercourse - Proposed

Parc Cybi Logistics Centre

Existing context

The site sits within the Parc Cybi development area with easy access to the A55 and is currently open grassland. There are trees in the south-west corner and an exposed rock outcrop towards the south-east corner of the site.

Design development

The development comprises an area of hardstanding for up to 100 Heavy Goods Vehicles (HGVs). An office/welfare building is provided to control operations and provide driver welfare facilities, along with an inspection facility and security/information kiosks.

Safe circulation has been designed to avoid vehicles reversing. HGVs may queue within the site at peak times.

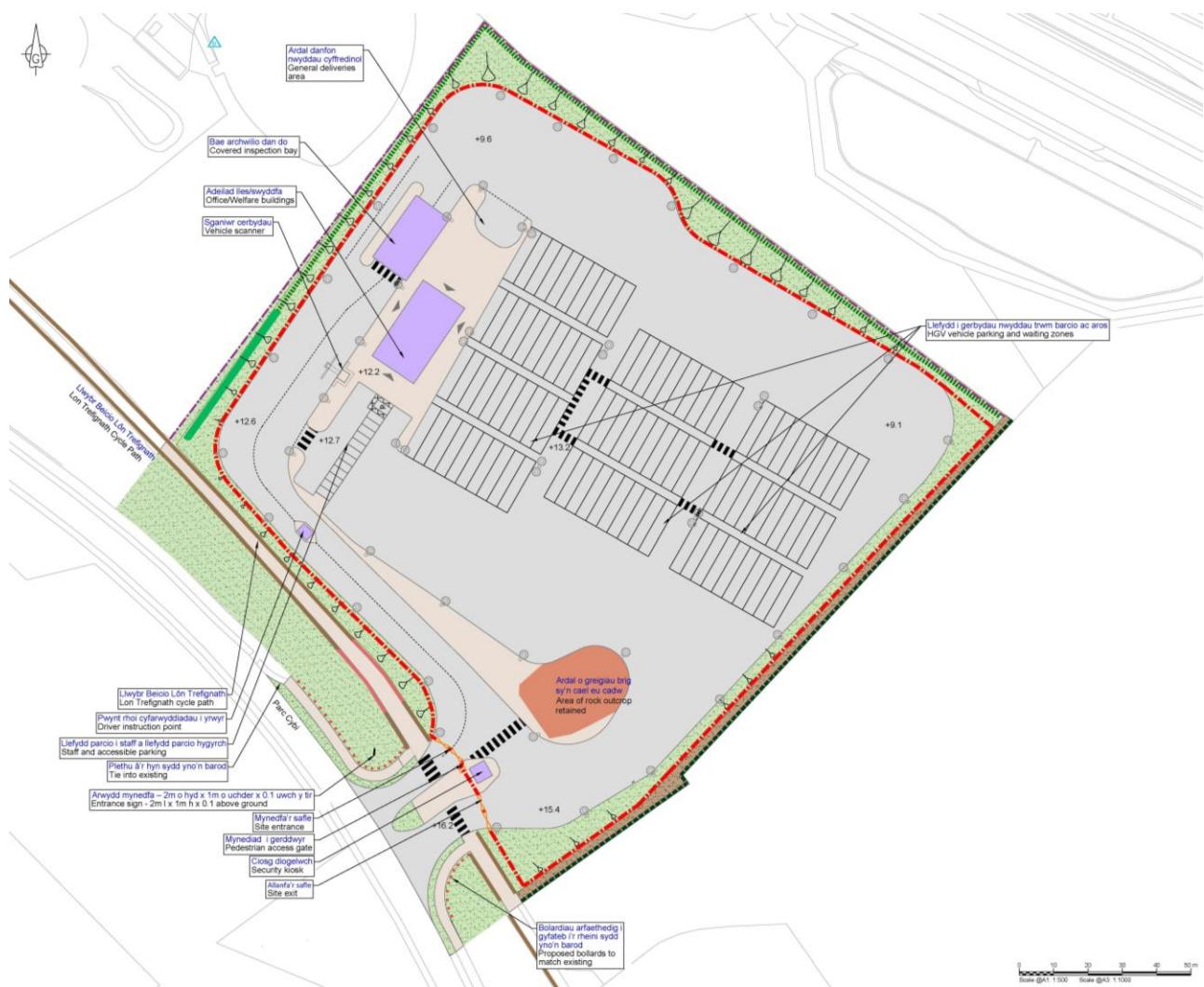
The Tŷ Mawr Standing Stone and the Trefignath Burial Chamber are near to the site and development has been refined to retain a line of sight between them.

Drawings showing how the Logistics Centre could look are shown on Figures 0-9 and 0-10.

Figure 0-9 Aerial impression of the Logistics Centre



Figure 0-10 Indicative layout of the Logistics Centre



Allwedd
Legend

- Gwaith tirweddu meddal – presennol**
Softworks - existing
- Gwrych sy'n cael ei gadw**
Hedgerow retained
- Gwaith Tirweddu Meddal – arfaethedig**
Softworks - proposed
- Planhigion ar yr yml**
Edge planting
- Plannu gwrychoedd**
Hedgerow planting
- Grassland**
- Gwaith tirweddu caled – presennol**
Hardworks - existing
- Marciau ffordd**
Road markings
- Walau cerrig sy'n cael eu cadw**
Retained stone walling

Gwaith Tirweddu Caled – arfaethedig
Hardworks - proposed

- Wal gerrig arfaethedig**
Proposed stone walling
- Lleoliadau arglawdd/toriad**
Embankment/cutting locations
- Ffens Paladin 2.4m o uchder**
2.4m high palladin fence
- Giât / pwynt mynediad diogel**
Secure gate / access point
- Ffens stoc postyn a gwifren 1.2m**
1.2m Post and wire stock fencing
- Wyneb i gerbydau, anhydراidd**
Vehicle surfacing, non-permeable
- Wyneb i gerddwyr**
Pedestrian surfacing
- Croesfan i gerddwyr**
Pedestrian crossing
- Lôn cerrig mân**
Gravel track

Adeiladau – arfaethedig
Buildings - proposed

- Pwynt mynediad safle / adeilad**
Building / site access point
- Goleuadau – arfaethedig**
Lighting - proposed
- Lleoliad colofn golau / uned CCTV**
Location of lighting column / CCTV unit

Dalar Hir Park and Ride facility

Existing context

The Park and Ride site is located close to Junction 4 of the A55. The site is currently in agricultural use, bordered by the existing karting centre to the east and existing roads to the west and south. To the north, the site gives way to open countryside.

Trees and shrubs have been planted along the boundary with the A5, helping to contain the site.

Design development

The development comprises zoned parking areas for up to 1,900 vehicles.

Parking areas have been designed to sensitively sit in the landscape.

A central bus transport facility building, providing information and welfare facilities, sits adjacent to the bus pick-up and drop-off.

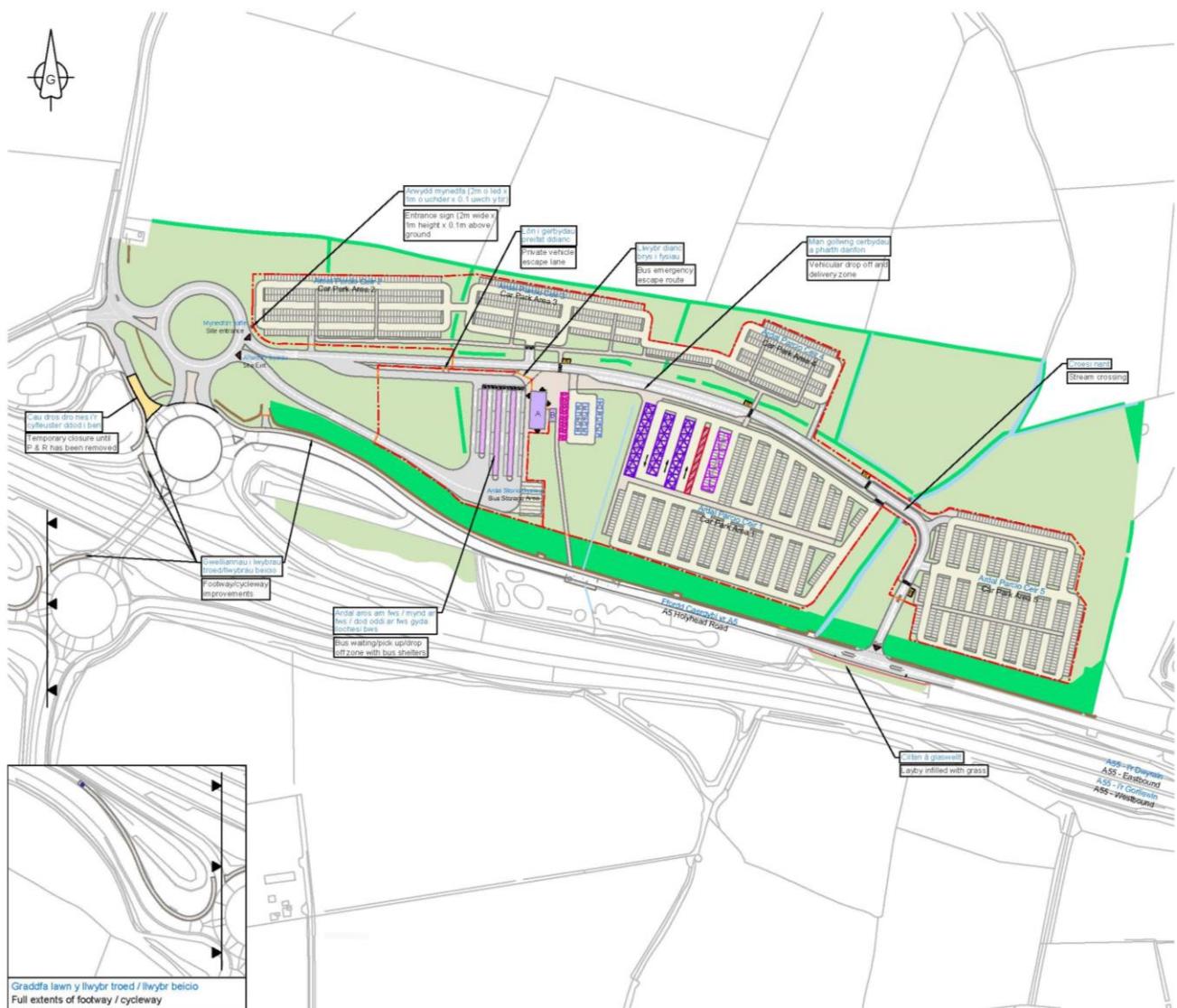
Clear and safe vehicle and pedestrian circulation has been designed. A new roundabout is proposed within the site, providing access.

Drawings showing how the Park and Ride facility could look are shown on Figures 0-11 and 0-12.

Figure 0-11 Aerial impression of the Park and Ride facility



Figure 0-12 Indicative layout for the Park and Ride facility



Allwedd Legend

-  **Wyneb y ffodd**
Road surface
-  **Wyneb llwybr troed / llwybr i gerddwyr**
Footway / pedestrian route surface
-  **Wyneb ffodd hydraidd**
Permeable road surface
-  **Öl-troed arfaethedig adeiladau**
Proposed building footprint
-  **Llystyfiant a fydd yn cael ei gadw**
Retained vegetation
-  **Tirweddu meddal**
Soft landscaping
-  **Mynedfa / pwnt mynediad adeilad**
Building access point / entrance
-  **Cwrs dŵr / ffos ddraenio bresennol**
Existing watercourse / drainage ditch

- Fnfs ddiogelwch (math Paladin 1.8m)
Security fence (1.8m paladin type)
- Wal gerrig bresennol
Existing stone wall
- Wal gerrig arfaethedig
Proposed stone wall
- Croesfan i gerddwyr
Pedestrian crossing
-  Safleoedd bws mewnol
Internal bus stops
-  Safleoedd bws cyhoeddus
Public bus stops
-  Mynediad giât a rhwystr
Gate and barrier access
-  Liefydd parcio bysiau mini
Minibus parking

Adeiladau Buildings

- A Adeilad cyfleuster trafnidiaeth bws**
Bus transport facility building
- B Storfa beics**
Cycle store

Off-line Highway Improvements

Existing context

One of the main aims of the Off-line Highway Improvements is to address potential highway safety and capacity issues caused by an increase in traffic movements as a result of the Wylfa Newydd DCO Project. The locations of the proposed improvements are shown on Figure 0-1.

Design development

Horizon undertook three stages of design development as prescribed by the Design Manual for Roads and Bridges, details of which are set out in Volume 3 of the DAS.

Crynodeb

Cyflwyniad

Y ddogfen hon ydy'r crynodeb o'r Datganiad Dylunio a Mynediad a gyflwynir i gefnogi'r cais am gydsyniad datblygu ar gyfer Prosiect DCO Wylfa Newydd (y 'Prosiect DCO').

Bydd y Prosiect DCO ar Ynys Môn, sydd oddi ar arfordir gogledd orllewinol Cymru. Mae'r Fenai yn llofnod rhwng Ynys Môn a Bangor ar y tir mawr.

Mae'r Prosiect DCO yn cynnwys:

- Gorsaf Bŵer;
- Gwaith Morol;
- datblygiadau eraill ar y safle;
- Cyfleusterau Oddi ar Safle'r Orsaf Bŵer;
- Datblygiadau Cysylltiedig:
 - Campws y Safle;
 - Cyfleuster Parcio a Theithio yn Dalar Hir;
 - Canolfan Logisteg ym Mharc Cybi;
 - Newidiadau i Briffordd yr A5025;
 - gwaith i greu a gwella cynefinoedd gwlyptir i wneud iawn yn Nhŷ Du, Cors Gwawr a Chae Canol-dydd.

Mae disgrifiad manylach o'r Prosiect DCO ar gael yng Nghyfrol 1 y Datganiad Dylunio a Mynediad ac mae lleoliadau safleoedd y Prosiect DCO yn cael eu dangos ar Ffigur 0-13.

Mae'r Datganiad Dylunio a Mynediad yn ceisio cyfleu'n glir y broses sy'n cael ei dilyn i sicrhau bod ansawdd dyluniad a mynediad cynhwysol wedi cael eu hystyried yn ddigonol yn y broses gynllunio ac yn unol â pholisïau cynllunio lleol a chenedlaethol.

Ffigur 0-13 Cynllun o'r lleoliad



ALLWEDD / KEY

 Ardal Datblygu Wylfa Newydd Wylfa Newydd Development Area	 Ffyrdd "A" / "A" roads
A Ardaloeedd mewn bylchau – meysydd ymgynghori Boxed areas – areas of consultation	 Aneddiadau / Settlements
 Newidiadau sy'n cael eu cynnig i'r briffordd Proposed Off-Line highway improvements	 Rheilffyrrd / Railway lines
A Cynefin corsiog presennol i'w wella Existing fen habitat to be enhanced	 Afonydd/lynnoedd / Rivers/lakes
B Cynefinoedd corsiog i'w creu neu eu gwella Fen habitat to be created or enhanced	 Gorsafodd Rheilffyrrd / Railway stations
C Ardaloeedd lliniaru ecollegol Wylfa Newydd Wylfa Newydd ecological mitigation areas	
ARDALOEDD FFIN NEWIDIADAU I BRIFFORDD YR A5025 A5025 OFF-LINE HIGHWAY BOUNDARY AREAS	
D Adran 1 - Y Fali / Section 1 - Valley	F Adran 5 - Llanfaethlu / Section 5 - Llanfaethlu
E Adran 3 - Llanfachraeth / Section 3 - Llanfachraeth	G Adran 7 - Cefn Coch / Section 7 - Cefn Coch
	H Cyfeusteriau Oddi ar Safle'r Orsaf Bŵer Off-site Power Station Facilities
	I Canolfan Logisteg - Parc Cybi Logistics Centre - Parc Cybi
	J Cysylltiad â'r Grid Cenedlaethol National Grid connection

Egwyddorion a pharamedrau dylunio

Mae'r Datganiad Dylunio a Mynediad yn cynnwys manylion egwyddorion a pharamedrau dylunio, y bydd angen i ddyluniadau manwl dilynol gyd-fynd â nhw.

Mae'r Datganiad Dylunio a Mynediad hefyd yn cyflwyno cynigion dylunio dangosol sy'n dangos sut byddai modd cyflawni'r datblygiadau yn unol â'r egwyddorion a'r paramedrau.

Strwythur y Datganiad Dylunio a Mynediad

Mae'r Datganiad Dylunio a Mynediad yn cael ei rannu yn tair cyfrol.

- **Cyfrol 1 – Prosiect DCO Wylfa Newydd** – mae hon yn rhoi trosolwg o'r strategaethau a'r dulliau gweithredu sy'n berthnasol i'r prosiect i gyd ac sydd wedi dylanwadu ar y dull dylunio.
- **Cyfrol 2 – Safle'r Orsaf Bŵer** – mae hon yn nodi'r egwyddorion dylunio ar gyfer Safle'r Orsaf Bŵer ac yn rhoi cynigion dylunio darluniadol sy'n dangos sut byddai modd cyflawni'r Orsaf Bŵer.
- **Cyfrol 3 – Datblygiadau Cysylltiedig a Chyfleusterau Oddi ar Safle'r Orsaf Bŵer** – mae hon yn rhoi'r egwyddorion dylunio ar gyfer pob un o safleoedd y Datblygiadau Cysylltiedig a safle'r Cyfleusterau Oddi ar Safle'r Orsaf. Mae hefyd yn rhoi cynigion dylunio dangosol sy'n dangos sut byddai modd cyflawni pob un o'r datblygiadau.

Mae egwyddorion dylunio tirwedd a chynefinoedd Ardal Datblygu Wylfa Newydd, heb gynnwys Safle'r Orsaf Bŵer a Champws y Safle, yn y Strategaeth Rheoli Tirwedd a Chynefinoedd.

Ymgynghori ac esblygiad y dyluniad

Mae Horizon wedi cynnal pedwar prif gam o ymgynghori, fel sy'n cael ei nodi isod:

- Ymgynghoriad Cyn Ymgeisio Cam Un (PAC 1): Medi – Rhagfyr 2014;
- Ymgynghoriad Cyn Ymgeisio Cam Dau (PAC 2): Awst – Hydref 2016;
- Ymgynghoriad Cyn Ymgeisio Cam Tri (PAC 3): Mai – Mehefin 2017; a,
- Ymgynghoriad Cyn Ymgeisio ar Dir Ychwanegol: Ionawr 2018.

Mae'r Datganiad Dylunio a Mynediad yn cynnwys manylion yngylch sut mae Horizon wedi defnyddio'r ymgynghoriadau er mwyn cyfrannu at y broses dylunio a mireinio'r Prosiect DCO.

Crynodeb o'r broses dylunio

Safle'r Orsaf Bŵer

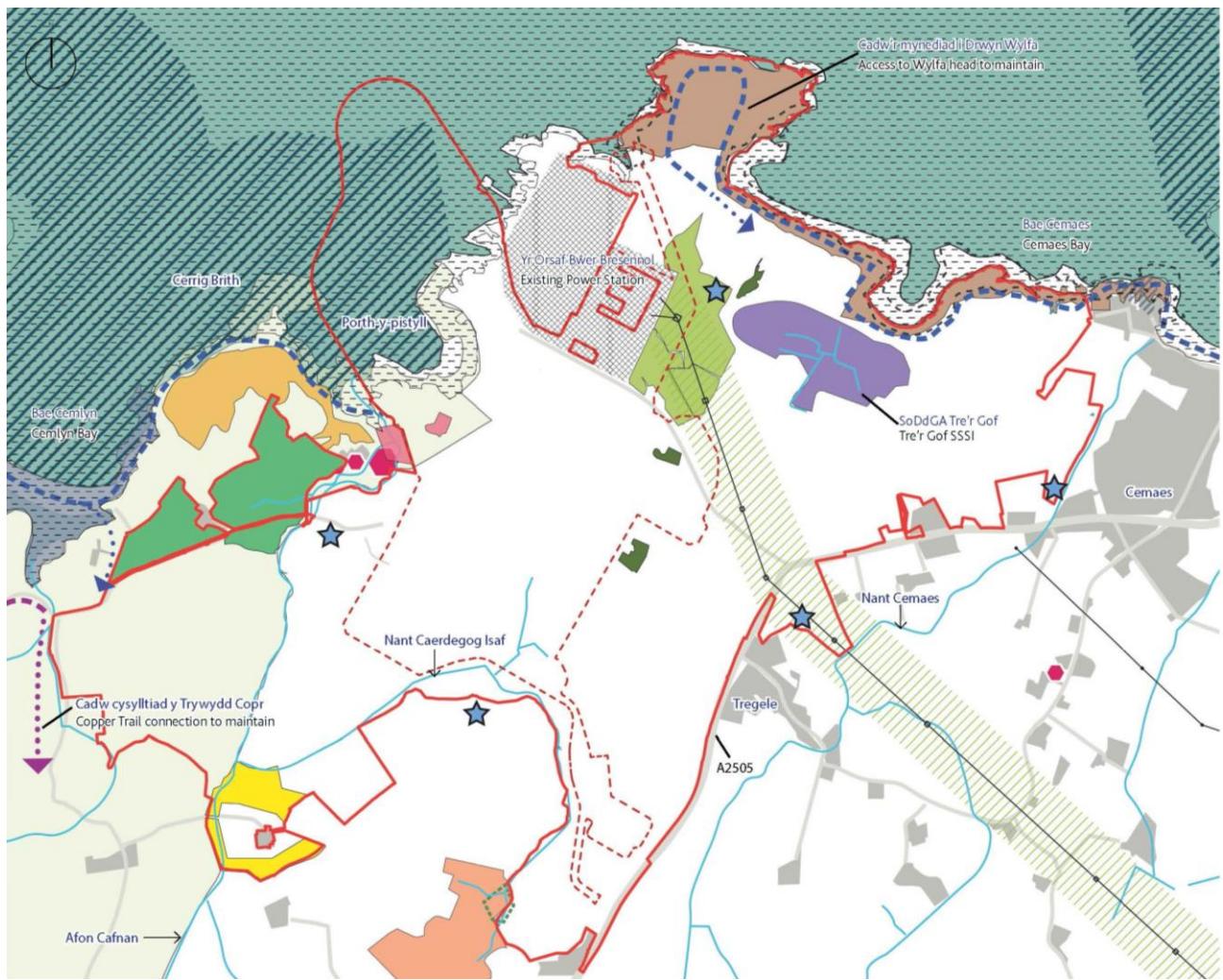
Y cyd-destun presennol

Mae'r rhan fwyaf o Safle'r Orsaf Bŵer yn dir amaethyddol gyda phatrymau caeau afreolaidd wedi'u rhannu gan amrywiaeth o wrychoedd, cloddiau traddodiadol neu

waliau cerrig sych, a ffensys postyn a weiren. Mae'r safle hefyd yn ymestyn allan i Fôr Iwerddon er mwyn gallu adeiladu'r Gwaith Morol.

Mae'r Orsaf Bŵer Bresennol yn agos at Safle'r Orsaf Bŵer yn Ardal Datblygu Wylfa Newydd. Mae Ffigur 0-14 yn cynnwys crynodeb o'r cyfleoedd a'r cyfyngiadau yn Ardal Datblygu Wylfa Newydd.

Ffigur 0-14 Cyfleoedd a chyfyngiadau'r Orsaf Bŵer



Legend

Ardal Datblygu Wylfa Newydd	SoDdGA Tre'r Gof	Coetir Hynafol	Saflie Geoamrywiaeth Pwysig y Rhanbarth
Wylfa Newydd Development Area	Tre'r Gof SSSI	Ancient Woodland	Regionally Important Geodiversity Site (RIGS)
Safle Gorsaf Bŵer Wylfa Newydd	Ardal Cadwraeth Arbennig a SoDdGA Bae Cemlyn	Coetir y Fonesig Sylvia Crowe	Ardal Gwarchodfaeth Arbennig Môr-wenolaid Ynys Môn
Power Station Site Boundary	Cemlyn Bay SSSI & SAC	Dame Sylvia Crowe woodland	Anglesey Terns SPA
Cwrs dŵr	AHNE Ynys Môn	Arfordir Mynydd y Wylfa – Saflie Bywyd Gwylt Trwyn Penrhyn	Y Trywydd Copr
Water course	Anglesey AONB	Arfordir Mynydd y Wylfa – Trwyn Penrhyn Wildlife Site	Copper trail
Saflie Bywyd Gwylt Trwyn Pencarreg	Adeilad Rhestredig Gradd II*	Darpar Ardal Cadwraeth Arbennig Forol Gogledd Ynys Môn	Uwibr Arfordir Cymru
Trwyn Pencarreg Wildlife Site	Grade II* listed building	North Anglesey Marine Candidate SAC	Wales coast path
SoDdGA Cae Gwyn	Adeilad Rhestredig Gradd II	Tôr bywyd gwylt, ysguboriau ystumod ac ysgubor tylluanod	Saflie Derbyn Madfallod Dŵr Cribog
Cae Gwyn SSSI	Grade II listed building	Wildlife tower, bat barns and owl barn	Great Crested Newt receptor site
Parciau a Gerddi Hanesyddol Cofrestredig	Arfordir Treftadaeth Gogledd Ynys Môn	Saflie Derbyn Ymlusgfaid	Hawl tramwyr ar gyfer y llinell bŵer uwchben
Gerddi Cestyll	North Anglesey Heritage Coast	Reptile Receptor site	Wayleave for overhead line
Cestyll Gardens Registered Historic Park & Garden			Aneddiau ac adeiladau
			Settlements and buildings

Datblygu'r dyluniad

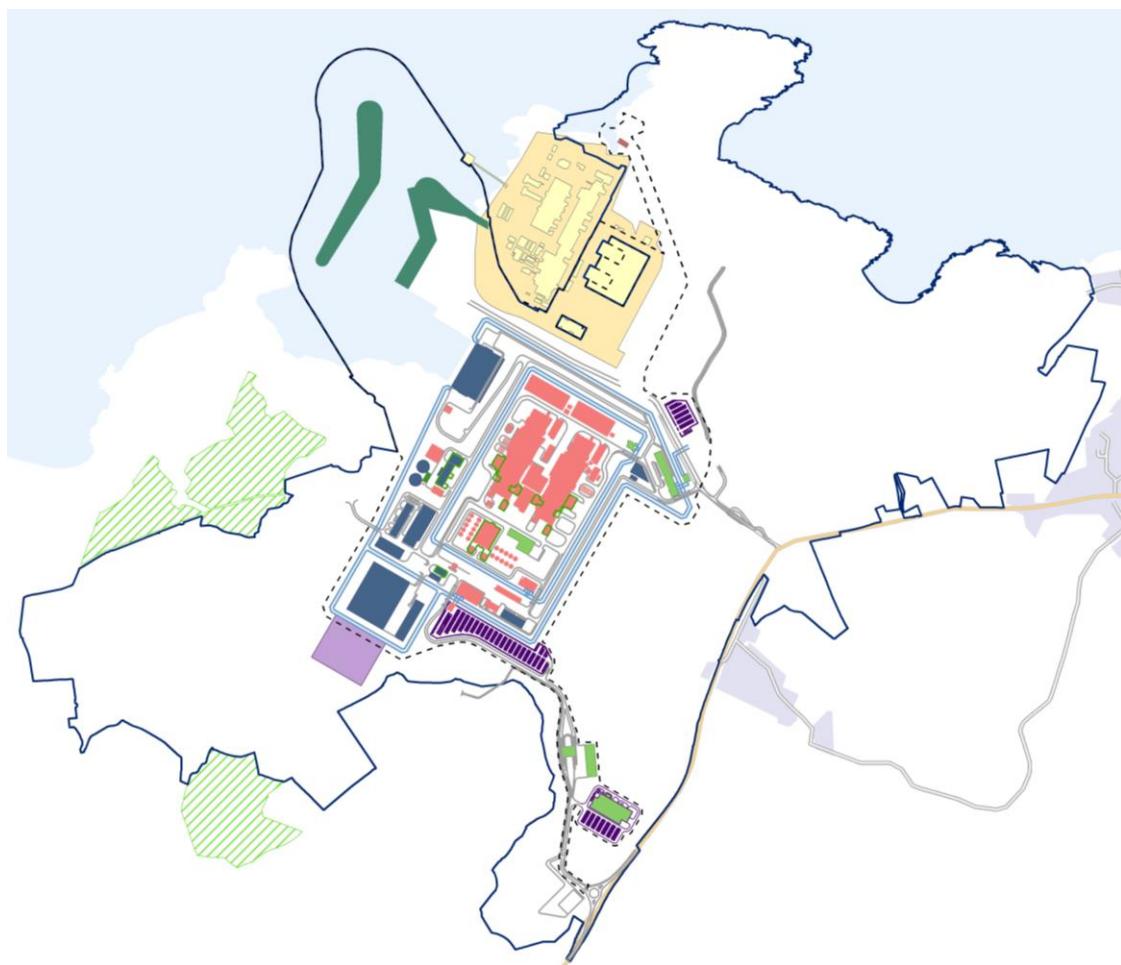
Fel y byddid yn ei ddisgwyl, mae'r Swyddfa Rheoleiddio Niwclear yn mynnu ei bod yn rhaid i unrhyw orsafoedd pŵer niwclear newydd sy'n cael eu hadeiladu yn y DU gyrraedd safonau rheoleiddio uchel. Mae dyluniad, graddfa a chynllun yr Orsaf Bŵer felly'n cael eu harwain i raddau helaeth gan y safonau hyn. O'u mewn, mae dyluniad yr Orsaf Bŵer wedi esblygu i gyfuno adeiladau a strwythurau pan fo hynny'n ymarferol, gan leihau cyfanswm arwynebedd y safle a'u gosod ymhellach oddi wrth gymunedau lleol a'r A5025.

Mae Ffigurau 0-15 a 0-16 yn cynnwys lluniadau sy'n dangos sut gallai'r Orsaf Bŵer edrych.

Ffigur 0-15 Argraff o'r awyr o'r Orsaf Bŵer



Ffigur 0-16 Cynllun dangosol ar gyfer yr Orsaf Bŵer



Allwedd

- Ardal Datblygu Wylfa Newydd
- Safle'r Orsaf Bŵer
- Gorsaf bŵer bresennol Magnox
- Adeiladau gorsaf bŵer bresennol Magnox
- A5025
- Cynllun ffyrdd mewnol a newydd
- Aneddiadau
- Ardaloedd Lliniaru Ecolegol

Gorsaf Bŵer

- Y prif offer
- Offer cyffredin

- Cyfleusterau, adeiladau, strwythurau a nodweddion cefnogol
- Y lleoliad sy'n cael ei ffafrio ar gyfer y cyfleusterau datgomisiynu prosesu a storio gwastraff
- Ffin Gosodiad Hylosgi
- Cynllun ffyrdd mewnol yr Orsaf Bŵer
- Cyfleuster dadlwytho morol a morgloddiau
- Ffensys yr Orsaf Bŵer
- Strwythur Gollwng y System Dŵr Oeri
- Meysydd parcio

*Gyda'i gilydd mae Ardal Datblygu Wylfa Newydd a'r Ardaloedd Lliniaru Ecolegol yn cynrychioli Terfynau'r Gorchymyn

Campws y Safle

Y cyd-destun presennol

Mae safle Campws y Safle ochr yn ochr â'r arfordir ger Trwyn Wylfa yn Ardal Datblygu Wylfa Newydd.

Mae ardal o goetir hynafol o fewn y ffin ddwyreiniol. Mae Safle o Ddiddordeb Gwyddonol Arbennig (SoDdGA) Tre'r Gof, gwern basn fach, i'r de ddwyrain o'r safle.

At ei gilydd mae'r dopograffeg yn gyfuniad o bantiau a bryniau yn codi tua'r pentir yn Nhrwyn Wylfa.

Datblygu'r dyluniad

Mae'r cynigion yn ceisio darparu llety ar gyfer hyd at 4,000 o drigolion, mewn datblygiad a gyflwynir fesul cam. Mae'r adeiladau llety'n cael eu trefnu'n sensitif yn y dirwedd fyniog, o amgylch un ardal amwynder ganolog.

Mae cynllun y safle wedi esblygu i ddarparu lle i adeiladau a ffyrdd oddi wrth dderbynyddion sensitif. Mae uchder a lliwiau'r adeiladau wedi cael eu datblygu er mwyn eu hintegreiddio i ffurf y tir o'u cwmpas, gan roi cyd-destun gweledol cydlynol o bell ac o agos.

Mae Ffigurau 0-17 a 0-18 yn cynnwys lluniadau sy'n dangos sut gallai Campws y Safle edrych.

Ffigur 0-17 Argraff o'r awyr o Campws y Safle



Ffigur 0-18 Cynllun dangosol Campws y Safle



Allwedd Legend

- Ffin Ardal Datblygu Wylfa Newydd
WNDA Boundary
- Wyneb y ffwrdd
Road surface
- Wyneb llywybr troed / llywybr i gerddwyr
Footway / pedestrian route surface
- Tirweddol meddal
Soft landscaping
- Llystyflant presennol i'w gadw
Existing vegetation retained
- Creigiau brig presennol i'w gadw
Existing rock outcrop retained
- Ūl-troed arfaethedig adeilad
Proposed building footprint
- ◀ Mynedfa / pwnt mynediad adeilad
Building access point / entrance
- Draenau arfaethedig
Proposed drainage
- Efens (2.4m math Paladin)
Fenceline (2.4m paladin type)
- Efens (1.8m math byrddau pren agos at ei gilydd)
Fenceline (1.8m timber close board type)
- Efens (3m math chwaraeon MUGA)
Fenceline (3m MUGA sports type)
- Wal gerrig bresennol i'w chadw
Existing stone walling retained
- ✓ Rhwystr mynediad i gerbydau
Vehicle access barrier
- Rhwystr mynediad i gerddwyr
Pedestrian access barrier
- Croesfan i gerddwyr gyda marciant llinell
Pedestrian crossing - white line markings
- Ardal sydd ei hangen ar gyfer draenio
Area required for sustainable drainage

Adeiladau - Nifer mwyaf o loriau Buildings - Maximum storeys

- MATH A 4 Llawr + Ystafell Offer ar y To
TYPE A 4 Storeys + Rooftop Plantroom
- MATH B 5 Llawr + Ystafell Offer ar y To
TYPE B 5 Storeys + Rooftop Plantroom
- MATH C 6 Llawr + Ystafell Offer ar y To
TYPE C 6 Storeys + Rooftop Plantroom
- MATH D 7 Llawr + Ystafell Offer ar y To
TYPE D 7 Storeys + Rooftop Plantroom
- MATH E Is-orsaf ac uned gaeeddig ar gyfer biniau
TYPE E Substation and bin enclosure
- MATH F Adeilad amwynder
TYPE F Amenity building
- MATH G Ysgubor ystumod presennol
TYPE G Existing bat barn
- MATH H Adeilad diogelwch
TYPE H Security building
- MATH I Adeilad y pwmp chwistrelu,
cywasgwyr a storfa biniau
allanol ar gyfer yr adeilad
amwynder
TYPE I Sprinkler pumphouse,
compactor and external bin
store for amenity building
- MATH J Ystafell Swtch Foltedd Uchel
TYPE J HV Switchroom
- MATH K Storfa beics
- TYPE K Cycle store
- MATH L Compound offer ar gyfer MUGAs
TYPE L Equipment compound for MUGAs

Allwedd meysydd parcio Car parking legend

- P1 Parcio (16 lle hygrych a 16 lle ar
gyfer cerbydau danfon/bysiau
mini neu 1 gerbyd mwyddau trwm)
- P1 Parking (10No. accessible spaces
and 10No. delivery vehicles /
minibuses or 1 HGV)

Allwedd amwynder Amenity legend

- S1 Ardal gemau sawl defnydd sy'n addas
ar gyfer pêl-droed pump bob ochr
- S1 Multi use games area suitable for
five-a-side football

Cyfleusterau Oddi ar Safle'r Orsaf Bŵer

Cyd-destun y safle

Mae'r safle i'r gogledd o Lanfaethlu ac yn cael ei ffinio gan yr A5025 i'r gorllewin, adeiladau preswyl/storio i'r gogledd ac i'r de orllewin a thir amaethyddol i'r de ac i'r dwyrain.

Mae rhan ogleddol y safle yn hen ganolfan fysiau ac mae'r rhan ddeheuol yn dir ffermio agored gan fwyaf. Mae bwnd yng nghanol y safle, sy'n holtti'r safle.

Mae gwrychoedd i'r ffiniau deheuol a dwyreiniol a llain cysgodi bytholwyrdd i'r gogledd.

Datblygu'r dyluniad

Mae'r Cyfleusterau Oddi ar Safle'r Orsaf Bŵer yn cynnwys Garej Offer Argyfwng Symudol, Canolfan Rheoli Argyfwng Amgen a Labordy Arolygon Amgylcheddol. Yn wreiddiol, roedd y cynigion ar gyfer y Ganolfan Rheoli Argyfwng Amgen a'r Labordy Arolygon Amgylcheddol ar safleoedd eraill.

Mae'r cynigion presennol yn rhoi'r Garej Offer Argyfwng Symudol a'r Ganolfan Rheoli Argyfwng Amgen yng nghanol y safle a'r Labordy Arolygon Amgylcheddol yn y rhan ogledd orllewinol. Mae trefniant yr adeiladau newydd yn debyg i'r patrwm presennol.

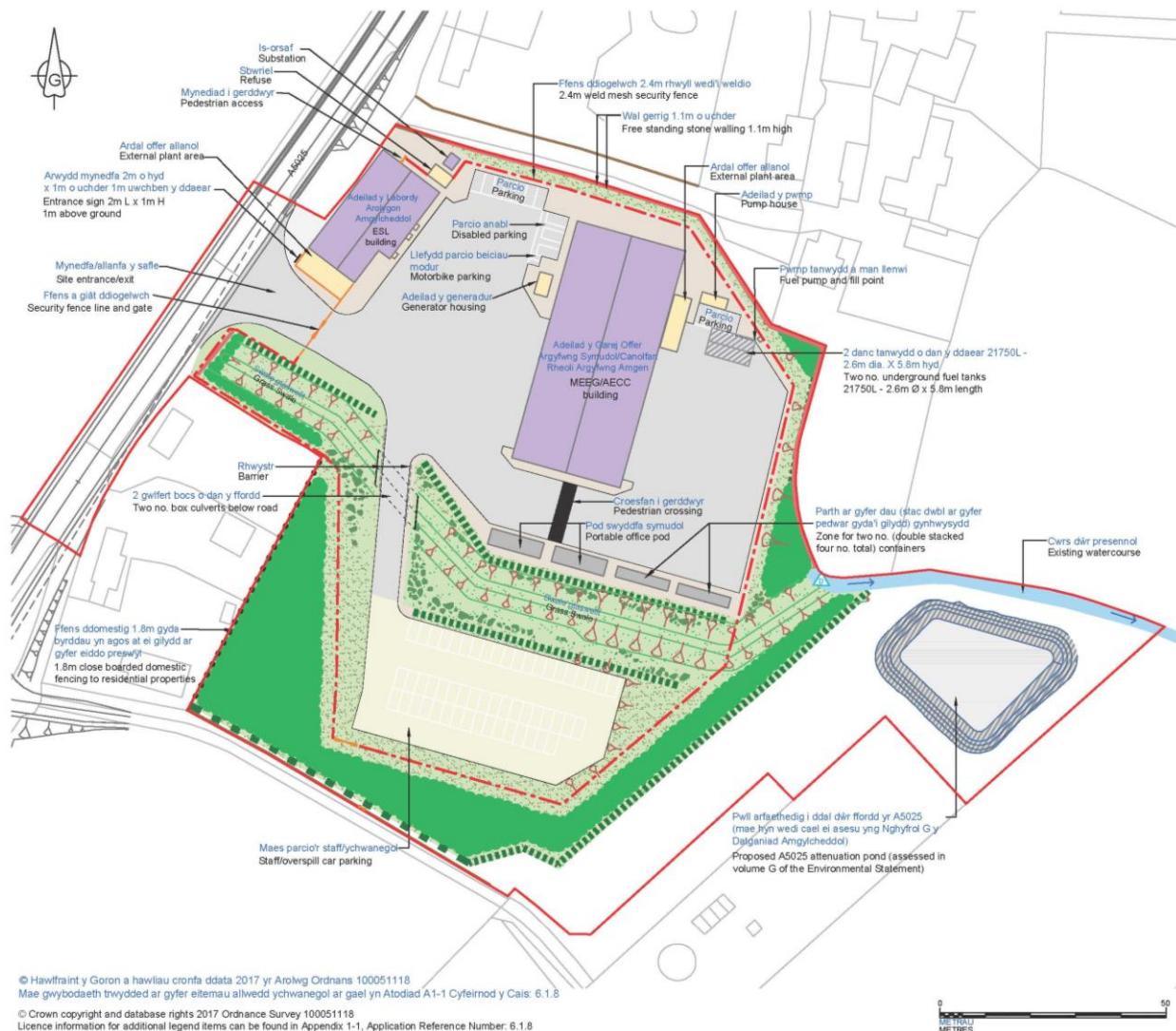
Bydd cerbydau'n teithio ar y naill ochr a'r llall i adeilad y Garej Offer Argyfwng Symudol/Canolfan Rheoli Argyfwng Amgen. Mae maes parcio ychwanegol wedi cael ei ddylunio yn rhan ddeheuol y safle.

Mae Ffigurau 0-19 a 0-20 yn cynnwys lluniadau sy'n dangos sut gallai'r Cyfleusterau Oddi ar Safle'r Orsaf Bŵer edrych.

Ffigur 0-19 Argraff o'r awyr o'r Cyfleusterau Oddi ar Safle'r Orsaf Bŵer



Ffigur 0-20 Cynllun dangosol y Cyfleusterau Oddi ar Safle'r Orsaf Bŵer



ALLWEDD
LEGEND

- Terfynau'r Gorchymyn**
Order Limits
- Gwaith Tirweddu Meddal - Presennol**
- Softworks - Existing**
- Gwrychoedd sy'n cael eu cadw
Retained hedgerow
- Gwaith Tirweddu Meddal - Arfaethedig**
- Softworks - Proposed**
- Plannu gwrychoedd
Hedgerow planting
- Plannu llwyni brodorol
Native shrub planting
- Glaswelltir - rhywogaethau cyfoethog
Grassland - species rich
- Plannu coeden a llwyni brodorol
Native tree and shrub planting
- Gwaith Tirweddu Caled - Presennol**
- Hardworks - Existing**
- Waliau cerrig sy'n cael eu cadw
Retained stone walling

Gwaith Tirweddu Caled - Arfaethedig
Hardworks - Proposed

- Wal gerrig arfaethedig
Proposed stone walling
- Lleoliadau arglawdd/toriad
Embankment/cutting
- Llinell ffin ddiogel
Secure boundary line
- Ffens ddomestig gyda byrddau'n agos at ei gilydd
Close boarded domestic fencing
- Giât/pwynt mynediad diogelwch
Security gate/access point
- Wyneb i gerbydau, anhydراidd
Vehicle surfacing, non-permeable
- Grasscrete ar gyfer maes parcio ychwanegol
Grasscrete for overspill car parking
- Wyneb i gerddwyr
Pedestrian surfacing

Cwrs Dŵr - Presennol
Watercourse - Existing

- Cwrs Dŵr wedi'i gadw
Watercourse retained
- Cwrs Dŵr - Arfaethedig**
Watercourse - Proposed
- Lleoliad gollwng
Discharge location

Canolfan Logisteg Parc Cybi

Y cyd-destun presennol

Mae'r safle yn ardal datblygu Parc Cybi gyda mynediad hwylus i'r A55 ac ar hyn o bryd mae'n laswelltir agored. Mae coed yn y gornel de orllewinol gyda chreigiau brig tua chornel de ddwyreiniol y safle.

Datblygu'r dyluniad

Mae'r datblygiad yn cynnwys ardal o lawr caled ar gyfer hyd at 100 o Gerbydau Nwyddau Trwm. Caiff adeilad lles/swyddfa ei ddarparu er mwyn rheoli'r gweithrediadau a darparu cyfleusterau lles i'r gyrwyr, ynghyd â chyfleuster archwilio a chabanau diogelwch/gwybodaeth.

Mae llwybrau diogel wedi cael eu dylunio er mwyn sicrhau na fydd yn rhaid i gerbydau facio. Mae modd i gerbydau nwyddau trwm giwio yn y safle yn ystod y cyfnodau prysuraf.

Mae Meini Hirion Tŷ Mawr a Siambwr Gladdu Trefignath yn agos at y safle ac mae'r datblygiad wedi cael ei fireinio i sicrhau bod modd gweld o'r naill i'r llall.

Mae Ffigurau 0-21 a 0-22 yn cynnwys lluniadau sy'n dangos sut gallai'r Ganolfan Logisteg edrych.

Ffigur 0-21 Argraff o'r awyr o'r Ganolfan Logisteg



Ffigur 0-22 Cynllun dangosol y Ganolfan Logisteg



Allwedd
Legend

- **Gwraith tirweddu meddal - presennol**
Softworks - existing
- **Gwrych sy'n cael ei gadw**
Hedgerow retained
- **Gwraith Tirweddu Meddal - arfaethedig**
Softworks - proposed
- **Planhigion ar yr ymyl**
Edge planting
- **Planu gwrychroedd**
Hedgerow planting
- **Glaswelltir**
Grassland
- **Gwraith tirweddu caled - presennol**
Hardworks - existing
- **Marciau ffordd**
Road markings
- **Waliau cerrig sy'n cael eu cadw**
Retained stone walling

Gwaith Tirwedd Caled – arfaethedig Hardworks - proposed

- Wal gerrig arfaethedig
Proposed stone walling
- ↔↔↔ Leoliadau aргlawdd/toriaid
Embankment/cutting locations
- Ffens Paladin 2.4m o uchder
2.4m high palladin fence
- Giât / pwnt mynediad diogel
Secure gate / access point
- Ffens stoc postyn a gwifren 1.2m
1.2m Post and wire stock fencing
- Wyneb i gerbydau, anhydraidd
Vehicle surfacing, non-permeable
- Wyneb i gerddwyr
Pedestrian surfing
- Croesfan i gerddwyr
Pedestrian crossing
- Lôn cerrig mân
Gravel track

Adeiladau – arfaethedig Buildings - proposed

- ▲ Pwynt mynediad safle / adeilad
Building / site access point
- ▲ Goleuadau - arfaethedig
Lighting - proposed
- Lleoliad colofn golau / uned CCTV
Location of lighting column / CCTV unit

Cyfleuster Parcio a Theithio Dalar Hir

Y cyd-destun presennol

Mae'r safle Parcio a Theithio yn agos at Gyffordd 4 yr A55. Ar hyn o bryd mae'r safle'n cael ei ddefnyddio at ddibenion amaethyddol ac mae'r ganolfan cartio bresennol i'r dwyrain a ffyrdd presennol i'r gorllewin ac i'r de. Cefn gwlad agored sydd yng ngogledd y safle.

Mae coed a phrysgwydd wedi cael eu plannu ar hyd y ffin gyda'r A5 yn helpu i ffinio'r safle.

Datblygu'r dyluniad

Mae'r datblygiad yn cynnwys ardaloedd parcio mewn parthau ar gyfer hyd at 1,900 o gerbydau.

Mae'r ardaloedd parcio wedi cael eu dylunio er mwyn eistedd yn y dirwedd yn sensitif.

Bydd adeilad cyfleuster trafnidiaeth bysiau canolog, a fydd yn darparu cyfleusterau lles a gwybodaeth, wrth ymyl man gollwng a chodi'r bysiau.

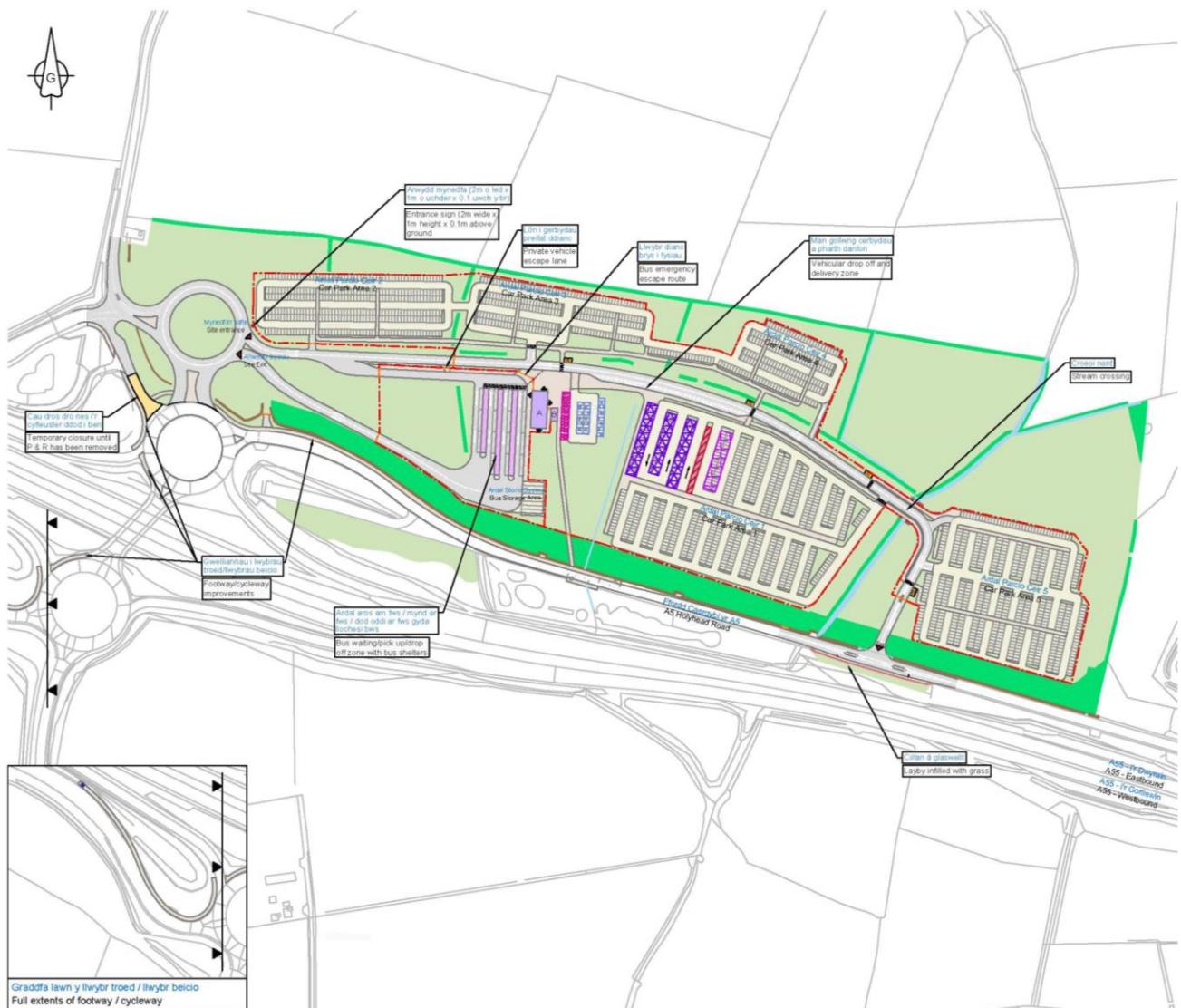
Mae llwybrau clir a diogel wedi cael eu dylunio ar gyfer cerbydau a cherddwyr. Cynigir codi cylchfan newydd yn y safle, a fydd yn rhoi mynediad.

Mae Ffigurau 0-23 a 0-24 yn cynnwys lluniadau sy'n dangos sut gallai'r cyfleuster Parcio a Theithio edrych.

Ffigur 0-23 Argraff o'r awyr o'r cyfleuster Parcio a Theithio



Ffigur 0-24 Cynllun dangosol ar gyfer y cyfleuster Parcio a Theithio



Allwedd
Legend

	Wyneb y ffordd Road surface
	Wyneb llwybr troed / llwybr i gerddwyr Footway / pedestrian route surface
	Wyneb ffordd hydraidd Permeable road surface
	Ôl-troed arfaethedig adeiladau Proposed building footprint
	Llystyfiant a fydd yn cael ei gadw Retained vegetation
	Tirweddus meddal Soft landscaping
	Mynedfa / pwnt mynediad adeilad Building access point / entrance
	Cwrs dŵr / ffos ddraenio bresennol Existing watercourse / drainage ditch

	Ffens ddiogelwch (math Paladin 1.8m) Security fence (1.8m paladin type)
	Wal gerrig bresennol Existing stone wall
	Wal gerrig arfaethedig Proposed stone wall
	Croesfan i gerddwyr Pedestrian crossing
	Safleoedd bws mewnol Internal bus stops
	Safleoedd bws cyhoeddus Public bus stops
	Mynediad giât a rhwyst Gate and barrier access
	Liefydd parcio bysiau mini Minibus parking

Liefydd parcio beicio modur
Motorbike parking

Liefydd parcio hygrych
Accessible parking

Pwynt gwefru trydanol
Electrical charging point

Liefydd parcio i staff
Staff parking

Adeiladau
Buildings

A Adeilad cyfleuster trafnidiaeth bws
Bus transport facility building

B Storfa beics
Cycle store

Newidiadau i'r Briffordd

Y cyd-destun presennol

Un o brif nodau'r Newidiadau i'r Briffordd ydy mynd i'r afael â phroblemau diogelwch a chapasiti posibl ar y briffordd a fydd yn cael eu hachosi gan fwy o draffig o ganlyniad i Brosiect DCO Wylfa Newydd. Mae Ffigur 0-13 yn dangos lleoliadau'r newidiadau sy'n cael eu cynnig.

Datblygu'r dyluniad

Roedd Horizon wedi cynnal tri cham o ddatblygu'r dyluniad fel sy'n cael ei nodi yn y Llawlyfr Dylunio ar gyfer Ffyrdd a Phontydd y mae eu manylion yng Nghyfrol 2 y Datganiad Dylunio a Mynediad.

1 Introduction

1.1 Purpose of the document

1.1.1 This Design and Access Statement (DAS) comprises three volumes, which would be certified through the Development Consent Order (DCO):

- Volume 1 – Project Wide (Application Reference Number: 8.2.1);
- Volume 2 – Power Station Site (Application Reference Number: 8.2.2); and
- Volume 3 – Associated Development and Off-Site Power Station Facilities (Application Reference Number: 8.2.3).

1.1.2 The DAS sets out the ‘design principles’ that would guide how Horizon would construct the authorised development, and illustrative design concepts which demonstrate how the Wylfa Newydd DCO Project could be brought forward in accordance with those principles.

1.1.3 For the Power Station Site the DAS (Volume 2) sets out the building design principles for the Power Station, with the landscape principles set out in the Landscape and Habitat Management Strategy (Application Reference Number: 8.16). For all other works, the DAS (Volume 3) contains both landscape and building design principles.

1.1.4 Volume 3 of the DAS covers the Off-Site Power Station Facilities and all of the Associated Development, as described below, with the exception of the proposed wetland habitat creation and enhancement works, which are addressed in the Landscape and Habitat Management Strategy.

Parameters approach

1.1.5 In order to cope with inevitable change through the design development process, Horizon has proposed a parameter based approach for the construction and operation of the Power Station. As such, the application for an order granting development consent will be based on bounded parameters rather than a defined design.

1.1.6 These parameters are sufficiently flexible to accommodate a reasonable level of change. Maximum and minimum parameters (such as limits on height and location of buildings) would be set by the development consent requirements, in order to keep the development within the defined envelope. Therefore, the final design will be within parameters set in the Development Consent Order (DCO).

1.1.7 Where detailed design approval is sought (for example for the Park and Ride) the parameter approach will also enable Horizon to submit revised plans for approval (in accordance with the parameters).

1.1.8 The defined parameters (which would be secured by DCO Requirements) are explained further in chapter 8 of this document.

Control documents

- 1.1.9 The DAS forms part of a suite of ‘control documents’ which support the DCO application for the Wylfa Newydd DCO Project.
- 1.1.10 The control documents deliver the majority of the commitments identified in the ES and other assessments and establishes the framework for the construction and operation of the Wylfa Newydd DCO Project, within the parameters.
- 1.1.11 All the control documents would be certified through the DCO:
 - **Construction Method Statement:** the Construction Method Statement (Application Reference Number: 6.4.17) describes the construction methodologies, works, and machinery required for works on the Power Station Site. The methodologies identified in the Construction Method Statement have been used as the basis of the Environmental Impact Assessment (EIA). The construction of the Power Station Site would be undertaken in general accordance with the Construction Method Statement.
 - **Phasing Strategy:** the Phasing Strategy (Application Reference Number: 8.29) identifies when key mitigation (such as the Site Campus and the Park and Ride) would be operational. This is to ensure that key mitigation is secured and would be brought forward, the DCO Requirements provide that the construction of the Wylfa Newydd DCO Project would be undertaken in accordance with the phasing outlined in the Phasing Strategy.
 - **Wylfa Newydd Code of Construction Practice (CoCP) and sub-CoCPs:** the Wylfa Newydd CoCP (Application Reference Number: 8.6), together with location-specific sub-CoCPs (Application Document References: 8.7-8.12), set out how construction activities would be managed and controlled in order to deliver the mitigation commitments set out in the Environmental Statement (ES) (Application Reference Number: 6.1) as well as other assessment processes undertaken (e.g. Habitat Regulations Assessment). The CoCP and sub-CoCPs would be certified through the DCO and compliance with these documents secured through the DCO Requirements.
 - **The Wylfa Newydd Code of Operational Practice** (CoOP: similar to the CoCPs, the Wylfa Newydd CoOP (Application Reference Number: 8.13) sets out the controls that would apply during the operation of the Wylfa Newydd Project (e.g. operational hours for the Power Station). The CoOP would be a certified document and Horizon would be required to comply with it under the DCO Requirements.
 - **Landscape and Habitat Management Strategy:** The LHMS sets out the landscape and habitat principles that would guide how Horizon would create and manage landscape and habitat within the WNDA and the SSSI

Compensation sites. It also sets out the illustrative design concepts which demonstrate how the Wylfa Newydd DCO Project could be brought forward in accordance with those principles. Application Reference Number: Application Reference Number:

- **Workforce Management Strategy (WMS):** the WMS (Application Reference Number: 8.5) sets out the principles that Horizon and its partners would follow to control and manage the behaviours of both the workforce and contractors undertaking the project. The WMS would be a certified document and would be secured through a DCO Requirement which would require Horizon to prepare and implement a Code of Conduct during construction of the Wylfa Newydd DCO Project; which must be prepared in accordance with the principles in the WMS

1.2 The Wylfa Newydd Project

- 1.2.1 Horizon is applying to the Secretary of State for a DCO under the Planning Act 2008 [RD1], to construct, operate and maintain a new nuclear power station on land west of Cemaes on Anglesey.
- 1.2.2 The Wylfa Newydd Project comprises the Wylfa Newydd DCO Project, the Licensable Marine Activities and the Enabling Works. The Wylfa Newydd DCO Project will be consented under a DCO and the Licensable Marine Activities will be consented under a Marine Licence. There is some overlap between the two; the Marine Works will be consented under both the DCO and the Marine Licence.
- 1.2.3 The Enabling Works are required prior to the grant of DCO and sought via separate applications under the Town and Country Planning Act 1990 (as amended) (the 'TCPA') [RD2].

The Wylfa Newydd DCO Project

- 1.2.4 The Wylfa Newydd DCO Project comprises those parts of the Wylfa Newydd Project which are to be consented by a DCO, namely:

The Nationally Significant Infrastructure Project (NSIP)

- Power Station: the proposed new nuclear power station at Wylfa, including two UK Advanced Boiling Water Reactors, the Cooling Water System, supporting facilities, buildings, plant and structures, radioactive waste and 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 works and activities including 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, the Marine Off-loading Facility, 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;
 - Temporary Marine Works: temporary cofferdams, a temporary access ramp, temporary navigation aids, temporary outfalls and a temporary barge berth;
- Off-site Power Station Facilities: comprising the Alternative Emergency Control Centre (AECC), Environmental Survey Laboratory (ESL) and a Mobile Emergency Equipment Garage (MEEG);

Associated Development

- the Site Campus within the Wylfa Newydd Development Area;
- temporary Park and Ride facility at Dalar Hir for construction workers (Park and Ride);
- temporary Logistics Centre at Parc Cybi (Logistics Centre);
- the A5025 Off-line Highway Improvements;
- Wetland habitat creation and enhancement works as compensation for any potential impacts on the Tre'r Gof Site of Special Scientific Interest (SSSI) at the following sites:
 - Tŷ Du;
 - Cors Gwawr;
 - Cae Canol-dydd

1.2.5 A description of these component parts of the Wylfa Newydd DCO Project are provided in chapter 6 of this DAS, with more detail provided in volumes 2 and 3 of the DAS (Application Document References: 8.2.2 to 8.2.3).

Figure 1-1 Location plan



1.2.6 The following terms are used when describing the geographical areas related to the Wylfa Newydd DCO Project and the Licensable Marine Activities, and are shown on Figure 1-1:

- Power Station Site – the indicative areas of land and sea within which the majority of the permanent Power Station, Marine Works and other on-site development would be situated; and

- Wylfa Newydd Development Area – the indicative areas of land and sea including the Power Station Site and the surrounding areas that would be used for the construction and operation of the Power Station, the Marine Works, the Site Campus and other on-site development (WNDA Development).

Enabling Works

- 1.2.7 The Enabling Works comprise the Site Preparation and Clearance (SPC) Proposals and the A5025 On-line Highway Improvements.
- 1.2.8 Horizon has submitted applications for planning permission for the Enabling Works under the TCPA 1990 to the Isle of Anglesey County Council (IACC).
- 1.2.9 The application for the SPC Proposals (LPA reference number: 38C310F/EIA/ECON) includes an ES that reports the findings of the EIA of the SPC Proposals. In order to maintain flexibility in the consenting process for the Wylfa Newydd DCO Project, in the event that the TCPA application is not granted prior to the DCO, the SPC Proposals have also been included in the application for development consent. The environmental effects of the SPC Proposals have been included within the assessment of the construction phase in this ES.
- 1.2.10 The A5025 On-line Highway Improvements (LPA reference number: 27C106E/FR/ECON) are not part of the application for development consent, and are therefore excluded from the scope of the EIA reported in this ES. The cumulative effects assessment reported in volume 1 (Application Document References: 6.9.1 to 6.9.5) does, however, consider the A5025 On-line Highway Improvements.

Licensable Marine Activities

- 1.2.11 The Licensable Marine Activities comprise the Marine Works and the disposal of material from Dredging at the Disposal Site.

1.3 Relationship with DAS volumes 2 and 3

- 1.3.1 The DAS has been split into three volumes, to provide an introduction and background context in this volume, and then to specifically address the different elements of the proposal in volumes 2 and 3.

Volume 1 – Wylfa Newydd DCO Project – provides a high level overview of the Wylfa Newydd DCO Project and signposts to specific sites and details in volumes 2 and 3 (and other documents which comprise the DCO application). Volume 1 provides an overview of project-wide strategies and approaches which have influenced the approach to design.

Volume 2 – Power Station Site – sets out the design principles for the Power Station Site. It then provides illustrative design proposals showing how the development could be delivered in accordance with these principles, and the parameters secured by DCO Requirements. Volume 2 also sets out the

approach in relation to environmental sustainability, community safety, accessibility and movement, and decommissioning for the Power Station.

Volume 3 – Off-Site Power Station Facilities and Associated Development – sets out the building design and landscape principles for each of the Associated Development sites and the Off-Site Power Station Facilities site. For the Park and Ride and Logistics Centre the DAS demonstrates how the detailed plans for approval reflect the design principles and parameters, whereas for the Off-Site Power Station Facilities and Site Campus (where detailed plans are not submitted for approval) illustrative examples are provided of how these developments could be delivered in accordance with these principles and parameters. The hybrid approach adopted for the Off-line Highways Improvements is set out in chapter 8. Volume 3 also sets out the approach in relation to environmental sustainability, community safety, accessibility and movement sets out the post operational strategy for each of these sites.

1.4 Structure of this document

- 1.4.1 This project-wide DAS introduces the overarching context to the sites and proposals. It provides an overview of the physical and social environment, which is then covered in more detail in volumes 2 and 3.
- 1.4.2 It explains the vision and objectives of the Wylfa Newydd DCO Project and how these have informed its design evolution. It also explains the approach and role of consultation in project design development.
- 1.4.3 This document provides an overview of national, regional and local policy, where specifically relevant to matters of design and access. Compliance of the Wylfa Newydd DCO Project with planning policy is covered in more detail, and more generally, in the Planning Statement (Application Reference Number: 8.1).
- 1.4.4 This document also summarises the strategies and approaches that have helped to shape the Wylfa Newydd Project as a whole, including Horizon's approach to sustainability, transport and worker accommodation.
- 1.4.5 The document also outlines the parameter based approach, which are secured by DCO Requirements.
- 1.4.6 This document is structured as follows:
 - Chapter 1: Introduction;
 - Chapter 2: Vision and objectives;
 - Chapter 3: Project context;
 - Chapter 4: Consultation and design evolution;
 - Chapter 5: Project-wide strategies;
 - Chapter 6: The development proposals;
 - Chapter 7: Post operational use;
 - Chapter 8: Parameters; and

- Chapter 9: Conclusions.

1.5 Conformity with DAS guidance

1.5.1 The DAS forms part of a suite of information submitted in support of the DCO. Regulation 5 of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations (2009) [RD4] does not explicitly refer to the need for a DAS, though it does state that the application must be accompanied by “any other documents considered necessary to support the application”¹.

1.5.2 The Planning Inspectorate *Advice Note 6: Preparation and submission of application documents* (2016) suggests that this may include information that the applicant would normally want to submit for the development proposal or that has been suggested or asked for by respondents to Pre-Application Consultation and publicity and which the applicant wishes to include. It lists examples of documents that this could cover, including, amongst others, a DAS.

1.5.3 National Policy Statement (NPS) EN-1, at paragraph 4.5.4, states that “*applicants should be able to demonstrate in their application documents how the design process was conducted and how the proposed design evolved. Where a number of different designs were considered, applicants should set out the reasons why the favoured choice has been selected*”.

1.5.4 The Town and Country Planning (Development Management Procedure) (Wales) Order 2012 (as amended) [RD5] relates to applications for planning permission, though provides useful guidance on DASs. It sets out that, as a minimum, the DAS must explain the design principles and concepts that have been applied to the development and how issues relating to access to the development have been dealt with.

1.5.5 Guidance on DASs in Wales is also provided in the Welsh Government’s Technical Advice Note 12: Design (2016) (TAN12) [RD8] and in Design and Access Statements in Wales – Why, What and How June 2017 [RD7] prepared for the Welsh Government by Design Commission for Wales (DCfW) (‘the DCfW guidance’).

1.5.6 The DCfW guidance identifies the benefits of a DAS, namely that they:

- demonstrate a good understanding of the site, context and brief;
- demonstrate that proposals meet local authority and Welsh Government design quality objectives;
- communicate and explain design ideas;
- improve pre-application discussions and assist with consultation;
- communicate how the proposal contributes to place making; and
- speed up the decision making process.

1.5.7 The DCfW guidance advises that Pre-Application Consultation “*presents the opportunity to add value to a project by engaging with those who know the*

¹ SI 2009/2264 Regulation 5(2)(q)

local area best and may ultimately take ownership of the project once complete”. This project-wide DAS provides an overview of the approach to consultation, with regard to matters in the DAS, in chapter 4. Volumes 2 and 3 provide more detail on the response to these consultation stages in relation to the development of the approach to design and access for each component of the Wylfa Newydd DCO Project. The Consultation Report (Application Reference Number: 5.1) provides the full account of consultation on the Wylfa Newydd Project since inception.

1.5.8 The DCfW guidance provides a guide on the approach to structuring the DAS, including an overview of the brief and vision; site and context analysis (including physical, socio-economic and planning policy background); interpretation; and an explanation of the evolution of the design vision to the final proposal having regard to policy and the five objectives of good design set out in TAN12 [RD8], namely:

- access (ensuring ease of access for all);
- character (sustaining or enhancing:
 - local character;
 - promoting legible development;
 - a successful relationship between public and private space;
 - quality;
 - choice variety; and
 - innovative design);
- community safety (ensuring attractive, safe public spaces; security through natural surveillance);
- environmental sustainability (achieving efficient use and protection of natural resources; enhancing biodiversity, designing for change); and
- movement (promoting sustainable means of travel).

1.5.9 Volumes 2 and 3 of the DAS (Application Document References 8.2.2 and 8.2.3)) provide an analysis of the site context and explanation of the design evolution (which has informed the design principles) with reference to these design objectives.

2 Vision and objectives

2.1 Introduction

2.1.1 The vision and objectives set out in this chapter have informed the design principles and illustrative design concepts for the Wylfa Newydd DCO Project, which are set out in volumes 2 and 3 of the DAS (Application Document References 8.2.2 and 8.2.3).

2.2 Vision

2.2.1 Horizon is developing a new generation of nuclear power stations to help meet the UK's need for stable and sustainable low carbon energy. Building on core values of safety, courage, integrity, collaboration and inspiration, Horizon's vision is as follows:

"We believe there is a compelling requirement for new nuclear power in the UK to help tackle the vital and complex challenge of delivering a sustainable energy future. As part of this vision Horizon will deliver secure, affordable, low carbon energy for present and future generations."

2.2.2 Horizon will deliver the Wylfa Newydd Project in a safe and efficient manner, whilst seeking to reduce adverse effects and increase opportunities that benefit the environment and local communities as far as possible

2.3 Objectives

Project-wide

2.3.1 In order to realise this vision, Horizon has set a series of project-wide objectives for the Wylfa Newydd Project. The Wylfa Newydd Project should:

- help to meet the energy challenge in the UK, by providing a reliable source of low carbon electricity;
- be delivered in a safe and efficient manner;
- reflect the importance of its setting on Anglesey;
- uphold the unique culture and language of Anglesey;
- integrate sustainability into all physical designs;
- develop a green and sustainable approach in the development and management of the buildings and operational activities;
- be a good neighbour;
- minimise local disruption as far as possible throughout the Wylfa Newydd Project lifecycle;
- build on the legacy of the Existing Power Station, and help to create a positive legacy for Anglesey;

- think about each significant investment and how it can create a positive future for the area, where appropriate;
- ensure that all the elements are designed to connect with the varied beauty and character of Anglesey and conserve and enhance the natural environment as far as possible; and
- respect local communities and ensure the effect of the Wylfa Newydd Project on them is minimised and that opportunities to provide enhancements are taken, as far as possible.

Wylfa Newydd Development Area

2.3.2 In addition to the project-wide objectives set out above, Horizon's proposals for development within the WNDA aim to:

- minimise visual impact as far as possible;
- ensure that the design reflects the difference between immediate and longer distance views;
- reflect the importance of the human scale activities on the Power Station Site; and
- respect local communities, and minimise impact on them as far as possible, particularly those very close to the Power Station Site.

2.3.3 Whilst the Site Campus is located within the WNDA, it is temporary Associated Development and therefore considered separately.

Off-Site Power Station Facilities and Associated Development

2.3.4 Horizon's proposals for the Off-Site Power Station Facilities and Associated Development should adhere to the below objectives, whilst recognising the temporary nature of some of the proposals:

- provide the necessary facilities to ensure the delivery of the Power Station that meets the urgent need for new nuclear power as early as possible in a safe and efficient manner;
- minimise visual impact as far as possible;
- respect local communities, and reduce adverse impact on them as far as possible, particularly those very close to the Associated Development site; and
- help to create a positive legacy for Anglesey, thinking about each significant investment and how it can create a positive legacy for the area, recognising that this would not always involve retaining the buildings on the Associated Development sites.

3 Project context

3.1 Introduction

- 3.1.1 This chapter outlines the relevant policy, physical, social and cultural context to the Wylfa Newydd DCO Project that has influenced the way in which the Wylfa Newydd DCO Project has been developed.
- 3.1.2 The principal overarching factor is that land covering broadly the same area as the WNDA has already been identified by the Government (in the National Policy Statement for Nuclear Power Generation EN-6) [RD11] as one of the eight sites considered to be potentially suitable for new nuclear power stations in England and Wales.
- 3.1.3 As well as summarising the context to this national need, this section also provides an introduction to other relevant planning policy in relation to design and access matters. It then introduces the local physical, social and cultural context and the operational requirements for the Power Station Site, which have a significant influence on the design of the Wylfa Newydd DCO Project.
- 3.1.4 This sets the context for further detail in relation to the Power Station, Off-Site Power Station facilities and the Associated Development sites (with the exception of the SSSI Compensation sites, which are addressed in the Landscape and Habitat Management Strategy) in volumes 2 and 3 of the DAS.

3.2 Planning policy overview

- 3.2.1 Planning policy provides a key component of the Wylfa Newydd DCO Project context. This section provides an overview of national, regional and local planning policy, where they are relevant to the determination of the DCO. For the purposes of this DAS, this focuses on policy relating to the principle of development and those that relate specifically to design and access considerations. The Planning Statement (Application Reference Number: 8.1) provides a full analysis of all relevant planning policy.

National Policy Statements

- 3.2.2 As the Wylfa Newydd Project is anticipated for deployment after 2025, the Government considers that it should be considered under section 105 of the Planning Act 2008. Decisions under Section 105 need to be taken having regard to any Local Impact Report and matters that the SoS thinks are both important and relevant.
- 3.2.3 These would include the policies contained in NPS EN-1 [RD 10] and the NPS for Nuclear Power Generation (EN-6) [RD11], which is confirmed in the recent Ministerial Statement on Energy Infrastructure (December 2017) (the 'ministerial statement') [RD30]. This further clarifies continued Government support for nuclear power, and specifically at Wylfa.
- 3.2.4 The policies contained in NPS EN-1 and NPS EN-6 therefore represent the primary policy basis for a decision made by the Secretary of State on this application for development consent for the Wylfa Newydd DCO Project.

NPS EN-1

3.2.5 NPS EN-1 makes clear that the Government's key objectives in energy policy are to ensure energy security for the UK and to decarbonise energy capacity in order to meet the UK's 2050 climate change targets.

3.2.6 NPS EN-1 explicitly states the urgent need for new (and particularly low carbon) electricity NSIPs in the UK and given the level and urgency of need, the decision maker is advised to *"start with a presumption in favour of granting consent to applications for energy NSIPs"* (paragraph 4.1.2). The policies contained within NPS EN-1, and its role in decision-taking, are covered in further detail in the Planning Statement (Application Reference Number: 8.1). The relevant policies contained with NPS EN-1 relating to design are addressed below.

NPS EN-6

3.2.7 NPS EN-6 is the NPS for nuclear power generation and is one of a suite of technology-specific NPSs that sit under the umbrella of NPS EN-1.

3.2.8 NPS EN-6 identifies the site at Wylfa as being potentially suitable for the deployment of new nuclear power stations in England and Wales by the end of 2025 (paragraph 2.3.2). Whilst delivery of the Wylfa Newydd Project is anticipated after 2025, the Government continues to give it's strong in principle support to project proposals at those sites listed in EN-6, including Wylfa. The "Consultation on the Siting Criteria and Process for a new NPS for Nuclear Power with Single Reactor Capacity over 1 Gigawatt beyond 2025" ("the Consultation on Siting and Process"), which was released at the same time as the ministerial statement, states that *"sites listed in EN-6 on which a new nuclear power station is anticipated to deploy after 2025 will continue to be considered appropriate sites and retain strong Government support during the designation of the new NPS"* [RD29].

3.2.9 In coming to the conclusion on the potential suitability of Wylfa, NPS EN-6 details the Strategic Siting Assessment (SSA) it undertook to assess Wylfa (and other sites) as suitable for a nuclear power development. The SSA analysed the following:

- demographics;
- proximity to military installations;
- flooding storm surge and tsunami risk;
- coastal processes;
- proximity to hazardous facilities;
- proximity to civil aircraft movements;
- internationally designated sites of ecological importance;
- nationally designated sites of ecological importance;
- areas of amenity, cultural heritage and landscape value;
- size of site to accommodate operation; and

- access to suitable sources of cooling.

3.2.10 In addition to the SSA, the suitability of Wylfa was assessed:

- in an Appraisal of Sustainability (as required by the Planning Act 2008) which examined the potential positive and negative effects of Wylfa, and identified the significance of these effects, with suggested mitigation possibilities (paragraph 9.95 of Annex C);
- in accordance with the European Habitats Directive, under which a Habitats Regulations Assessment was carried out on the Wylfa site (paragraph 9.96 of Annex C); and
- against specific areas of concern raised including: health; socio-economic effects; and seismic risk.

3.2.11 The outcome of these comprehensive assessments is that NPS EN-6 concluded that Wylfa meets the SSA criteria, and in considering the Appraisal of Sustainability and Habitats Regulations Assessment site reports, Wylfa is a potentially suitable site for development.

3.2.12 The Government's Consultation on the Siting Criteria and Process for a new NPS for Nuclear Power with Single Reactor Capacity over 1 Gigawatt beyond 2025 ('the Consultation on Siting') [RD29] document released at the same time as the ministerial statement, states that "*sites listed in EN-6 on which a new nuclear power station is anticipated to deploy after 2025 will continue to be considered appropriate sites and retain strong Government support during the designation of the new NPS*". It states that the Government propose to carry forward the list of potentially suitable sites from NPS EN-6 into the new NPS, with 2035 as a new 'capable of deployment by' date.

Design objectives

3.2.13 The Planning Act 2008 [RD1] places importance on good design and sustainability.

3.2.14 NPS EN-1 sets out the criteria for good design for energy infrastructure at section 4.5. This notes that high quality and inclusive design goes beyond aesthetic considerations. It states that "*the functionality of an object — be it a building or other type of infrastructure — including fitness for purpose and sustainability, is equally important*".

3.2.15 NPS EN-1 states at paragraph 4.5.1 that "*applying 'good design' to energy projects should produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible*".

3.2.16 NPS EN-1 acknowledges that the nature of energy infrastructure development will often limit the extent to which it can enhance the quality of an area. It advises, at paragraph 4.5.3, however, that "*whilst the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character*,

landform and vegetation. Furthermore, the design and sensitive use of materials in any associated development such as electricity substations will assist in ensuring that such development contributes to the quality of the area”.

3.2.17 Paragraph 4.5.2 of EN-1 says that “*good design is also a means by which many policy objectives in the NPS can be met, for example the impact sections show how good design, in terms of siting and use of appropriate technologies can help mitigate adverse impacts such as noise*”.

3.2.18 Energy infrastructure developments should, EN-1 states, be sustainable and be “*as attractive, durable and adaptable (including taking account of natural hazards such as flooding) as they can be*” (paragraph 4.5.3). In so doing, account should be given to both functionality and aesthetics as far as possible.

3.2.19 NPS EN-1, at paragraph 4.5.4, states that the decision maker “*should take into account the ultimate purpose of the infrastructure and bear in mind the operational, safety and security requirements which the design has to satisfy*”.

3.2.20 EN-6, in specifically applying the principles of good design in EN-1 to nuclear power stations, sets out the need to ensure the safety and security of the Power Station and the need to control the impacts of its operations. These “*must be given substantial weight given the importance of these factors to the operation of a nuclear power station*” (paragraph 2.8.1). With reference to section 3.10 of EN-6 and section 5.9 of EN-1, the decision maker should consider how good design can act to mitigate the impacts of new nuclear power stations, such as landscape and visual impacts.

3.2.21 Section 5.9 of EN-1 relates to landscape and visual impact. It notes that virtually all NSIPs will have effects on the landscape, but the nature of the effects will depend on the local landscape character and quality and its capacity to accommodate change. It states that projects should be designed carefully taking into account potential impacts on landscape and minimise harm where possible. Section 3.10 of EN-6 adds to this, stating that the decision maker “*should not expect the visual impacts associated with a new nuclear power station to be eliminated with mitigation. Indeed, the scope for visual mitigation will be quite limited. Mitigation should, however, be designed to reduce the visual intrusion of the project as far as reasonably practicable*”.

3.2.22 Section 5 of EN-1 and section 3 of EN-6 also set out the other general impact and siting considerations for energy projects, and specifically nuclear power respectively. The nuclear impacts set out in EN-6 are:

- flood risk;
- water quality and resources;
- coastal change;
- biodiversity and geological conservation;
- landscape and visual impacts;
- socio-economic; and
- human health and well-being.

Welsh national and local planning policy

- 3.2.23 While NPS EN-1 and EN-6 represent the primary basis for deciding DCO applications for nuclear NSIPs, Development Plan policy may be considered by the decision maker to be *“important and relevant”* to decision making. The energy NPSs have already taken relevant national planning policy into account at the time of publication, though newer Welsh policies may also be relevant.
- 3.2.24 Paragraph 4.1.5 of NPS EN-1 states that in the event of a conflict between any other documents and an NPS, the NPS prevails for purposes of decision making given the national significance of the infrastructure.
- 3.2.25 This section summarises the relevant policies where they specifically relate to the objectives of design set out in Technical Advice Note 12 (TAN 12) (namely access, character, community safety, environmental sustainability and movement).

Welsh national planning policy

- 3.2.26 For development in Wales, the principal strategic policy documents are Planning Policy Wales (PPW) (Version 9, November 2016) [RD15], the TANs and the Wales Spatial Plan (2008).

Planning Policy Wales

- 3.2.27 PPW sets out the land use planning policies of the Welsh Government, forming a strategic framework to guide development. There are no specific policies related to nuclear power generation or the Project, though chapter 4 (Planning for Sustainability) outlines overarching objectives for sustainable development.
- 3.2.28 Paragraph 4.11.1 states that to create sustainable development, design should go beyond aesthetics to include the social, environmental and economic aspects of development, including construction, operation and management and its relationship to its surroundings.
- 3.2.29 It states that *“meeting the objectives of good design should be the aim of all those involved in the development process and applied to all development proposals, at all scales, from the construction or alteration of individual buildings to larger development proposals”*. These objectives are categorised into the five key aspects of good design as shown in Figure 3-1 below.

Figure 3-1 PPW good design



- 3.2.30 Paragraph 4.11.3 states that the design principles and concepts that have been applied to these aspects should be reflected in the content of any DAS. As introduced in chapter 1 of this document, these headings form the basis for the structure of volumes 2 and 3 of the DAS.
- 3.2.31 PPW states that good design should promote efficient use of resources, contribute to tackling the causes of climate change and offer high environmental quality. It states (paragraph 4.11.19) that *“landscape considerations are an integral part of the design process and can make a positive contribution to environmental protection and improvement, for example to biodiversity, climate protection, air quality and the protection of water resources”*.
- 3.2.32 It notes that the visual appearance of proposed development, its scale and its relationship to its surroundings and context are material planning considerations.
- 3.2.33 Section 3.3 of PPW deals with inclusive access for all. It states that developments must conform to the provisions of the Equality Act 2010. Developers should consider the need to make buildings accessible for all who

might use the building. It notes that the design and layout of spaces around buildings is particularly important in ensuring good accessibility.

3.2.34 Welsh Government are consulting on a new PPW Edition 10 between February and May 2018.

The Wales Spatial Plan (2008)

3.2.35 The Wales Spatial Plan [RD16] recommends that developers work with DCfW for best practice in creating distinctive, clean, safe and sustainable development through the design process. The process that Horizon has undertaken with DCfW is set out in detail in chapter 4.

TAN12: Design (2016)

3.2.36 TAN12 [RD8] is strongly committed to achieving the delivery of good design in the built and natural environment which delivers environmental sustainability. It states that early consideration is essential to achieving good design along with consideration of the context, development of a vision and design objectives.

3.2.37 It reiterates the principles of the PPW; especially related to the need and definition of design and its key principles of access, character, community safety, environmental sustainability and movement. It provides a series of design pointers for each of the following key principles.

Design pointers for access:

- design for people with mobility/sensory impairments and learning difficulties;
- layout should consider access for emergency vehicles; and
- clear connections for all, particularly pedestrians and cyclists.

Design pointers for character:

- sustain or enhance local character;
- promote legible development;
- promote a successful relationship between public and private space;
- promote quality, choice, variety and innovative design;
- promote good landscape design; and
- be mindful of its scale, mass, height, appearance and layout – whilst integrating with its surroundings and character.

Design pointers for community safety:

- ensure attractive, safe public spaces;
- encourage security through natural surveillance; and
- promote a sense of ownership and responsibility.

Design pointers for environmental sustainability:

- reduce environmental impacts of buildings;
- enhance biodiversity where possible;
- maintain/enhance opportunities for the local environment including management and aftercare;
- integrate with landscape/townscape setting;
- reduce energy demand, promote energy efficiency and carbon reduction;
- use of sustainable materials;
- sustainable approach to water supply;
- sustainable approach to waste management; during and post construction;
- integrate climate resilience in the design; and
- use of sustainable building standards.

Design pointers for ‘movement’:

- ensure safe and clear connections;
- encourage cycling, walking and use of public transport;
- actively work towards reducing reliance on cars;
- integrate development with existing footpaths, cycle ways and PRoWs;
- minimise the adverse effects on the PRoW network;
- provide on-site facilities for sustainable forms of transport;
- sustainable solutions for transport freight; and
- appropriate and sustainable management of parking requirements.

3.2.38 The other TANs that are relevant to the Wylfa Newydd DCO Project include:

- Nature and Conservation (TAN5) [RD17];
- Noise (TAN11) [RD18];
- Development and Flood Risk (TAN15) [RD19];
- Transport (TAN18) [RD20];
- The Welsh Language (TAN20) [RD21];
- Waste (TAN21) [RD22]; and
- Sustainable Buildings (TAN22) [RD23].

Local planning policy and guidance

Joint Local Development Plan

3.2.39 The IACC and Gwynedd Council have produced a Joint Local Development Plan (JLDP) [RD24]. This was adopted on 31 July 2017. It replaced the

policies contained within the Gwynedd Structure Plan 1993, the Ynys Môn Local Plan 1996 and the stopped Ynys Môn Unitary Development Plan (2005).

3.2.40 JLDP Policy PS9 specifically deals with 'Wylfa Newydd and Related Development', with Temporary Worker Accommodation, the Logistics Centre and the Park and Ride facility, specifically covered by Policies PS10, PS11 and PS12 respectively. These specific policies are covered in more detail in the Planning Statement (Application Reference Number: 8.1).

3.2.41 PS9 contains various criteria which will be taken into account in the preparation of a Local Impact Report (and in determining the non DCO elements of the Project). With specific regard to matters of design and access considerations, the following apply.

- Minimising adverse transport impacts to an acceptable level.
- Temporary proposals shall be informed by a consideration of legacy uses. Where legacy uses are not feasible the buildings should be removed and land left in a suitable condition.
- The scheme layout, design and the scale of open spaces and landscaping etc. should avoid, minimise, mitigate or compensate for visual, landscape and ecological impacts as well as cultural and historic elements of the landscape.
- Proposals will be expected to be commensurate with the scale of the development.
- All proposals shall be appropriately serviced by transport infrastructure.

3.2.42 Policy ISA1 states that "*proposals will only be granted where adequate infrastructure capacity exists or where it is delivered in a timely manner. Where proposals generate a directly related need for new or improved infrastructure and this is not provided by a service or infrastructure company, then this must be funded by the proposal*". Where appropriate, contributions may be sought for a range of purposes, including nature conservation, cultural, sports and community facilities, public realm and archaeological and historic assets.

3.2.43 Strategic Policy PS5 relates to sustainable development. It requires that all proposals should be consistent with sustainable development principles, including preserving and enhancing the quality of the built and historic environment (including their setting). Proposals should incorporate sustainable building principles to contribute to energy conservation and efficiency, use renewable energy where possible, reduce/recycle and use sustainably sourced materials. Proposals should also promote high standards of design that make a positive contribution to the local area and work towards reducing crime.

3.2.44 Strategic Policy PS6 relates to alleviating and adapting to climate change. Developments should be capable of alleviating the effects of climate change by demonstrating that they have taken account of energy hierarchy, energy efficiency, using low and zero carbon technologies, reducing greenhouse gas emissions, reducing waste and discouraging car travel.

- 3.2.45 Policy PCYFF3 relates to design and place shaping, and states that “*all proposals will be expected to demonstrate high quality design which fully takes into account the natural, historic and built environmental context and contributes to the creation of attractive, sustainable places. Innovative and energy efficient design will be particularly encouraged*”.
- 3.2.46 Policy PCYFF4 (design and landscaping) requires that all proposals (by virtue of their nature, scale, location) should integrate with their surroundings, demonstrating how landscaping has been considered as part of the design from the outset.

New Nuclear Build at Wylfa Supplementary Planning Guidance (SPG)

- 3.2.47 A number of SPG documents have been published by the IACC to further inform development plan policies, the most relevant of which for the Wylfa Newydd Project is the New Nuclear Build at Wylfa SPG published in 2014 (Wylfa SPG) [RD25]. This SPG predates the adopted JLDP and is therefore out of date. There remain elements, however, that could be relevant.
- 3.2.48 The Wylfa SPG recognises the important contribution new nuclear power can make to the UK's energy mix and security of supply and supports the principle of development of a new nuclear power station. The IACC's vision for the Wylfa Newydd Project is clear and aligns with its wider socio-economic and legacy aspiration. The vision (paragraph 3.1) states: “*the New Nuclear build at Wylfa is a positive driver for the transformation of the economy and communities on Anglesey, providing sustainable employment opportunities, improving the quality of life for existing and future generations and enhancing local identity and distinctiveness*.”
- 3.2.49 The transformative potential of the Wylfa Newydd Project is recognised, calling it an “*unprecedented opportunity*” to transform the economies of Anglesey and wider north Wales. It would maximise opportunities for employment and upskilling of people, whilst delivering investment in services and infrastructure. The Wylfa Newydd Project can also be a catalyst for cultural and behavioural change ensuring sustainable economic development, community cohesion, strengthening the identity of the island and its communities and leading to a better quality of life (paragraph 4.1.1).
- 3.2.50 It states that the IACC is committed to ensuring that the potential adverse impacts of the Wylfa Newydd Project are identified and wherever possible mitigated. The Wylfa Newydd Project is also expected to provide significant and enduring infrastructure benefits to communities, provide sustainable modes of transport, enhance connectivity, conserve and enhance the island's distinctive environment whilst taking climate change into account. It should contribute positively to the biodiversity and provide compensation for impacts that cannot be mitigated (paragraph 3.1.4).
- 3.2.51 The SPG outlines seven objectives for the Project. Those of particular relevance to this DAS include ensuring the Wylfa Newydd Project recognises the unique identity of the Island (objective 5), that the sustainable movement of materials is promoted (objective 6) and to ensure the Wylfa Newydd Project

conserves and enhances the Island's distinctive environment and resources (objective 7).

3.2.52 The document breaks down how these would be achieved including, amongst others:

- promoting high quality design and enhancement to public realm;
- avoiding adverse impacts of temporary construction worker accommodation through sensitive location and design;
- sustaining local distinctiveness;
- minimising road traffic and disruption;
- promoting good access to the Power Station Site and Associated Development sites;
- ensuring construction worker accommodation has good access to facilities; and
- promoting sustainable uses of resources.

3.2.53 The SPG also provides guidance on different locations on Anglesey. This includes the WNDA (referred to as the 'Main Wylfa NNB Site'), Holyhead, Llangefni, Amlwch, the A55/A5 Corridor, the A5025 Corridor, Cemaes and the 'Rest of Anglesey'. Whilst these locational assessments are useful in informing the contextual site analyses, those relating to Llangefni and Amlwch are not directly relevant as no development is proposed in these locations.

3.2.54 Policy GP26 sets out a series of key development principles in relation to the WNDA. The SPG recognises the opportunity that the decommissioning of the Existing Power Station represents, though notes that the combined scale of works should be fully considered. Policy GP26 sets out the key development principles for the Power Station Site, which in relation to design and access, include for example, minimising landscape and visual impacts; identification of landscape treatments; maintaining access to the coast with improvements to the Wales Coast Path; reinstatement of land where development is temporary.

3.2.55 A draft Wylfa Newydd Supplementary Planning Guidance 2018 Consultation Draft was published for consultation in January 2018. The draft recognises, at paragraph 7.33, that the policy framework for determining the DCO application is set out in NPSs, including NPS EN-1 and EN-6. The draft SPG is, at the time of submission, subject to consultation, including representations submitted by Horizon. It can therefore be given very limited weight. Further commentary on the draft SPG is provided in the Planning Statement (Application Reference Number: 8.1)

Summary of policy context

3.2.56 The ministerial statement is clear that for projects that would be deployed beyond 2025 (considered under section 105 of Planning Act 2008) NPS EN-1 and EN-6 remain important and relevant matters which would carry significant weight. They continue to represent the primary policy basis for a

decision made by the SoS on this application for development consent for the Wylfa Newydd DCO Project.

- 3.2.57 EN-6 concluded that given the site meets the SSA criteria, the site is potentially suitable, and the ministerial statement [RD30] states that the Government continues to give its strong in principle support for those sites identified in NPS EN-6 that would not be deployed by 2025
- 3.2.58 EN-1 is clear that in relation to good design for energy infrastructure, high quality design goes beyond aesthetic considerations and that functionality and sustainability are equally important. Whilst the NPS acknowledges that there may be limited scope to influence the physical appearance of some energy infrastructure, there are opportunities to demonstrate good design in terms of relationship with landscape character and sensitive use of materials.
- 3.2.59 With specific regard to nuclear power EN-6 states that substantial material weight must be given to the need to ensure the safety and security of the Power Station and the need to control the impacts of its operations.
- 3.2.60 Development plan policy and guidance provides further layers of policy support for principles of good design, accessibility and sustainability. This includes SPG and local policy (in the JLDP) which specifically relates to the Wylfa Newydd Project. Whilst the NPSs form the primary basis for decision making for the DCO, these policies may be considered important and relevant.

3.3 Operational requirements

- 3.3.1 The regulators ensure that any new nuclear power stations built in the UK meet high standards of safety, security, environmental protection and waste management, through the Generic Design Assessment (GDA) process.
- 3.3.2 As set out above, the relevant NPSs recognise that the need to ensure safety and security should be given substantial weight given the importance of these factors to the operation of a nuclear power station (NPS EN-1 paragraph 4.5.4 and NPS EN-6 paragraph 2.8.1). This is reflected in the vision and objectives for the Project.
- 3.3.3 The design, scale and layout of the Power Station (and the Off-site Power Station Facilities) are largely driven by these fundamental operational requirements. The Power Station Site needs to comprise a wide range of buildings, structures, facilities and features that meet particular specifications. Collectively, the operational requirements comprise the strategic design brief for the Power Station Site (and wider WNDA) as set out in detail in chapter 2 of volume 2 of the DAS (Application Reference Number: 8.2.2) and the Site Selection Report for the WNDA (Application Reference Number: 8.24.2).
- 3.3.4 In summary, the overall functional layout must be based on nuclear safety and construction, operational efficiency and decommissioning considerations, including: facilitating authorised access and minimising adverse interactions; and minimising the handling materials and the effects of incidents.
- 3.3.5 Site specific criteria in relation to the functional layout include the following: proximity to the sea, the landform and levels, existing environmental

considerations; suitability of geology; relationship to the Existing Power Station and existing road access.

3.4 Physical context

3.4.1 This section provides an overview of the local physical context for the WNDA, Off-Site Power Station Facilities and the sites for Associated Development. The physical context for each site is assessed in more detail in volumes 2 and 3 of the DAS (Application Reference Number: 8.2.1 and 8.2.2)

Regional context

Location

3.4.1 The Isle of Anglesey is situated off the north-west coast of Wales, separated from Bangor on the mainland by the Menai Strait, as shown on Figure 1-1. It is the largest of the Welsh islands covering an area of 720km².

Historical context

3.4.2 The Isle of Anglesey has a valuable historic environment, characterised by numerous Scheduled Monuments and archaeological sites (terrestrial and marine); landscapes of outstanding historic interest; Listed Buildings and Conservation Areas.

Access and highways network

3.4.3 Anglesey is connected to mainland Wales by the Britannia Bridge and the Menai Suspension Bridge, both crossing the Menai Strait near Bangor. The A55 crosses the Britannia Bridge and continues north-west to Holyhead, from where ferry services connect with the Republic of Ireland. Similarly, the railway line along the north Wales coast crosses onto Anglesey via the Britannia Bridge and connects to the Port of Holyhead.

3.4.4 The A5 crosses the Menai Suspension Bridge, to the east of the Britannia Bridge, and then runs parallel to the A55 for much of its route across Anglesey.

3.4.5 The A5025 leaves the A55 near Llanfair Pwll, just north of the Menai Strait, heads around the east and north of the island, past the WNDA, before heading south again to re-join the A55 at Junction 3 near Valley, south-east of Holyhead.

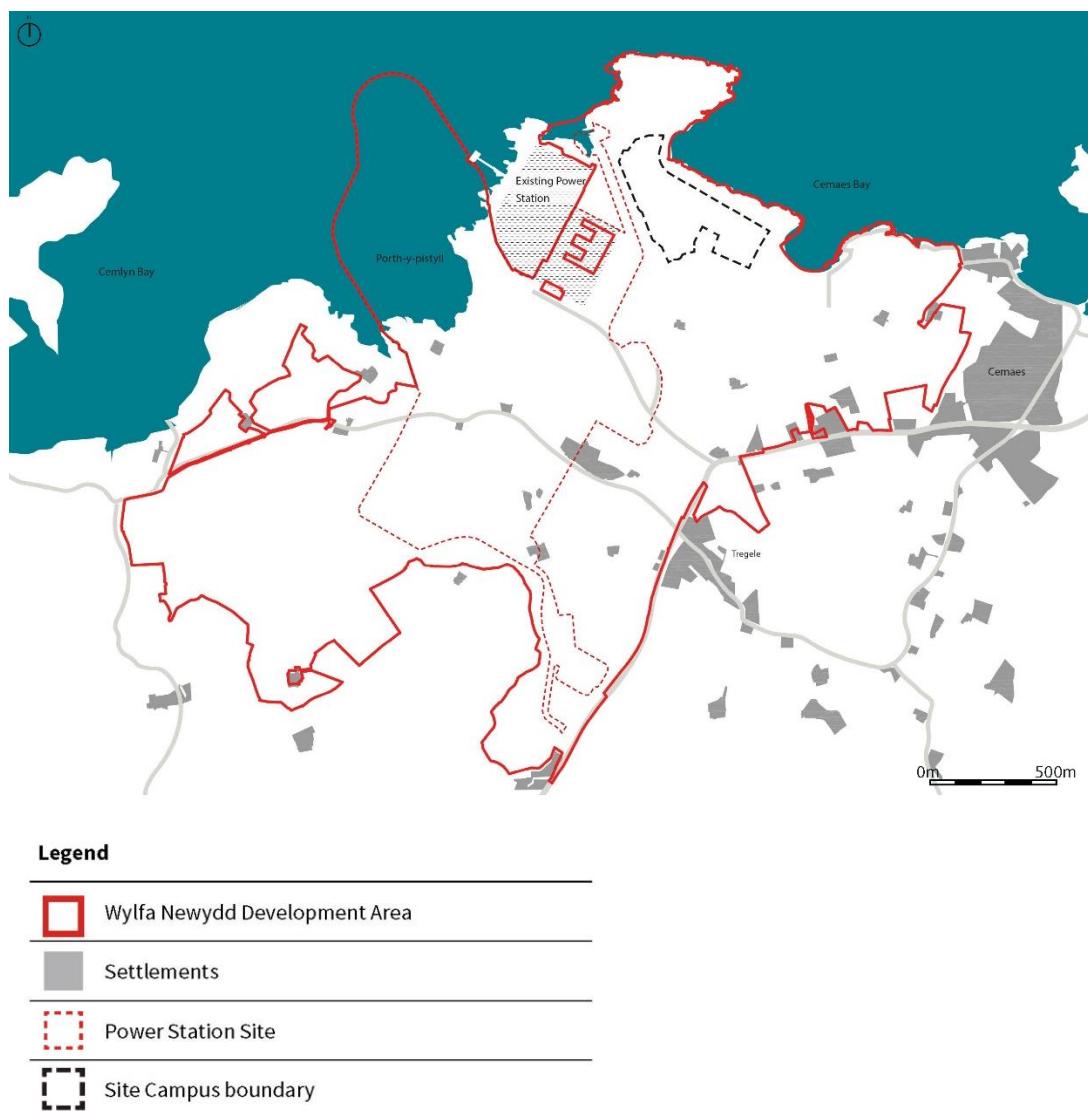
3.4.6 Anglesey Airport is located at RAF Valley, in the south-west of Anglesey, from where passenger flights operate to Cardiff.

Wylfa Newydd Development Area

The WNDA is bounded to the north by the Existing Power Station and a stretch of coastline, as shown on Figure 3-2 below. To the east, it is separated from the town of Cemaes by agricultural land. The A5025 defines part of the south-east boundary. To the south and west, the site abuts agricultural land with a small number of residential dwellings and farmsteads. To the west, the site is

bounded by the coastal hinterland and Cestyll Garden, beyond which lies Cemlyn Bay.

Figure 3-2 Wylfa Newydd Development Area



- 3.4.7 The Existing Power Station occupies land to the north of the WNDA, which is in the process of being decommissioned.
- 3.4.8 The landscape in this area is characterised by small rounded hills (known as drumlins). Land within and around the WNDA is predominantly in agricultural use, for grazing by sheep or cattle. Land is contained by hedgerows and dry stone walls ('cloddiau'), and crossed by a network of roads, rural lanes, watercourses and overhead electricity infrastructure.
- 3.4.9 Settlement patterns around the WNDA are characterised by small clusters of residential dwellings and more isolated farmsteads. Larger settlements in the immediate vicinity of the WNDA include the villages of Cemaes, to the east, and Tregele, to the south-east.

3.4.10 The Wales Coast Path, Copper Trail and a number of PRoW, cross the WNDA. The Wales Coast Path is a long-distance trail that follows the entire coastline of Wales. Some sections of the route divert inland where access is restricted, as is the case where the path runs inland of the Existing Power Station. The Copper Trail is part of the National Cycle Network (Route 566).

3.4.11 Land to the north and west of the WNDA is within the Anglesey Area of Outstanding Natural Beauty and the North Anglesey Heritage Coast.

3.4.12 There are a number of sites subject to ecological conservation designations (both statutory and non-statutory) of international, national and local importance within and in the vicinity of the WNDA. Notable sites are:

- Tre'r Gof and Cae Gwyn Sites of Special Scientific Interest (SSSIs),
- Cemlyn Bay SSSI which forms part of the Ynys Feurig, Cemlyn Bay and The Skerries Special Protection Area;
- Cemlyn Bay Special Area of Conservation;
- North Anglesey Marine candidate Special Area of Conservation; and
- Anglesey Terns Special Protection Area.

3.4.13 Tre'r Gof SSSI is located within the WNDA. Tre'r Gof has been designated for its rich fen habitat containing rushes and sedge species, including blunt-flowered rush and fen sedge and black bog rush. Cae Gwyn SSSI is located adjacent to the WNDA border in the south. It is designated for its acidic basin mires containing *sphagnum* mosses and numerous royal ferns.

3.4.14 The Cemlyn Bay designated sites are located approximately 350m from the WNDA. The North Anglesey Marine candidate Special Area of Conservation and the Anglesey Terns Special Protection Area cover the whole of the marine environment in the study area; hence the WNDA is partly within these two designated sites.

3.4.15 A detailed appraisal of the WNDA is provided at chapter 3 of volume 2.

Off-Site Power Station Facilities site

3.4.16 The proposed site for the Off-Site Power Station Facilities is near Llanfaethlu, between Valley and the WNDA, as shown on Figure 1-1.

3.4.17 The site is approximately 450m to the north-east from the centre of the village of Llanfaethlu. Currently the land is being used by an existing business as a garage and for bus parking. It is bounded by the existing A5025 road to the west, residential and storage buildings to the north, and farmland and a small sewage works to the south and east. Across the A5025, within 100m west of the proposed site, a new primary school is being constructed, which is scheduled to open in September 2017.

3.4.18 A detailed appraisal of the Off-Site Power Station Facilities site is provided in volume 3 of the DAS.

Associated Development sites

- 3.4.19 The Park and Ride facility and Logistics Centre would be located remotely from the Power Station Site at Dalar Hir and Parc Cybi respectively, as shown on Figure 1-1. The A5025 Off-line Highways Improvements are sections of new road along the A5025 between Valley and the Power Station Site. Further details of the site context for the Associated Development sites is provided in volume 3 of the DAS (Application Reference Number: 8.2.3).
- 3.4.20 The Site Campus, however, is located within the WNDA boundary, as shown on Figure 1-1. Further details of the WNDA are provided in volume 2 of the DAS (Application Reference Number: 8.2.2) and the site specific context of the Site Campus at volume 3 (Application Reference Number: 8.2.3).

Site Campus

- 3.4.21 The Site Campus site is located within the WNDA, in an area to the east of the Existing Power Station. The site lies parallel to the coast on the approach to Wylfa Head.
- 3.4.22 It is predominantly an area of coastal grassland used for sheep grazing, bounded by the coastline to the north and the Existing Power Station, associated wooded slopes designed by Dame Sylvia Crowe and the more deciduous parkland tree planting associated with the former Wylfa Hall to the south.
- 3.4.23 Large rock outcrops run through the site, reflecting the close proximity of the bedrock to the surface, which influences the design of the temporary development on the site.

Park and Ride facility (Dalar Hir)

- 3.4.24 The Park and Ride facility would be located near Dalar Hir, north of Llanfihangel, approximately 3km east of Valley, close to Junction 4 of the A55. The area is characterised by agricultural land with a number of small settlements and farmsteads. There are a number of larger settlements located nearby, including Llanfihangel yn Nhowyn approximately 400m to the south and Bodedern 1km to the north.
- 3.4.25 The site is bounded to the south by the A5 and to the west by a road leading to Bodedern. To the east and north, the site is bounded by agricultural land.

Logistics Centre (Parc Cybi)

- 3.4.26 The Logistics Centre at Parc Cybi would be located approximately 2km south of the centre of Holyhead, and 250m south from existing industrial and commercial premises. The land is currently being used for arable farming.
- 3.4.27 The site is bounded to the north-east by the A55, beyond which lie existing industrial and commercial premises, including Penrhos Business Park, an aluminium works and sewage works. To the south-west, the site is bounded by a road, and south-east is agricultural land. An area of coniferous woodland is located approximately 200m south-east from the site boundary.

A5025 Off-line Highways Improvements

3.4.28 There are four sections of Off-Line Highway Improvements proposed along the A5025 between Valley and the WNDA. These sections would be at Valley, Llanfachraeth, Llanfaethlu and Cefn Coch.

Wetland habitat creation and enhancement works

3.4.29 The Wylfa Newydd DCO Project includes approximately 49.5ha of land that form the compensation proposals to offset potential significant effects to rich fen habitat at the Tre'r Gof Site of Special Scientific Interest (SSSI) which is located within the WNDA.

3.4.30 The compensation proposal comprises three sites at Cae Canol-dydd, Cors Gwawr and Ty du. These sites provide 13.8ha of land that is suitable for rich-fen habitat creation and 20ha for the enhancement of existing but unmanaged or degraded fen and mire habitat. These sites are addressed in the Landscape and Habitat Management Strategy (Application Reference Number: 8.17)

3.4.31 The physical context, including environmental designations relevant to the other Associated Development sites are covered in detail in volume 3 of the DAS (Application Reference Number: 8.2.3).

3.5 Social and cultural context

Socio economic context

3.5.1 Anglesey has a population of approximately 70,000 representing just over 2% of the Welsh population of 3.1 million (2011). Of the population of Anglesey, 57% can speak Welsh which is the second highest rate in Wales [RD28]

3.5.2 Whilst there has been a recent decrease in the local employment rate on Anglesey, employment rates on Anglesey (70.8%) are broadly comparable to those for Wales as a whole (71.2%) [RD29].

3.5.3 Tourism is vital to the economy of Anglesey with more than five million visitors to the island in 2014 and generating circa £260m to the economy.

3.5.4 The Existing Power Station has made a notable contribution to the economy and employment since it was commissioned in 1971, and prior to that during construction. At the end of 2015, the Existing Power Station ceased generating electricity and decommissioning has now begun.

Cultural context

3.5.5 Both Anglesey and Gwynedd have been recognised for their high concentration of fluent Welsh speakers in the Welsh Language Use Survey 2013-15. They are traditional Welsh-speaking heartlands in Wales and include the second highest and highest percentages respectively of Welsh speakers throughout Wales.

3.5.6 The Welsh language, culture and heritage are integral elements of the social fabric of Anglesey's communities, though the percentage of Welsh speakers

does vary significantly amongst wards, with greater concentrations in and around the geographical centre of Anglesey and Llangefni.

3.6 Summary

3.6.1 The Government's conclusions in NPS EN-6, drawn in the SSA, that there are no factors that would prevent Wylfa from being considered suitable for a new nuclear power station (and the Government's ongoing support for the EN-6 sites in the ministerial statement), set the foundation for further detailed analysis and project development.

3.6.2 The following considerations summarise the key points drawn out from the assessment of policy, physical and social context and operational requirements. This includes analysis and conclusions drawn by the Government against the SSA.

- There is an established need for the urgent delivery of new nuclear power in the UK.
- Wylfa is one of only eight sites that the Government has identified as being potentially suitable for the deployment of new nuclear power stations in England and Wales before the end of 2035.
- Whilst there are a number of factors that require further consideration, the Government considered through the SSA that none of the factors were sufficient to prevent the site from being considered potentially suitable, and continue to give strong in principle support for those sites identified in NPS EN-6 that would not be deployed by 2025.
- The important contribution that the Wylfa Newydd Project would have on the economy and communities on Anglesey is recognised in adopted local policy and guidance.
- The form of the Power Station itself is largely driven by the need to deliver and operate the Power Station in a timely, safe and efficient manner.
- Whilst the nature of energy infrastructure can limit the extent to which it can enhance the quality of an area there may be opportunities to demonstrate good design relative to landscape character, landform and vegetation.
- There are a number of important environmental designations in the vicinity of the Power Station Site (and Off-Site Power Station Facilities and Associated Development sites) which need to be taken into consideration in the design and assessment of the Wylfa Newydd DCO Project.
- The components of the Wylfa Newydd DCO Project have different lifespans and site characteristics.
- The potential impacts on the highways network should be duly assessed in developing the proposals and the strategy for transporting workers to

the Power Station Site, which in turn influences the location (and scale) of Associated Development sites.

- The Power Station Site is in a remote rural location, though is in close proximity to the settlements of Cemaes and Tregele, and is crossed by a number of PRoWs. It is important to have regard to the overall scale of the Wylfa Newydd Project and the effect on existing communities and on recreation and tourism.

The next section sets out the approach to consultation and design evolution. Full details of how the evolution of the Wylfa Newydd DCO Project, having regard to these considerations, has been shaped through consultation is set out in the volumes 2 and 3 of the DAS (Application Document References 8.2.2 and 8.2.3).

4 Consultation and design evolution

4.1 Introduction

4.1.1 Horizon has undertaken an extensive consultation process, the feedback from which has been important in enabling Horizon to develop and refine the Wylfa Newydd DCO Project.

4.1.2 Pre-Application Consultation is a legal requirement for NSIPs under the Planning Act 2008, though irrespective of any legislative requirements, as highlighted in the DCfW guidance, evidence of consultation can help to justify design decisions and should be a fundamental part of the development of both the design and access components of a project.

4.1.3 Horizon has undertaken three main stages of consultation, as set out below, in addition to further informal consultation including a Project Update consultation in January 2016 and on specific elements of the Wylfa Newydd DCO Project in May 2016:

- Stage One Pre-Application Consultation (PAC 1): September – December 2014;
- Stage Two Pre-Application Consultation (PAC 2): August – October 2016; and,
- Stage Three Pre-Application Consultation (PAC 3): May – June 2017.

4.1.4 A further period of Consultation on Additional Land was undertaken in January and February 2018. This included additional land required as part of the WNDA and at the AD sites, as well as the sites required for the creation of the new wetland habitats.

4.1.5 Horizon has also engaged on the Wylfa Newydd DCO Project proposals with technical consultees such as the IACC, Welsh Government, Natural Resources Wales, Gwynedd Council, Conwy County Borough Council, Non-Governmental Organisations (NGOs) including the National Trust, Royal Society for the Protection of Birds and North Wales Wildlife Trust, DCfW and Office for Nuclear Regulation (among others).

4.1.6 The comments received at each stage of the consultation process are comprehensively recorded within the Consultation Report (Application Reference Number: 5.1).

4.1.7 Following PAC 2, the Wylfa Newydd DCO Project underwent a programme of optimisation, to ensure that the development is optimised with respect to cost, schedule, safety and environmental impact. This involved Horizon's appointment of a joint venture partner and various consultants to take forward its proposals for project design and deliverability. This optimisation process, in addition to responding to consultation, resulted in the refinement of proposals, as presented at PAC 3.

This chapter sets the overarching context for the consultation and project review process, and an overview of the key strategic changes to the Wylfa Newydd DCO Project where they specifically relate to matters of design and

access. Volumes 2 and 3 of the DAS provide a fuller review of consultation and design evolution for each element of the Wylfa Newydd DCO Project.

4.2 PAC 1

Scope of consultation

4.2.1 PAC 1 was undertaken in September 2014 with the aim of sharing information available at the time to promote an open and ongoing dialogue with Horizon's consultees, stakeholders and the community, at a stage in the Wylfa Newydd DCO Project's development where feedback could influence the early design of the proposals.

Key outcomes following PAC 1

4.2.2 Horizon sought feedback on the appearance of the Power Station Site in the early stages of consultation. The feedback received expressed a broad range of views with little consensus on a particular architectural style, however, the following conclusions could be drawn.

- The use of colours that are common in nature at north-west Anglesey was generally supported. This was described as a 'blend' approach rather than a 'bold' approach to colour.
- The appearance of buildings was regarded as an important way of influencing the perceived scale and massing.

4.2.3 In addition to the statutory PAC 1 process, Horizon engaged with IACC, DCfW (including meetings regarding Associated Development and the Power Station Site in June and August 2016 respectively) and other stakeholders to further develop the architectural approach to the Power Station.

4.2.4 This feedback informed the emerging design and the following concepts were established and reflected in the proposals that were consulted on in Horizon's PAC 2:

- the Power Station Site will be designed comprehensively to ensure all components complement each other and the surrounding landscape where possible;
- the design strategy will draw inspiration from the local landscape and culture;
- the design will be distinctive with a consistent approach to detailing; and
- the design will celebrate the industrial character of this type of development with a consistent and cohesive approach to building shape and appearance.

4.3 PAC 2

Scope of consultation

4.3.1 In September 2016, Horizon undertook PAC 2 on updated proposals for the Project. The consultation documents included a description of how the Wylfa Newydd DCO Project had developed since the previous consultation (PAC 1) and how feedback from stakeholders had been taken into account.

Key outcomes following PAC 2

4.3.2 As well as the consideration of the feedback from the PAC 2, and further dialogue with DCFW, the Wylfa Newydd DCO Project also underwent a programme of optimisation, following Horizon's appointment of a joint venture partner and ongoing operational, cost, design, engineering and environmental advice - to ensure that it was being taken forward to a DCO application that was affordable and deliverable.

4.3.3 The key changes made across the Wylfa Newydd DCO Project, following the PAC 2 and as a result of the optimisation process, where they relate to the design and access proposals, are summarised below.

Power Station Site

- Modification to the layout of the Power Station Site to make construction and operation more compact and efficient, whilst retaining appropriate levels of flexibility to allow for detailed design development.
- Refinement of proposals for the landscaping proposals within the WNDA to respond to changes made on the Power Station Site and consultation feedback received.
- Altering the design of the MOLF, to increase cargo handling capacity and reduce the amount of seabed that would be required to be excavated.
- Inclusion of a temporary viewing area during the construction period for visitors to see the construction.

Off-Site Power Station Facilities

- Locating the three Off-Site Power Station Facilities (AECC, ESL and MEEG) onto a single site at Llanfaethlu, which is the site upon which only the MEEG was previously proposed to be located. This would enable the most effective use of a brownfield site and the greenfield site at Cefn Coch would therefore no longer be required.

Accommodating the construction workers

- A reduction in the projected peak number of construction workers from around 10,700 to around 8,500 as a result of improved construction techniques and design optimisation.

- Change to the Workforce Accommodation Strategy (WAS), so that workers who are not living at home (or in existing accommodation such as tourist accommodation or the private rental sector), would be accommodated in a single, temporary Site Campus, close to the Power Station Site.
- Consequently, the previously proposed Temporary Worker Accommodation sites at Rhosgoch, Amlwch sites A and B, Kingsland and Cae Glas, or Madyn Farm were no longer to be progressed.

Transporting construction workers and materials

- The overall number of car parking spaces was reduced from approximately 5,800 spaces to 3,800 spaces, with an increased emphasis on car sharing with fewer traffic movements on Anglesey as a whole.
- The number of car parking spaces at the Park and Ride facility at Dalar Hir was reduced from 2,700 spaces to 1,900 spaces, and the number of car parking spaces at the WNDA increased from 1,000 to 1,900 parking spaces. This reflects the reduction in peak worker numbers, increased car sharing ratios and increased number of workers accommodated within the WNDA.
- Heavy goods vehicle deliveries from Parc Cybi to the site were decreased from a maximum of 80 to 40 deliveries per hour.
- The number of heavy goods vehicle spaces at the Logistics Centre at Parc Cybi was increased to enable better control of movements on the A5025 and to hold more vehicles in the event of an incident on the road network.

4.4 PAC 3

Scope of consultation

4.4.1 In May 2017, Horizon undertook the PAC 3 on the updated proposals for the Wylfa Newydd DCO Project, as summarised above. The consultation documents included information on the proposed changes to the Wylfa Newydd DCO Project.

Key outcomes following PAC 3

4.4.2 The Consultation Report (Application Reference Number: 5.1) provides a full list of all comments received from PAC 3 and the actions taken in response. Key changes, where they relate to design and access include:

- Marine and biodiversity - Change to a continuous quay as far as possible; any effects to be mitigated by maintenance of a wave damping structure.

- Power Station - As a result of further project optimisation changes to the site layout of the Power Station including, building spacing and building form. For example, new transformers and changes to the turbine building, a slight change to the location of the EDG Stack and an increase in the size of the Auxiliary Boiler Building.
New buildings on the Power Station Site including, a fuelling station, two new switchgear buildings, a plant logistics warehouse and new parking areas.
- Off-Site Power Station Facilities - Updated design to include connection of foul water to mains sewer.
- Site Campus - Realignment of the site fence to remove 90 degree fences with 45 degree 'chamfers'.
- Logistics centre - Change to surface and foul water drainage details to connect the surface drain to the existing pond on the north west of the site and the foul water drainage to the sewage treatment plant on the north west of the site.
- Park and Ride - Change to exit at east of site to align with design for a "no left turn exit"; provide secondary access to car parks 2 and 4.
- Transportation related to construction - Harbour movements - Change to 8 movements (4 inward and 4 outward) per 12 hour shift. Two twelve hour shifts, total of 16 movements per day. All movements assumed to be supported by tugs.
- Transportation related to construction - HGVs - A maximum average of 40 HGV deliveries per hour (160 per day, 3500 per month) would travel along A5025 between hours of 0700 and 1900 hours Monday to Friday, a lower number of deliveries may be undertaken on a Saturday.

4.4.3 These have informed the final scheme proposals as introduced in chapter 6 of this document and set out in more detail in volumes 2 and 3.

4.5 Summary

4.5.1 The evolution of the Wylfa Newydd DCO Project has been influenced by the statutory consultation process, consultation with the public and key stakeholders including DCfW, and through Horizon's optimisation process.

4.5.2 This process has led to some key changes which influence the overall design of the Wylfa Newydd DCO Project. This includes the important changes to the approach to accommodating workers during the construction period, which by accommodating up to 4,000 workers on the WNDA means other development sites are not required, and the need for daily travel is minimised.

4.5.3 The process has also resulted in a reduction in the number of car parking spaces, resulting in for example the inclusion of more amenity grassland at the Park and Ride site at Dalar Hir.

- 4.5.4 Other positive scheme changes arising directly from consultation include the introduction of a temporary viewing area during the construction period for visitors to see the construction.
- 4.5.5 The form of the Power Station itself is largely driven by operational and safety requirements. There has therefore been little scope to influence the layout of the Power Station through consultation, although the layout of the Power Station has been made more compact through more efficient design.
- 4.5.6 The consultation process has provided important feedback on the appearance of the Power Station and the approach to the architectural language. There has also been more ability for consultation to inform the development of elements of the Power Station Site where there is more scope for influence, including the design of the marine elements of the Project. For example, Horizon has excluded the previously proposed dewatering of basements due to the potential impact on Tre'r Gof SSSI.
- 4.5.7 Volumes 2 and 3 of the DAS (Application Document References 8.2.2 and 8.2.3) provide a fuller review of design and access related feedback received from consultation and details of how the design evolved in response.

5 Project-wide strategies

5.1 Introduction

5.1.1 This chapter provides a summary of project-wide strategies and approaches which have had an influence on the design development of the Wylfa Newydd DCO Project, including:

- Sustainability Statement;
- Integrated Traffic and Transport Strategy (ITTS); and
- WAS.

5.2 Sustainability

Objectives

5.2.1 Horizon has embedded the sustainability themes common to relevant policies, plans and programmes (as listed in appendix 7-1 of the Sustainability Statement (Application Reference Number: 8.17)) into fourteen Sustainability Assessment Objectives to enable sustainability in the context of the Wylfa Newydd DCO Project to be defined and appraised. The majority of these have design implications for the proposals.

5.2.2 The fourteen Sustainability Assessment Objectives are as follows.

- Objective 1: To support economic growth and contribute to a vibrant economy.
- Objective 2: To seek to minimise adverse impacts on terrestrial and marine biodiversity and promote habitat quality and connectivity.
- Objective 3: To ensure development proposals value and complement the existing landscape and seascape character and established land uses.
- Objective 4: To manage and reduce the impacts of climate change through mitigation and adaptation measures.
- Objective 5: To facilitate and encourage the use of sustainable transport modes.
- Objective 6: To promote health and well-being.
- Objective 7: To enhance opportunities for formal and informal training, education and learning.
- Objective 8: To promote community cohesion and viability.
- Objective 9: To deliver sustainable accommodation initiatives to meet Project needs.
- Objective 10: To minimise the need to travel.
- Objective 11: To support and encourage the use of the Welsh language and foster Welsh culture.

- Objective 12: To safeguard and maintain retained heritage assets
- Objective 13: To maintain water quality, manage water resources sustainably and minimise the risk of and from flooding.
- Objective 14: To use land, materials and mineral resources efficiently.

Approach

Social and economic sustainability

5.2.3 There are a number of aspects of social and economic sustainability, as set out in the objectives above, which directly influence the design and nature of the Wylfa Newydd DCO Project.

5.2.4 Achieving Objectives 8 – 11 for example all have direct implications for the location of and scale of development. For example, delivering sustainable accommodation initiatives requires a robust worker accommodation strategy (as set out in more detail below), which has driven the location and scale of the proposed Site Campus. The scale of the Site Campus is based on the capacity of existing accommodation to accommodate the peak workforce, and is part of a strategy which seeks to ultimately avoid excess demand on existing provision and local communities. The decision to locate all temporary accommodation, which cannot be met sustainably through existing sources, next to the Power Station Site has a clear design implication for the WNDA.

5.2.5 The objective of promoting sustainable communities also directly influences the inclusion of facilities as part of the Wylfa Newydd DCO Project. For example, the need for the provision of medical and healthcare services within the WNDA, and dedicated leisure and sports facilities as part of the Site Campus, helps to ensure there is no unacceptable pressure on community services.

5.2.6 The Wylfa Newydd Project has also been designed to minimise community impacts from transport and freight management. For example, proposing a Logistics Centre to manage traffic flows, a Park and Ride facility to reduce traffic movements and proposing a series of improvements to the A5025. The ITTS is considered further below.

Environmental sustainability

5.2.7 The objectives relating to environmental sustainability also have direct design implications. Objective 2, for example, seeks to minimise adverse impacts on terrestrial and marine biodiversity and promote habitat quality and connectivity. The development of a new nuclear power station has the potential to conflict with this objective as large bodies of water can host important ecological assets. The Wylfa Newydd DCO Project has taken into account the biodiversity issues of relevance and these are set out in the ES (Application Reference Number: 6.8).

5.3 Integrated Traffic and Transport Strategy

5.3.1 The Wylfa Newydd DCO Project has significant transport requirements both in terms of construction logistics (e.g. transport of materials), travel patterns of construction workers and operational requirements. This has a major bearing on the approach to the location and nature of development.

5.3.2 Horizon's approach to these challenges is through the ITTS (Application Reference Number: 6.3.20), which is explained in ES volume C chapter 2: Project-wide traffic and transport assessment. The ITTS does not form part of the DCO application, but was the strategy by which Horizon established its proposals for managing the transportation of materials and workers to the Power Station Site, and proposed improvements to the local road network, which now form the A5025 Off-line Highway Improvements and A5025 On-line Highway Improvements.

5.3.3 Horizon's overarching aims for transporting its workers and materials are shown below.

- Improve the transport network to positively affect the local and global natural and built environment while minimising negative impacts.
- Provide an effective and efficient transport system with greater use of more sustainable forms of travel and which minimises the need to travel.

5.3.4 The objectives of the ITTS are:

- enhanced highway capacity and safety;
- integration with strategic public transport services;
- improved transport links to the Wylfa Newydd Power Station;
- encouraging sustainable travel; and
- reduced need to travel.

5.3.5 These aims and objectives would help to deliver the Sustainability Assessment Objectives 5 and 10.

Approach

5.3.6 The ITTS was the strategy by which Horizon established its proposals for managing the transportation of materials and workers to the Power Station Site, and proposed improvements to the local road network, which are now subject to the DCO and A5025 Off-line Highway Improvements TCPA applications.

Transporting workers

5.3.7 Horizon estimates that the number of workers during the construction period would peak at approximately 8,500. Horizon has however assumed a peak of 9,000 workers for the assessment work (to allow for any unforeseen increases in worker numbers).

5.3.8 Travel impacts would be reduced by:

- enabling up to 4,000 workers to live at the Site Campus in the WNDA meaning they would be able to walk to and from work each day;
- providing shuttle bus services for workers living on Anglesey and to/from the mainland towns of Bangor and Caernarfon;
- providing a Park and Ride facility at Dalar Hir and a shuttle bus service between Dalar Hir and the WNDA to reduce car travel by workers on the A5025; and
- requiring car sharing through a programme of incentivisation and management (secured through the CoCP, CoOP and WMS).

Transporting materials

5.3.9 The ITTS also covers construction traffic and the following embedded measures are proposed to reduce construction traffic impacts.

- Construction of a MOLF adjacent to the Power Station. This would take between 60% and 80% of all construction materials required for the Power Station.
- Construction of on-line highway measures on the A5025 to ease movements by construction vehicles (not part of the Wylfa Newydd DCO Project).
- Construction of off-line highway measures on the A5025 including three village bypasses.
- Construction of a Logistics Centre adjacent to Junction 2 of the A55. This would enable construction vehicle movements on the A5025 to be controlled, helping to ensure a smooth flow of construction vehicles to the site and avoiding sensitive times along the corridor. It would also require transporters to provide full loads rather than part loads thereby reducing the number of trips.
- Implementation of mitigation and management measures to control the flow of construction traffic whilst the early elements of the Wylfa Newydd DCO Project are being constructed (including the MOLF).

Inclusive access

5.3.10 The Transport Assessment (Application Reference Number: 6.3.14) (informed by the ITTS) sets out that access arrangements for the Wylfa Newydd DCO Project would ensure that all users would have equal access both to and within the site. Up to 5% of car parking spaces would be designed for use by disabled workers or visitors (based on IACC's Parking Standards: SPG) [RD26]. The location of these spaces would depend on the phase of construction and disabled spaces would be located as close as possible to the place of work for each worker or visitor. This means that more disabled spaces are likely to be provided at the WNDA rather than the Park and Ride

facility to reduce the need for disabled workers or visitors to use the shuttle bus facility.

5.4 Worker Accommodation Strategy

5.4.1 The approach to accommodating up to 9,000 construction workers at peak has a key strategic design implication for the Wylfa Newydd DCO Project.

5.4.2 Horizon has worked with the IACC, Gwynedd Council and the Welsh Government prior to the submission of the DCO application to define its WAS (Application Reference Number: 8.4). This will not be certified as part of the DCO though elements of the strategy would be secured through planning obligations.

5.4.3 The WAS seeks to ensure the Wylfa Newydd DCO Project takes a balanced approach to accommodating its workers, by seeking to avoid excess demand being placed on existing provision and other disruption to local communities, while also attracting a productive workforce. This balance will help to ensure that the Wylfa Newydd DCO Project is efficient and cost effective and can offer economic benefits to local accommodation providers utilising under-used capacity.

5.4.4 A key part of Horizon's approach is the provision of Temporary Worker Accommodation at the Site Campus within the WNDA. This serves several key purposes: it would ensure excess demand is not placed on existing accommodation, businesses and communities; and, it would provide a type of accommodation that is both attractive to workers (including due to its location) and which is required for the efficient construction of the Project.

5.4.5 The total number of workers required, the capacity of existing accommodation and the type of accommodation that would meet workers' needs, all have a direct influence on the amount of temporary development proposed as part of the Wylfa Newydd DCO Project proposals. The strategy, having regard to these factors, includes the provision of the temporary Site Campus to accommodate up to 4,000 workers in close proximity to the Power Station Site.

5.4.6 Horizon's three overarching aims for its WAS are:

- avoiding adverse effects on Anglesey's residents and accommodation markets;
- delivering Horizon's commercial and productivity requirements; and
- providing a positive legacy where possible and appropriate.

5.4.7 Achieving these requires a balanced strategy that ensures an adequate supply of accommodation that is attractive and affordable for workers and minimises travel to site. However, Horizon understands from consultation and engagement with communities and local stakeholders that this can also provide the opportunity for local economic benefits from workers using existing accommodation where there is spare capacity.

5.4.8 Horizon recognises it needs to avoid displacing existing residents, or tourists during the peak season. Purpose-built accommodation is required to minimise

travel and coordination with shift patterns, provide facilities and amenities for workers alongside their accommodation (e.g. catering or sports and leisure facilities) and to manage workers' behaviour and their impacts on local communities.

- 5.4.9 A certain amount of large-scale, purpose-built, accommodation is best suited to meeting these needs. It provides the type of accommodation workers would want at a scale and in a format that enables the delivery of associated services (e.g. room cleaning and managing changeover between workers) in a way regular houses cannot. Horizon aims to deliver its purpose-built accommodation flexibly so it can respond to temporary workers' needs in terms of the amount and timing appropriately.
- 5.4.10 The key driver of demand for accommodation is the number of workers at the peak of construction and how many of them are recruited from outside the local area. This peak would be the point at which demand is highest and therefore when demands on accommodation would be the greatest. The WAS needs to be able to accommodate the numbers at this peak scenario.
- 5.4.11 Horizon estimates that it would need accommodation for approximately 7,000 temporary non-home-based workers. Based on this, and the updated understanding of the capacity of existing accommodation, the Wylfa Newydd DCO Project includes Temporary Worker Accommodation for a maximum of 4,000 bed spaces.
- 5.4.12 The remaining 3,000 non-home-based workers would be accommodated in a combination of existing capacity sources, including the private rented sector, tourist accommodation, the owner-occupied sector and 'latent accommodation' (i.e. new capacity coming onto the market, for example the letting of spare rooms).

Approach

- 5.4.13 The approach to locating Temporary Worker Accommodation has evolved through the consultation stages of the Wylfa Newydd DCO Project. Whilst a number of different sites were originally proposed, on balance, the environmental and social effects of the construction workforce on the existing community is considered to be best managed through locating them in a single, temporary purpose-built campus as close as possible to the Power Station Site (the Site Campus).
- 5.4.14 This reduces daily vehicle trips on the local road network as much as possible and also has the benefit of being able to provide a single, managed site which itself provides all of the facilities required by workers, including leisure and healthcare, in one place.
- 5.4.15 The Site Campus would provide an independent living space for each worker, with shared campus-style amenities. It would be a temporary facility, completed in phases in order to respond to actual demand.
- 5.4.16 A number of locations on the WNDA were considered for the Site Campus location. The 15ha site to the east of the Existing Power Station was chosen because it maximises the distance of the accommodation from the active

construction site while avoiding constraints on construction activities. It is also located away from neighbouring communities and in a location which would be partially screened through landscaping (including mounding) as discussed in volume 2 of the DAS (Application Reference Number: 8.2.2).

5.4.17 A more detailed description of the Site Campus is provided in chapter 6 of this volume and the full rationale for the evolution of this element of the Wylfa Newydd DCO Project is provided within volume 3 of the DAS (Application Reference Number: 8.2.3) and Site Selection Report (Application Reference Number: 8.24).

6 The development proposals

6.1 Introduction

- 6.1.1 The components that comprise the Wylfa Newydd DCO Project, their distribution and their nature, have been developed having regard to the vision and objectives (outlined in chapter 2), the planning policy context, physical and socio economic environment (as introduced in chapter 3), the consultation process prior to the submission of the application for DCO (chapter 4) and the overarching strategies in relation to construction, worker accommodation, sustainability and traffic and transport.
- 6.1.2 This chapter provides a brief overview of the different components of the Project, with full details, including the design rationale and evolution through consultation process provided in volumes 2 and 3 of the DAS. The post operational strategy is then introduced in chapter 7.
- 6.1.3 Having summarised the development proposals in this chapter, chapter 8 then sets out the approach to flexibility sought through the DCO for each of the components of the Project. The parameters and design principles for each site are set out in volumes 2 and 3 of the DAS.

6.2 Enabling Works

- 6.2.1 Horizon is proposing to undertake Enabling Works, prior to construction under the DCO, which include:
 - SPC Proposals to prepare the WNDA for Main Construction; and
 - A5025 On-line Highways Improvements work to improve the existing A5025, including widening, reconstructing and resurfacing the road from Valley to the Power Station Site.

Site Preparation and Clearance

- 6.2.2 The SPC Proposals represent the first stage of construction (as described above).
- 6.2.3 The SPC works would prepare the Wylfa Newydd Development Area for Main Construction, including site establishment, soil remediation, erection of fencing, habitat clearance, demolition and diversion of a watercourse.
- 6.2.4 These works are subject to a separate TCPA planning application submitted to the IACC on 10th November 2017 (LPA reference number: 38C310F/EIA/ECON) in anticipation of commencing the works in advance of construction under the DCO. The SPC Proposals are however also included in the DCO in the event that the SPC Works are not granted prior to the DCO. In the event that the TCPA permission is granted prior to the DCO, the DCO includes a mechanism for Horizon to "switch" into undertaking the SPC works under the DCO.
- 6.2.5 The activities set out above represent a reduced scope of works to those originally proposed, which have been amended following consultation, in order

to reduce physical impacts on the WNDA prior to the grant of the DCO. This is a response to concerns raised through consultation feedback.

6.2.6 If the DCO is not granted or the Wylfa Newydd Project does not proceed, all project related structures would be removed and the affected land would be subject to a scheme of restoration where appropriate.

A5025 On-line Highways Improvements

6.2.7 The required changes to the existing A5025 between Valley and the Power Station Site are known as A5025 On-line Highway Improvements. These works include the following.

- Widening: the road to an overall width of 7.3m (with only a handful of locations where this is not possible).
- Reconstruction: remove and replace the layers which make up the highway surface. We have undertaken tests to assess the condition of different layers of the road to help us understand the sections that need to be reconstructed and strengthened.
- Resurfacing: resurfacing the base layers of the road where, even though it may look acceptable, we know through testing that the base conditions are poor.

6.2.8 The stretch of the A5025 from Valley to the Power Station Site also requires improvements that are unable to be accommodated along the line of the existing road.

6.2.9 These works are subject to a separate TCPA planning application which was submitted to the IACC in on 17th November 2017 (LPA reference number: 27C106E/FR/ECON).

6.3 Power Station Site

6.3.1 The design of the Power Station is largely driven by functional operational requirements to ensure safety and security. These factors should be given substantial weight (as advised at NPS EN-1 paragraph 4.5.4 and NPS EN-6 paragraph 2.8.1).

6.3.2 The Power Station Site would comprise a range of buildings, structures, facilities and features including the following.

Power Station

- **Main plant** – buildings that are located in and around the single power island and contain the plant that is particularly important for safe generation of electricity.
- **Common plant** – comprising those parts of the Power Station that support the process of generation of power and are shared between the two UK ABWRs Units.

- **Supporting facilities, buildings, structures and features** – including those parts of the Power Station necessary to support the operation and maintenance of the Power Station, including offices and security facilities.
- **Grid Connection** – apparatus to transfer electrical energy to the National Grid high voltage electricity transmission network.

Other on-site development

- 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 fencing;
- construction fencing; and
- electricity connections.

Marine Works

6.3.3 The Marine Works comprise:

- Permanent Marine Works: the Cooling Water System, Cooling Water System intake and outfall, Marine Off-Loading Facility, breakwater structures, shore protection works, surface water drainage outfalls, 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.

6.3.4 The electrical energy created in each generator 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.

- 6.3.5 The permanent Power Station development would be subject to a landscaping scheme, which would be an important element of settling the building and structures into their setting.
- 6.3.6 Horizon intends to create a new Power Station Access Road to permanently connect the A5025 to the Power Station Site, as well as provide access to the wider WNDA for Main Construction activities. Construction of this road would commence early in the Main Construction stage. The proposed route is to leave the A5025 north of Groesfechan.
- 6.3.7 The layout and design of the Power Station itself is largely driven by the need to comply with operational, safety and security requirements, and the need to deliver the Wylfa Newydd Project in a timely and efficient manner.
- 6.3.8 The design has however evolved throughout the consultation process, as introduced in chapter 4 and set out in detail in volume 2 of the DAS, and following the appointment of the construction contractor, Menter Newydd. This has resulted in the consolidation of the main plant buildings into a single area, and a reduction in the number and redesign of the buildings required to support the Power Station, reducing the total area required to accommodate the Power Station.

6.4 Licensable Marine Activities

- 6.4.1 The Licensable Marine Activities comprise the Permanent Marine Works, the Temporary Marine Works, the disposal of dredged material at the Disposal Site (at Holyhead North), the drainage of surface water into the sea, the construction of a waste water treatment effluent outfall, and the drainage of treated sewage into the sea (during the construction phase only).

6.5 Off-Site Power Station Facilities

- 6.5.1 All of the Off-Site Power Station Facilities would be located on the same site. The selected site is located adjacent to the A5025 at Llanfaethlu, approximately 7.5km from the Wylfa Newydd Development Area, on a site currently used as a garage and vehicle parking. The proposed development would consist of the following.
 - An Alternative Emergency Control Centre (AECC) to provide back-up command and communications facilities that would be used to remotely manage an incident at the Power Station in the extremely unlikely event the primary facilities on the Power Station Site were unavailable or if there was no access to the Power Station Site.
 - A Mobile Emergency Equipment Garage (MEEG) to enable Horizon to store a number of specialist vehicles at a location close to but separate from the Power Station Site, allowing them to be rapidly deployed if needed to support an incident. The MEEG could also be used as a marshalling point for support arriving on Anglesey before onward dispatch to the Power Station Site in an emergency situation. The MEEG would be located in the same building as the AECC.

- An Environmental Survey Laboratory (ESL) would perform a normal operating function on a daily basis for environmental monitoring and, as such, would contain facilities such as radiation monitoring equipment to conduct radiological surveys in the local area.
- Car parking and pedestrian walkways.
- Access and delivery areas.
- Generator.
- Pump house.
- Fuel pump and fill point.
- Substation.
- Two underground fuel tanks.
- Refuse compound.
- Portable office pods.
- Container storage.
- Security fencing.
- Drainage swale.

6.5.2 The Off-Site Power Station Facilities would be used during the operational phase of the Power Station. The facilities are required in order to provide resilience against extreme events with very low probabilities.

6.6 Associated Development

6.6.1 Horizon has identified requirements for a number of Associated Developments that are necessary to facilitate the delivery of the Power Station. These are described in brief below with more detail on the facilities proposed, and how their design evolution responds to their operational need and their individual site contexts, provided in volume 3 of the DAS.

Site Campus

6.6.2 The proposed Site Campus would form part of the Wylfa Newydd DCO Project. It would provide Temporary Worker Accommodation on land to the north-east of the WNDA, to be delivered in phases. The Site Campus would only be present during construction of the Power Station. When it is no longer required the Site Campus buildings would be removed and the area returned to its pre-developed condition. Public footpaths and access to Fisherman's Car Park would be reinstated after decommissioning.

6.6.3 The Site Campus would consist of:

- accommodation for up to 4,000 workers in 'campus' style modular form (providing an independent living space for each worker);
- amenity building including:
 - cafeteria;

- café;
- reception area;
- gym;
- bar;
- shop;
- first aid facilities; and
- other social space.
- Site Campus Medical Centre;
- outdoor recreation including two multi-use games areas, outdoor seating and informal public spaces;
- Site Campus access road (from the site to the A5025);
- bus set down and parking area;
- disabled parking spaces (staff only) and parking for light vans/minibuses;
- temporary parking for workers;
- internal access ways for pedestrians, service vehicles and emergency vehicles;
- 2.4m high Paladin type fence around the perimeter;
- soft landscaping works; and
- secondary substation, compactor, bin and bike stores.

6.6.4 The total of up to 4,000 bed spaces would be provided over a total of up to 25 buildings between four and seven storeys in height. Each building would provide between 128 and 224 bed spaces.

6.6.5 The Site Campus Medical Centre, which would be similar in concept to a GP surgery, would be accessible to all construction workers (including sub-contractors), whether they live in the Site Campus, reside locally or travel to the WNDA from the wider area.

6.6.6 Additional services associated with the worker accommodation, though not provided on the Site Campus itself, would include the following:

- associated parking would be provided for up to 800 spaces located to the south of the Site Campus, adjacent to the access road (though during the initial phases, 400 spaces would be provided on the Site Campus to the east of the amenity building); and
- extension to the existing Welsh Water sewage treatment plant (this is not part of the Wylfa Newydd Project as it is being undertaken by the local water utility).

Park and Ride facility

6.6.7 The proposed Park and Ride facility at Dalar Hir forms part of the Wylfa Newydd DCO Project to which this application for development consent

relates. The site is located immediately to the north-east of Junction 4 on the A55 and approximately 18.5km from the WNDA.

6.6.8 The Park and Ride facility consists of:

- secure parking for up to 1,900 cars which includes 10 disabled car spaces, as well as spaces for 55 minibuses and 35 motorbikes;
- a bus waiting pick up and drop off zone for up to 15 buses with additional parking for eight buses;
- a bus transport facility building to provide:
 - transport information;
 - a waiting area;
 - welfare facilities;
 - a bus driver canteen; and
 - management office facilities;
- access via a new roundabout located near the existing A55-A5 junction (Junction 4);
- landscaping and screen planting for visual mitigation;
- other ancillary development, including a cycle store for up to 25 bicycles, signage, fencing, lighting, CCTV and utilities; and
- a crossing at the east end of the site.

6.6.9 This Park and Ride facility would be used during the construction phase of the Power Station to transport and manage the flow of some of the construction workforce to and from the WNDA, in order to reduce the number of vehicles being driven to the WNDA.

6.6.10 Following construction of the Power Station, the Park and Ride facility would be removed and the land restored to its existing use (agricultural land). The existing hedge line and proposed new hedge line to the west of the site, along with tree and shrub planting, using native species, on the southern boundary would be retained as a legacy benefit.

A5025 Off-line Highways Improvements

6.6.11 The main route to the Wylfa Newydd Development Area from the mainland and the port of Holyhead is along the A55, the A5 and the A5025. Studies undertaken by Horizon in 2010–2011 (summarised in chapter G2 alternatives and design evolution, Application Reference Number: 6.7.2) identified that the stretch of the A5025 between the community of Valley and the Existing Power Station access road has physical and operational constraints in relation to its width, alignment, overtaking opportunities and surfacing condition.

6.6.12 A variety of highway improvement works along the A5025 would be needed to address existing safety and environmental concerns and mitigate the impacts of the construction and operation of the Wylfa Newydd Project.

6.6.13 The proposed A5025 Off-line Highway Improvements form an important component of the Wylfa Newydd Project, and are required as part of the wider ITTS (appendix F of appendix C2-4 DCO Transport Assessment, Application Reference Number: 6.3.20). The A5025 Off-line Highway Improvements involve the construction of new sections of road such as bypasses and road realignment works.

6.6.14 The A5025 Off-line Highway Improvements seek to address potential environmental effects on communities, including noise from increased road traffic and severance.

6.6.15 The A5025 between Valley and the Power Station Site is approximately 16.5km in length and can be broadly described geographically in eight sections. Sections 1, 3, 5 and 7 relate to the A5025 Off-line Highway Improvements, as described below. Please refer to Figure A2-4 (Application Reference Number: 6.1.10) for the location of the A5025 Off-line Highway Improvements.

6.6.16 The A5025 Off-line Highway Improvements can be described as follows:

- section 1 – A5 east of Valley Junction to the north of Valley Junction – proposed four-arm roundabout and bypass connecting the A5 with the A5025 to the east of the existing A5/A5025 signalised junction;
- section 3 – north of Llanyngchedl to the north of Llanfachraeth – proposed 2km highway to provide a bypass to the east of Llanfachraeth village;
- section 5 – south of Llanfaethlu to the north of Llanfaethlu – proposed bypass to provide a straighter section of road, where there are two existing substandard bends near the Black Lion pub and through Llanfaethlu;
- section 7 – north of Llanrhuddlad to the north of Cefn Coch – proposed bypass to eliminate two existing substandard bends in Llanrhwydrus; and
- new Power Station Access Road junction - proposed roundabout junction linking the proposed Power Station Access Road to the existing A5025 public highway.

Logistics Centre

6.6.17 The proposed Logistics Centre at Parc Cybi forms part of the Wylfa Newydd DCO Project to which this application for development consent relates. The site is located in the north-west of the wider Parc Cybi employment area. It is located approximately 19km from the WNDA. The Logistics Centre would consist of:

- an office/welfare building;
- security kiosk;
- driver instructor point;
- covered inspection bay;

- heavy goods vehicle scanner; and
- parking zones (100 parking bays for heavy, medium and light goods vehicles, and 12 staff parking bays (plus one disabled space)).

6.6.18 The Logistics Centre would be used during the construction phase of the Power Station to control the flow of traffic along the A5025, in order to prevent vehicles leaving in convoy and to avoid sensitive times of the day (such as peak work rush hour and school run).

6.6.19 Following construction of the Power Station, the site would be available for another use subject to necessary consents being secured.

7 Post Operational use

7.1 Introduction

7.1.1 Horizon's visions and objectives (as set out in chapter 2) include an aim to *"build on the legacy of the Existing Power Station, and help to create a positive legacy for Anglesey; thinking about each significant investment and how it can create a positive future for the area, where appropriate"*.

7.1.2 The Wylfa Newydd Project would represent a significant investment and play a vital role in meeting the challenge of maintaining secure energy supplies in the UK. It would also deliver long term employment growth, attracting and developing a skilled workforce equipped to support future projects and initiatives throughout north Wales.

7.1.3 It is also important to identify how each component of the Wylfa Newydd DCO Project would be managed and used following their operational stage, whilst recognising that the DCO itself cannot give approval for post operational uses. The timescales for these post operational uses of the different components would be very different. The Power Station itself would have an approximately 60-year lifespan. The buildings and facilities in the wider WNDA would have served their purpose after the construction period.

7.1.4 This is also true of the Associated Development sites, meaning that strategies are required to deliver a lasting legacy and/or restore the sites to an appropriate state.

7.1.5 This chapter provides an introduction to the post operational proposals, with more detail provided in volumes 2 and 3 of the DAS (Application Document References: 8.2.2 and 8.2.3)

7.2 Wylfa Newydd Development Area

Power Station Site

7.2.1 The Power Station would be decommissioned following approximately 60 years of operation and the approach would be consulted upon in accordance with the Nuclear Reactors (EIA for Decommissioning) Regulations 1999, as may be amended. To ensure that the specific environmental conditions following operation are known, the consultation process would begin in the final few years before operations cease. Within this timeframe, decommissioning would be undertaken as early as possible.

7.2.2 Horizon has taken the following criteria into account during the design refinement for the Power Station as a means of facilitating the future decommissioning stage:

- careful selection of materials to minimise the potential of them becoming radioactive through activation;
- use of containment structures (barriers and filters) that minimise contamination of equipment;

- tank and pipework design that minimise transport and deposition of contamination;
- using surface materials that are easy to clean; and
- using modular plant components that are easy to disassemble and allowing sufficient handling or lifting equipment and access routes to reduce decommissioning time and dose to workers.

7.2.3 Horizon has developed a strategy for the decommissioning of the Power Station. This proposes prompt starting of decommissioning with a target timeframe for completion of main decommissioning activities of 20 years following the end of power generation, which would be consistent with traditional de-construction/demolition works.

7.2.4 Further details are provided in volume 2 of the DAS.

7.3 Off-Site Power Station Facilities

7.3.1 The Off-Site Power Station Facilities would remain in operation for the life of the Power Station.

7.3.2 The post operation strategy for the site would be to reinstate the greenfield part of the site to its current use (predominantly open farmland) reinforcing the objectives set out in the Ynys Môn Landscape Strategy and in the LANDMAP landscape character classifications.

7.3.3 The proposals would focus on re-establishing the site to its current use incorporating the key environmental assets that have been identified, enhanced and protected throughout the operation of the site. A separate application would be made for this in due course.

7.4 Highways improvements

7.4.1 The A5025 On-line and Off-line Highway Improvements represent permanent and positive legacy benefits of the Wylfa Newydd Project.

7.5 Associated Development

7.5.1 The Associated Development sites are for temporary development. The overall approach to their post operational use is to either return the site to their current state or to deliver some lasting legacy from the development.

Site Campus

7.5.2 The post operational strategy for the Site Campus is to reinstate the site to its current undeveloped state. This would involve restoring the coastal grassland areas, restoring stone walls and landforms and reinstatement of native shrubs.

Logistics Centre

7.5.3 Following construction of the Power Station, the Logistics Centre would be removed and the site would be available for another appropriate employment use, subject to the necessary separate planning consents.

Park and Ride facility

7.5.4 Following construction of the Power Station, the Park and Ride facility and roundabout structure would be removed. The new portion of highway would also be stopped up. The land would be restored to its existing use (agricultural land) with the enhancements that have already been made to help mitigate the impact of the facility.

7.5.5 This would involve an enhanced hedge line and proposed new hedge line to the west of the site, along with the enhanced tree and shrub planting, using native species, on the southern boundary.

7.6 Summary

7.6.1 This chapter has described the headline approach to the post operational stage of the WNDA, Off Site Power Station Facilities and Associated Development sites and ultimately the decommissioning of the Power Station itself (and Off-Site Power Station Facilities).

7.6.2 The approach ensures that all land required for temporary development is restored to an appropriate condition with enhancement where possible. This includes a number of physical legacy benefits, including:

- landscaping proposals and ecological enhancements in the WNDA site and public access;
- retention and diversion of the Wales Coast Path and introduction of new footpaths;
- permanent highways improvements;
- delivery of a serviced employment site at Parc Cybi; and
- landscape reinstatements and enhancements at Dalar Hir and Llanfaethlu.

7.6.3 These benefits would be delivered following the construction period.

7.6.4 The post operation decommissioning process for the Power Station and Off-Site Power Station Facilities has a much longer outlook given the approximately 60-year operation period. The process would be subject to consultation nearer that time, though Horizon is taking account the careful selection of materials, structures and components which would assist this future decommissioning process.

8 Parameters for implementation

8.1 Introduction

8.1.1 NSIPs consented through the DCO process are by their nature, usually large and very complex forms of development. Nuclear power stations have the additional need to comply with important safety and other regulatory requirements. Whilst the Wylfa Newydd DCO Project has been subject to an extensive process of design development and consultation, Horizon will have a continuing need to refine the proposals.

8.1.2 These design changes may be required as a result of the design development process alongside commercial procurement considerations.

8.1.3 Horizon has, in order to cope with these changes, proposed a parameter based approach for the construction and operation of the Power Station, the Off Site Power Station Facilities and Associated Development.

8.1.4 This chapter sets out this, having regard to the relevant guidance and policy, and the key issues to be considered when defining flexibility in the DCO. This sets the parameter based approach in context with other controls (in the control documents or controls identified issues or works) in accordance with which the Wylfa Newydd DCO Project would be brought forward (as set out at section 1.1 of this document).

8.1.5 The two aspects of the DCO application to which the issue of flexibility particularly relates are:

- the EIA process; and
- the draft DCO and the requirements within the order.

8.1.6 This chapter sets out how the level of detail required for a DCO project, the approach proposed, how this has been tested through the EIA process and how the adopted approach has informed the drawings submitted in the DCO.

8.2 Guidance

8.2.1 The EIA for the Wylfa Newydd DCO Project uses a 'Rochdale Envelope' or parameter approach. This approach is established in UK planning case law and guidance.

8.2.2 NPS EN-1 [RD10] recognises (paragraph 4.2.7) that "*in some instances it may not be possible at the time of the application for development consent for all aspects of the proposal to have been settled in precise detail. Where this is the case, the applicant should explain in its application which elements of the proposal have yet to be finalised, and the reasons why this is the case*".

8.2.3 EN-1 continues at 4.2.8 to state that "*where some details are still to be finalised the ES should set out, to the best of the applicant's knowledge, what the maximum extent of the proposed development may be in terms of site and plant specifications, and assess, on that basis, the effects which the project*

could have to ensure that the impacts of the project as it may be constructed have been properly assessed”.

8.2.4 NPS EN-1 (footnote 78) refers to case law (for example Rochdale MBC Ex. Parte C Tew 1999) which provides a legal principle that indicative sketches and layouts cannot provide the basis for determining applications for EIA development. It states that “*the “Rochdale Envelope” is a series of maximum extents of a project for which the significant effects are established. The detailed design of the project can then vary within this ‘envelope’ without rendering the ES inadequate*”.

8.2.5 The Department for Communities and Local Government’s Planning Act 2008: Guidance on the Pre-application Process (March 2015) provides further guidance when considering the level of detail that may be required for a DCO project. Paragraphs 109 – 113 relate to flexibility and the “Rochdale Envelope”.

- *“It is expected that draft orders submitted will generally closely reflect the actual final development. However, there may be times where a degree of flexibility is required...” (Paragraph 110).*
- *“The principles of the Rochdale Envelope are that where there are clear reasons why it would not be possible to define a project fully in the short term (thereby delaying significantly submission of an application) then an applicant should be forwarded a degree of flexibility, within clearly defined and reasonable parameters. These parameters should be no greater than the minimum range required to deliver the project effectively and applicants will have to justify these parameters to the Secretary of State...” (Paragraph 111).*
- *“The use of the Rochdale Envelope approach does not remove the onus on applicants to submit as detailed as possible project proposals in their application and it should certainly not be an excuse for an unnecessary degree of flexibility”. (Paragraph 112).*

8.2.6 This establishes the principle that flexibility is possible and appropriate where it can be justified.

8.2.7 Planning Inspectorate’s Advice Note 9: The ‘Rochdale Envelope’ (April 2012) provides further explanation of how the Rochdale Envelope is used for DCO projects, stating that the application needs to include “*sufficient information to enable ‘the main,’ or the ‘likely significant’ effects on the environment to be assessed...., and the mitigation measures to be described. Any proposed scheme parameters should therefore not be so wide ranging as to represent effectively different schemes*”.

8.3 Proposed approach

8.3.1 Similar to other DCOs of this scale, the draft DCO is based on a ‘parameters approach’ which identifies defined envelopes for the construction of the Wylfa Newydd DCO Project within which future development would be undertaken.

8.3.2 In defining a Rochdale Envelope, a series of parameters of a project (in terms of activities to be undertaken and the spatial and temporal scope of the proposed development) are established to be used for the assessment of significant effects. The maximum extents of these parameters are often termed the 'worst case scenario'. The detailed design and construction methodology of a project can subsequently be modified within this parameter 'envelope' without rendering its EIA inadequate.

8.3.3 Maximum and minimum parameters (such as limits on height and location of buildings) would be set by the DCO requirements in order to keep the development within a defined envelope. The parameters are contained within the following:

- Order Limit Plans: these identify the Order Limits for the development to be authorised
- Works Plans (Application Reference Number: 2.3): these identify the limits of deviation for, and location of each work package (or 'work area').
- Schedule of Works: this outlines the works that could theoretically take place within each works area, as identified on the Works Plans.
- Parameter tables: these identify maximum and minimum building dimensions and where relevant final construction platform levels, dredging depths and volumes.

8.3.4 The maximum building heights shown in the parameters do not include additional height for external components (such as stairs, solar panels etc.).

8.3.5 Some elements of the Wylfa Newydd Project are largely fixed for consenting purposes, while other buildings, structures, works and construction methodology are restricted through application of the parameters. These parameters have been informed by the potential to create adverse environmental effects. For example, for those buildings where the location is sensitive in terms of EIA, e.g. because there is a stack emission on the building, the location has been limited to relatively modest limits of deviation.

8.3.6 In general, more limited parameters are adopted for the Off-Site Power Station Facilitates Site and Associated Development. The approach proposed for each site, having regard to whether detailed design drawings are submitted for approval or not, are set out below.

8.3.7 For each EIA topic, the sensitivity to change within the parameters may vary. For example, variation in the proposed height of a building may alter an effect on visual amenity, but it would not alter land take. Where the identified parameters have a bearing on the assessment of effects, a worst case scenario has been assessed.

8.3.8 In order to identify a worst case scenario, each discipline in the EIA has examined the parameters to identify key determining factors for the assessment and, where required, carried out sensitivity testing in order to support a worst case assessment.

8.4 Power Station Site

- 8.4.1 Horizon has proposed a parameter based approach for the construction and operation of the Power Station. The application is therefore based on bounded parameters rather than a defined design.
- 8.4.2 The parameters proposed for the Power Station Site are sufficiently flexible to accommodate a reasonable level of change. The maximum and minimum parameters (such as limits on height and location of buildings) would be set by the development consent requirements, in order to keep the development within the defined envelope. Therefore, the final design will be within the parameters set in the DCO.
- 8.4.3 Some elements of the Power Station Main Site are largely fixed (for example the location of the nuclear reactors) for consenting purposes. The flexibility associated with other buildings, structures and works is restricted through the application of the parameters. These parameters have been informed by the potential to create adverse environmental effects. Likewise, for those buildings where the location is sensitive in terms of EIA, e.g. because there is a stack on the building, the location has been limited to relatively modest limits of deviation.
- 8.4.4 Environmental Statement Chapter D1 (Application Reference Number: 6.4.1) sets out a description of the works and maximum and minimum proposed parameters for the buildings within the Power Station Site. Volume 2 of the DAS (Application Reference Number: 8.2.2) provides further detail on the broad approach to the different level of flexibility sought for different zones within the Power Station Site.
- 8.4.5 The primary drivers for flexibility at the Power Station Site are to address two key design requirements that cannot be resolved until post DCO submission, which are 'demonstration of As Low As Reasonably Practicable (ALARP)' and 'turbine optionality'. These are explained in Volume 2 of the DAS (Application Reference Number: 8.2.2).
- 8.4.6 In addition, experience from Hinkley Point C nuclear power station is that there would inevitably be some change to the Power Station post GDA. It is sensible therefore to allow for some flexibility now, as long as it enables a robust assessment of likely significant effects, rather than needing to go back and apply for those changes later.

8.5 Off-Site Power Station Facilities

- 8.5.1 Horizon has proposed a parameter based approach for the construction for the Off-Site Power Station Facilities.
- 8.5.2 The parameters for the Off-Site Power Station Facilities parameters have been informed by the potential to create adverse environmental effects. For those buildings where the location is sensitive in terms of EIA, location has been limited to relatively modest limits of deviation.

- 8.5.3 Illustrative plans are submitted to demonstrate how the development could be delivered, in accordance with the parameters, design principles and other control documents.
- 8.5.4 The building dimensions that have been assessed are larger than the dimensions of the parameter approach sought under the requirements in the DCO and therefore, the assessment represents a worst-case scenario.
- 8.5.5 The parameter approach would enable Horizon to submit revised plans for approval in accordance with the parameters, if at a later date, the approved design is no longer feasible or preferred.
- 8.5.6 Environmental Statement Chapter E1 (Application Reference Number: 6.5.1) sets out a description of the works and maximum proposed parameters for the Off-site Power Station Facilities.

8.6 Associated Development

Site Campus

- 8.6.1 Like the Off-site Power Station Facilities, Horizon has proposed a parameter based approach for the construction of the Site Campus, with illustrative plans to demonstrate how the development could be delivered, in accordance with the parameters, design principles and other control documents.
- 8.6.2 These parameters are sufficiently flexible to accommodate a reasonable level of change although the location of the buildings is relatively fixed to mitigate visual effects.
- 8.6.3 Volume 3 of the DAS provides an illustrative example of how the Site Campus could be designed in accordance with the 'building design and landscape principles' and parameters.

Park and Ride facility and Logistics Centre

- 8.6.4 The Park and Ride facility and Logistics Centre sites will have plans submitted for approval as part of the DCO, though also with parameter tables with limited tolerances. Horizon will be required to undertake works in accordance with the detailed plans, unless alternative detailed plans, in accordance with the parameters are submitted and approved by the local planning authority.
- 8.6.5 While the parameters for the Park and Ride facility and Logistics Centre are slightly larger than the dimensions assessed in the EIA, the maximum parameters set by the DCO Requirements would not result in materially different likely significant environmental effects.

A5025 Off-line Highway Improvements

- 8.6.6 Horizon has adopted a hybrid approach to the development of detailed design drawings for the A5025 Off-line Highway Improvements. While the majority of the design drawings for the A5025 Off-line Highways Improvements have been submitted for approval as part of the DCO Application, designs for certain structures within the A5025 Off-line Highway Improvements are

submitted on an illustrative basis and subject to further approvals under the DCO Requirements. This is explained further in volume 3 of the DAS (Application Document Reference: 8.2.3).

9 Conclusions

- 9.1.1 This project-wide DAS provides the introduction for more detailed analysis of the different components of the Wylfa Newydd DCO Project in volumes 2 and 3 of the DAS (Application Document References: 8.2.2 and 8.2.3).
- 9.1.2 This document has set out the guidance and requirements for the DAS. Whilst a DAS is not explicitly required as a document to accompany a DCO application, it represents good practice, with benefits to the applicant, stakeholders and the decision maker. The content and structure of DASs have had regard to the guidance in Wales provided in TAN12 and the DCfW guidance.
- 9.1.3 The project-wide DAS has set out Horizon's vision and objectives for the Wylfa Newydd DCO Project, the relevant policy framework and introduced the physical and socio-economic context for the site.
- 9.1.4 The fundamental policy context is the principle established in the relevant NPSs (NPS-1 and NPS-6), that there is an urgent need for new nuclear power, and that the Wylfa site is a potentially suitable site. The ministerial statement confirms that the Government continues to give its strong in principle support to project proposals at those sites listed in EN-6, including Wylfa.
- 9.1.5 The NPSs also set out the criteria for good design for energy infrastructure, which have been introduced in this document and, alongside relevant national and development plan policies, form the basis for the design and layout of the Power Station and the Associated Development sites. The relevant planning policy framework is set out in more detail in the Planning Statement (Application Reference Number: 8.1).
- 9.1.6 In addition to having regard to the overarching need for the development, and the local site context (for each of the different components) the design of the proposals has undergone extensive consultation with stakeholders, including DCfW. This document has outlined the key changes arising from each consultation stage, which is set out in more detail in the Consultation Report (Application Reference Number: 5.1).
- 9.1.7 The project-wide DAS has provided a summary of the different components of the Wylfa Newydd DCO Project, resulting from the analysis of context and iterative design process. It has also set out the approach to flexibility sought through the DCO application.
- 9.1.8 The document has also outlined the approach to the post operational strategy for each of the Wylfa Newydd DCO Project components.
- 9.1.9 In summary, the project-wide DAS provides an introductory framework for the more detailed design and access analysis in volumes 2 and 3 of the DAS.

10 Reference Table

ID	Reference
RD1	UK Government. 2008. <i>Planning Act 2008</i> . London: UK Government.
RD2	UK Government. 1990. Town and Country Planning Act 1990 (as amended). London: UK Government.
RD3	UK Government. 2017. <i>Wales Act 2017</i> . London: UK Government.
RD4	UK Government. 2009. <i>Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations (2009)</i> . [Online]. [Accessed: 27 February 2018]. Available from: https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2009/08/uksi_20092264_en.pdf
RD5	<i>Town and Country Planning (Development Management Procedure) (Wales) Order 2012 (as amended)</i> . [Online]. [Accessed: 27 February 2018]. Available from: http://www.legislation.gov.uk/wsi/2012/801/made
RD6	Office for Nuclear Regulation. 1999. <i>Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999</i> . [Online]. [Accessed: 27 February 2018]. Available from: http://www.legislation.gov.uk/uksi/1999/2892/pdfs/uksi_19992892_en.pdf
RD7	Design Commission for Wales. 2017. <i>Design and Access Statements in Wales</i> . [Online]. [Accessed: 27 February 2018]. Available from: https://dcfw.org/design-and-access-statements-in-wales-why-what-and-how/
RD8	Welsh Government. 2016b. Technical Advice Note 12: Guidance on Design and Access Statements [Online]. [Accessed: 27 February 2018]. Available from: http://gov.wales/topics/planning/policy/tans/tan12/?lang=en
RD9	UK Government. 2015. <i>Planning Act 2008: Guidance on the Pre-application Process</i> . [Online]. [Accessed: 27 February 2018]. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/418009/150326_Pre-Application_Guidance.pdf
RD10	2011. <i>Overarching National Policy Statement for Energy (EN-1) dated July 2011 (NPS EN-1)</i> . [Online]. [Accessed: 27 February 2018]. Available from: https://www.gov.uk/government/publications/national-policy-statements-for-energy-infrastructure
RD11	2011. <i>National Policy Statement for Nuclear Power Generation (EN-6), Volume 1 dated July 2011 (NPS EN-6)</i> [Online]. [Accessed: 27 February 2018]. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/47859/2009-nps-for-nuclear-volumel.pdf
RD12	The Planning Inspectorate. 2016. <i>Advice Note 6: Preparation and submission of application documents</i> . [Online]. [Accessed: 27 February 2018]. Available from:

ID	Reference
	https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2015/05/Advice-note-6-version-71.pdf
RD13	The Planning Inspectorate. 2015. <i>Advice Note 7: Preliminary Environmental Information, Screening and Scoping</i> . [Online]. [Accessed: 27 February 2018]. Available from: https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2015/03/Advice-note-7v4.pdf
RD14	The Planning Inspectorate. 2012. <i>Advice Note 9: The 'Rochdale Envelope' Preliminary Environmental Information, Screening and Scoping</i> . [Online]. [Accessed: 27 February 2018]. Available from: https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2013/05/Advice-note-9.-Rochdale-envelope-web.pdf
RD15	Welsh Government. 2016b. <i>Planning Policy Wales (Edition 9, November 2016)</i> . [Online]. [Accessed: 27 February 2018]. Available from: http://gov.wales/docs/desh/publications/161117planning-policy-wales-edition-9-en.pdf
RD16	Welsh Government. 2008. <i>The Wales Spatial Plan</i> . [Online]. [Accessed: 27 February 2018]. Available from: http://gov.wales/docs/desh/publications/130701wales-spatial-plan-2008-update-en.pdf
RD17	Welsh Government. 2009. <i>Technical Advice Note 5: Nature Conservation and Planning</i> . [Online]. [Accessed: 27 February 2018]. Available at: http://gov.wales/docs/desh/policy/100730tan5en.pdf
RD18	Welsh Government, 1997. <i>Technical Advice Note 11: Noise</i> . [Online]. [Accessed: 27 February 2018]. Available from: http://gov.wales/topics/planning/policy/tans/tan11/?lang=en
RD19	Welsh Government. 2004. <i>Technical Advice Note 15: Development and Flood Risk</i> [Online]. [Accessed: 27 February 2018]. Available from: http://gov.wales/docs/desh/publications/040701tan15en.pdf
RD20	Welsh Government. 2007. <i>Technical Advice Note 18: Transport</i> [Online]. [Accessed: 27 February 2018]. Available from: http://gov.wales/docs/desh/publications/070301tan18en.pdf
RD21	Welsh Government. 2013. <i>Technical Advice Note 20: Planning and the Welsh Language</i> [Online]. [Accessed: 27 February 2018]. Available at: http://gov.wales/docs/desh/publications/131213technical-advice-note-20-planning-and-the-welsh-language-en.pdf
RD22	Welsh Government. 2014. <i>Technical Advice Note 21: Waste</i> [Online]. [Accessed: 27 February 2018]. Available from: http://gov.wales/docs/desh/publications/170223technical-advice-note-21-en.pdf

ID	Reference
RD23	Welsh Government. 2010. <i>Technical Advice Note 22: Planning for Sustainable Buildings</i> [Online]. [Accessed: 27 February 2018]. Available from: http://gov.wales/topics/planning/policy/tans/tan12/?lang=en
RD24	IACC and Gwynedd Council. 2017. <i>Joint Local Development Plan</i> . [Online]. [Accessed: 27 February 2018]. Available from: http://www.anglesey.gov.uk/planning-and-waste/planning-policy/joint-local-development-plan-anglesey-and-gwynedd/
RD25	IACC, 2014. <i>New Nuclear Build at Wylfa: Supplementary Planning Guidance</i> . [Online]. [Accessed: 27 February 2018]. Available from: http://www.anglesey.gov.uk/Journals/2014/08/11/q/k/h/Wylfa-NNB-SPG-Adopted-July-2014.pdf
RD26	IACC, 2008. <i>Parking Standards: Supplementary Planning Guidance</i> . [Online]. [Accessed: 27 February 2018]. Available from: http://www.anglesey.gov.uk/Journals/public/attachments/78/SPG_PARKING_ADOPTED.pdf
RD27	Office for National Statistics. 2017. <i>2011 Census: Quick Statistics</i> . [Online]. [Accessed: 19 March 2017]. Available from: http://www.neighbourhood.statistics.gov.uk/dissemination/LeadTableView.do?a=7&b=6275328&c=anglesey&d=13&e=61&g=6488680&i=1001x1003x1032x1004&o=362&m=0&r=1&s=1489766645904&enc=1&dsFamilyId=2499 .
RD28	Nomis. 2013. <i>2011 Census Data for England and Wales</i> . [Online]. [Accessed: 28 March 2017]. Available from: https://www.Nomisweb.co.uk/census/2011 .
RD29	Department for Business, Energy and Industrial Strategy <i>Consultation on the Siting Criteria and Process for the new NPS for Nuclear Power with single reactor capacity over 1 gigawatt beyond 2025</i> [Online] [Accessed: 26 January 2018] Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/666057/061217_FINAL_NPS_Siting_Consultation_Document-1.pdf
RD30	Department for Business, Energy and Industrial Strategy <i>Statement on Energy Infrastructure: Written Statement (7 December 2017)</i> [Online]. Available from: http://www.parliament.uk/business/publications/written-questions-answers-statements/written-statement/Lords/2017-12-07/HLWS316/

[This page is intentionally blank]