



## Wylfa Newydd Project

### 8.23 Community Impact Report

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## Executive summary

The Wylfa Newydd Project would be one of the largest construction projects in the UK, for a Power Station providing low carbon power to around five and a half million homes.

The effects from the Wylfa Newydd Project are assessed in a series of documents (including an Environmental Statement (ES)) submitted to the Planning Inspectorate as part of the Development Consent Order (DCO) application. The purpose of this Community Impact Report (CIR) is to highlight where these effects are likely to impact local communities in different areas.

## The Wylfa Newydd Project

Horizon is proposing to construct and operate the Wylfa Newydd Project, which comprises the Wylfa Newydd DCO Project, the Licensable Marine Activities and the Enabling Works. Each of these elements is described further below. 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 (see below) will be consented under both the DCO and the Marine Licence.

### Wylfa Newydd DCO Project

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

The following terms are used when describing the geographical areas related to the Wylfa Newydd DCO Project and the Licensable Marine Activities:

- 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).

### **Licensable Marine Activities**

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

## Enabling Works

The Enabling Works comprise the Site Preparation and Clearance Proposals (SPC Proposals) and the A5025 On-line Highway Improvements.

Horizon has submitted applications for planning permission for the Enabling Works under the Town and Country Planning Act 1990 to the Isle of Anglesey County Council (IACC).

In order to maintain flexibility in the consenting process for the Wylfa Newydd DCO Project, the SPC Proposals have also been included in the DCO application. The A5025 On-line Highway Improvements are not part of the DCO application.

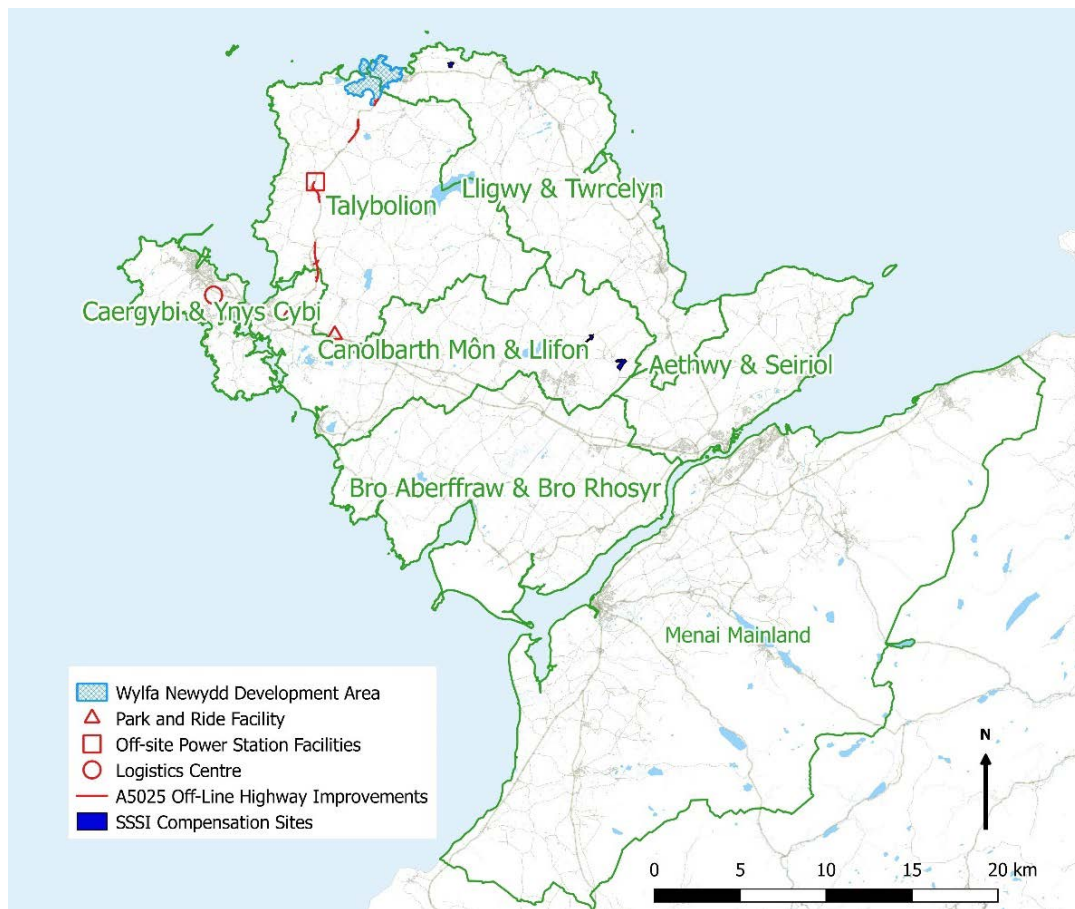
## Study areas

This Report considers effects within six areas that cover the whole of the Isle of Anglesey (which are the Well-being Assessment Areas identified by the Anglesey Public Services Board), as well as a seventh area in mainland Wales, shown in the figure below.

The areas are:

- Lligwy & Twrcelyn (of which Twrcelyn is closest to the WNDA;
- Talybolion;
- Canolbarth Môn and Llifon;
- Caergybi & Ynys Cybi;
- Bro Aberffraw and Bro Rhosyr;
- Aethwy & Seiriol; and
- Menai Mainland.

**Figure E-1: Study areas**



## Context and approach

The scope of this report reflects feedback from consultation and input from the Isle of Anglesey County Council (IACC).

The Wylfa Newydd Project has been through three stages of Pre-Application Consultation (PAC1-3). Input has been received from a wide range of individuals, organisations and statutory consultees, including IACC, the North Anglesey Partnership of Councils, the Destination Anglesey Partnership and many other stakeholders.

This Report is not itself an assessment of effects, but rather draws on the assessments undertaken in the DCO application documents, including the ES, Health Impact Assessment (HIA) (Application Document Reference 8.19), Equalities Impact Assessment (EqIA) (Application Document Reference 8.22) and Welsh Language Impact Assessment (WLIA) (Application Document Reference 8.21). Those documents collectively consider the full range of potential effects of the Wylfa Newydd Project.

This Report, however, is not intended to be a full summary of the ES and the rest of the DCO application documents. It focuses only on significant effects (as defined by the Environmental Impact Assessment (EIA) and other assessments) as they relate to local communities in each area.

This Report has separate chapters for the seven study areas. Each sets out:

- a description of the area covered;
- what development (if any) will directly occur there;
- a baseline summary of the area; and
- a summary of the impacts in each area as a result of the Wylfa Newydd Project.

These effects are set out according to broad topics (such as socio-economic or transport). They cover project-wide effects, such as traffic or demand for accommodation, and site-specific effects such as visual impacts or noise.

### Study areas and project effects

Area	Project components	Impact topics
Lligwy and Twrcelyn (including Cemaes & Tregele)	WNSA (part, including Site Campus) Ecology Compensation Site (Tŷ Du)	Population and socio-economics (including Tourism); Transport; Noise and Vibration; Air Quality; Landscape and Visual Impact; Public Access and Recreation; Cultural Heritage
Talybolion	WNSA (part) A5025 Off-line Highway Improvements (part) Off-Site Power Station Facilities Park & Ride facility	Population and socio-economics; Transport; Noise and Vibration; Air Quality; Landscape and Visual Impact; Public Access and Recreation; Cultural Heritage
Canolbarth Môn & Llŷon	A5025 Off-line Highway Improvements (part) Ecology Compensation Sites (Cors Gwawr and Cae Canol-dydd)	Population and socio-economics; Transport; Noise and Vibration; Air Quality; Landscape and Visual Impact; Public Access and Recreation
Caergybi & Ynys Cybi	Logistics Centre	Population and socio-economics; Transport; Landscape and Visual Impact; Public Access and Recreation; Cultural Heritage
Bro Aberffraw & Bro Rhosyr	No project components in this area	Population and socio-economics; Transport
Aethwy & Seiriol	No project components in this area	Population and socio-economics; Transport
Menai Mainland	No project components in this area	Population and socio-economics; Transport



## Project-wide socio-economic effects

The Wylfa Newydd Project will involve substantial investment in the local area and create significant short, medium and long-term employment opportunities and economic benefits for Anglesey and north Wales. It will also have significant community legacy benefits, including new local infrastructure.

As well as major temporary employment opportunities during construction, the Power Station will create 850 permanent jobs when operational. The Jobs and Skills Strategy sets out ways to enable more local people to access these jobs.

The purpose of this CIR is to report the principal effects of the Wylfa Newydd Project as they relate to local communities, however some key effects will be project-wide. This is particularly the case for socio-economic effects arising from the accommodation of construction workers. Workers are likely to find accommodation throughout the study areas, but the potential effects – including on demand for accommodation and community facilities – will vary locally.

The Wylfa Newydd Project will require a construction workforce of up to 9,000 workers at peak. Up to 4,000 workers are expected to stay at the Site Campus at the WNDA; up to 3,000 are expected to stay in other temporary accommodation across the study areas; and at least 2,000 are expected to be home-based, living permanently within the Daily Construction Commuting Zone (DCCZ). It is expected that the arrival of construction workers will occur gradually because of the phased nature of construction.

The EIA forecasts the likely distribution of workers across the island and mainland, based on information about the workforce, housing market, and travel distances. This has been used to indicate the potential local distribution of project-wide effects relating to the workforce.

### Summary of workforce distribution results

Area	Home-based workforce	Non-home-based migrant workforce	Site Campus
Anglesey North	521	1,024	4,000
Anglesey South	279	633	-
Anglesey West	456	892	-
Menai Mainland	265	451	-
Wider area	479	-	-
<b>Workforce totals</b>	<b>2,000</b>	<b>3,000</b>	<b>4,000</b>



## Mitigation

The Wylfa Newydd Project includes a wide range of mitigation measures to reduce adverse effects and enhance positive effects. These include:

- elements of the Project itself, including the A5025 Off-line Highway Improvements, Park and Ride facility, Logistics Centre, and the Site Campus;
- additional design measures, such as screening bunds and planting to reduce effects such as noise or visual intrusion;
- direct physical mitigation such as noise insulation of eligible affected properties or reinstatement of footpaths;
- operational measures, such as hours of working or types of machinery to reduce disturbance;
- management measures, for example on recruitment of workers and information on accommodation, including on-going monitoring and liaison with local stakeholders; and
- further mitigation including financial contributions, such as the tourism, skills, housing and community impact funds, agreed through the planning process.

With many forms of mitigation (such as the Housing Fund), it will be important to maintain a flexible approach, to monitor impacts on local communities and receptors, to maintain dialogue with stakeholders and to apply mitigation as it is needed. Therefore, some mitigation will be adapted to circumstances as the Project progresses.

## Summary of community area impacts

This CIR only considers impacts relevant to local communities, and only those impacts assessed as being significant. The brief summary below is not comprehensive, and further detail is given in the remainder of the Report, and in the rest of the DCO documents.

### *Lligwy and Twrcelyn*

A number of impacts are expected to directly affect the Lligwy and Twrcelyn area (particularly Twrcelyn, nearest to the WNDA). These are particularly concentrated around the WNDA and will particularly affect Tregele and Cemaes. Impacts will relate to the effects of construction and operation of the Power Station as well as impacts as a result of workers seeking accommodation in the area.

Of the non-home-based workers, modelling estimates that 160 may live in Amlwch and 261 in Benllech/Llanbedrgoch. The Worker Accommodation Management Service (WAMS) will seek to match accommodation demand to

supply, and monitor the effects. A Housing Fund will provide support for housing in the local area to mitigate localised impacts.

Tregele and Cemaes are closest to the Site Campus, where many workers will live. A range of on-site welfare, leisure, sport and recreational amenities, retail and convenience stores, a bar and medical services aim to avoid or reduce the effects on local communities. A Workforce Management Strategy and Code of Construction Practice (CoCP) are other measures to mitigate or manage effects, including a Community Liaison Group (CLG), and Community Involvement Officers, as well as a dedicated hotline for any issues that arise.

Beneficial effects are likely in the local economy and labour market, while potential effects on the Welsh language are identified as a result of the additional workforce.

Noise and vibration effects are identified for areas near the construction site, including in Tregele and Cemaes, affecting residents, and community buildings including Ysgol Gynradd Cemaes. These effects result from construction activity and traffic on the A5025. Combined effects from impacts such as noise, vibration, visual impact and dust are also identified.

During construction and operation there will be landscape and visual impacts, including on the Isle of Anglesey Area of Outstanding Natural Beauty (AONB), the Wales Coast Path (WCP), Copper Trail and other Public Rights of Way (PRoWs), as well as from Tregele and Cemaes. The setting of St Patrick's Church in Llanbadrig would also be affected during construction.

A number of footpaths and other areas of access around the WNDA will be affected by temporary or permanent closures or diversions.

Chapter 2 gives further details of the effects in the Lligwy and Twrcelyn area.

### ***Talybolion***

The Talybolion area is likely to experience a range of effects as a result of the Wylfa Newydd Project. These would particularly impact communities in the north of the area nearest the WNDA such as Llanfechell. However, effects from Associated Developments will also be present in other areas of the Talybolion area, particularly along the A5025.

As well as direct impacts from construction and operation, there would be impacts as a result of workers seeking accommodation in the area. The WAMS will seek to match accommodation demand to supply, and monitor the effects. A Housing Fund will provide support for housing in the local area to mitigate localised impacts.

Beneficial effects are likely in the local economy and labour market, while potential effects on the Welsh language are identified from the additional workforce.

Road users, particularly on the A5025 would experience increased traffic in some locations, but traffic would be reduced in other locations as a result of A5025 Off-line Highway Improvements.

Noise or vibration effects are identified for some areas as a result of construction activity on the WNDAs, the construction of A5025 Off-line Highway Improvements, or traffic on the A5025 during the construction period. Combined effects from impacts such as noise, vibration, visual impact and dust are also identified.

There will be landscape and visual effects from construction and operation, affecting the WCP, Copper Trail and AONB, as well as occasional visitors to Cestyll Garden, the William Thomas monument at Mynydd y Garn, and the standing stones at Llanfechell. Landscape and visual impacts will also be experienced from properties and landscapes with views of the A5025 Off-line Highway Improvements, the Off-Site Power Station Facilities and the Park and Ride facility (Dalar Hir).

The communities of Llanfechell and Llanfair-yng-Nghornwy will experience a cumulative visual impact from the Wylfa Newydd Project and others including Existing Power Station decommissioning.

A number of footpaths and other areas of access will be affected by temporary or permanent closures or diversions. Heritage assets would be affected by intrusion including Cestyll Garden, the Mill and other buildings at Felin Gafnan, and the Capel Soar standing stones.

Chapter 3 gives further details of the effects in the Talybolion area.

### ***Canolbarth Môn and Llifon***

Some impacts are expected to affect the Canolbarth Môn and Llifon area. These are mainly related to the socio-economic effects of workers, traffic-related effects and effects of the construction of the A5025 Off-line Highway Improvements.

Of the non-home-based workers, modelling estimates that 60 may live in Llangefni. The WAMS will seek to match accommodation demand to supply, and monitor the effects.

Beneficial effects are likely in the local economy and labour market, while potential effects on the Welsh language are identified from the additional workforce.

During construction some sections of the A5, A5025 and A5114 will experience additional traffic. There will be increased noise in some areas from traffic or from construction of the A5025 Off-line Highway Improvements, but on completion of these some areas will experience reduced traffic noise.

The A5025 Off-line Highway Improvements will also create some visual intrusion during construction/operation from some parts of Valley. Some

residential properties may experience a combined effect from visual impacts, noise, vibration and dust.

Chapter 4 gives further details of the effects in the Canolbarth Môn and Llifon area.

### ***Caergybi and Ynys Cybi***

The Caergybi and Ynys Cybi area will experience some direct impacts related to the construction and operation of the Logistics Centre at Parc Cybi and to construction workers seeking accommodation in the area.

Of the non-home-based workers, modelling estimates that 314 may live in Holyhead. The WAMS will seek to match accommodation demand to supply, and monitor the effects.

Beneficial effects are likely in the local economy and labour market, while potential effects on the Welsh language are identified from the additional workforce.

During construction/operation/decommissioning of the Logistics Centre at Parc Cybi, some residences in Kingsland may experience cumulative/combined effects of traffic/construction noise and impacts on views.

The construction and operation of the Logistics Centre may also have landscape, amenity, access or combined effects, including in the AONB, at the Trefignath burial chamber and Ty Mawr standing stone, and from some roads, footpaths and the Lôn Trefignath cycle path.

Chapter 5 gives further details of the effects in the Caergybi and Ynys Cybi area.

### ***Bro Aberffraw and Bro Rhosyr***

The Bro Aberffraw and Bro Rhosyr area is unlikely to experience many impacts, with no development occurring within the area. Those impacts that will occur mainly relate to transport and to the socio-economic effects of workers seeking accommodation in the area.

The WAMS will seek to match accommodation demand to supply, and monitor the effects.

Beneficial effects are likely in the local economy and labour market, while potential effects on the Welsh language are identified from the additional workforce.

Users of the A5114 may experience additional traffic during the construction period.

Chapter 6 gives further details of the effects in the Bro Aberffraw and Bro Rhosyr area.

### ***Aethwy and Seiriol***

The Aethwy and Seiriol area will primarily be affected by impacts related to construction workers seeking accommodation, such as the potential effects on the Welsh Language.

Of the non-home-based workers, modelling estimates that 96 may live in Menai Bridge & Llanfairpwllgwyngyll, while 34 may live in Beaumaris. The WAMS will seek to match accommodation demand to supply, and monitor the effects.

Beneficial effects are likely in the local economy and labour market.

Chapter 7 gives further details of the effects in the Aethwy and Seiriol area.

### ***Menai Mainland***

The Menai Mainland area is likely to host some additional construction workers. Furthermore, construction-related traffic will travel through the area via the A55 and over the Britannia Bridge. However, it is assessed as unlikely that any significant impacts will result, other than a moderate beneficial impact on the local economy in North Wales.

Of the non-home-based workers at peak construction, modelling estimates that 174 may live in Bangor, 67 in Caernarfon/Bontnewydd, 26 in Bethesda, 18 in Bethel/Llanrug, eight in Deiniolen and three in Llandygai. The WAMS will seek to match accommodation demand to supply, and monitor the effects.

Chapter 8 gives further details of the effects in the Menai Mainland area.

## Crynodeb gweithredol (Welsh language)

Byddai Prosiect Wylfa Newydd yn un o'r prosiectau adeiladu mwyaf yn y DU, ar gyfer Gorsaf Bŵer a fyddai'n darparu pŵer carbon isel i oddeutu pum miliwn a hanner o gartrefi.

Mae effeithiau Prosiect Wylfa Newydd yn cael eu hasesu mewn cyfres o ddogfennau (gan gynnwys Datganiad Amgylcheddol) a gyflwynir i'r Arolygiaeth Gynllunio fel rhan o'r cais am Orchymyn Cydsyniad Datblygu (DCO). Diben yr Adroddiad o'r Effaith ar Gymunedau hwn ydy amlygu lle bydd yr effeithiau hyn yn debyg o effeithio ar gymunedau lleol mewn ardaloedd gwahanol.

## Prosiect Wylfa Newydd

Mae Horizon yn cynnig adeiladu a gweithredu Prosiect Wylfa Newydd, sy'n cynnwys Prosiect DCO Wylfa Newydd, y Gweithgareddau Morol mae angen eu Trwyddedu a'r Gwaith Galluogi. Mae'r holl elfennau hyn yn cael eu disgrifio isod. Bydd Prosiect DCO Wylfa Newydd yn cael cydsyniad o dan DCO a bydd y Gweithgareddau Morol mae angen eu Trwyddedu yn cael cydsyniad o dan Drwydded Forol. Mae rhywfaint o orgyffwrdd rhwng y naill a'r llall; bydd y Gwaith Morol (gweler isod) yn cael cydsyniad o dan y DCO a'r Drwydded Forol.

## Prosiect DCO Wylfa Newydd

Mae Prosiect DCO Wylfa Newydd yn cynnwys y rhannau hynny o Brosiect Wylfa Newydd a fydd yn cael cydsyniad drwy DCO, sef:

### Y Prosiect Seilwaith o Arwyddocâd Cenedlaethol

- Yr Orsaf Bŵer: gorsaf bŵer niwclear newydd arfaethedig yn Wylfa, gan gynnwys dau Adweithydd Dŵr Berwedig Uwch y DU, y System Dŵr Oeri, cyfleusterau, adeiladau, strwythurau ac offer cefnogol, adeiladau i storio tanwydd sydd wedi cael ei ddefnyddio a gwastraff ymbelydrol a'r Cysylltiad â'r Grid;
- datblygiadau eraill ar y safle gan gynnwys: gwaith tirweddu a phlannu, draeniau, systemau rheoli dŵr wyneb, gwaith mynediad i'r cyhoedd gan gynnwys cau a dargyfeirio hawliau tramwy cyhoeddus dros dro ac yn barhaol, Ffordd Fynediad newydd i'r Orsaf Bŵer a ffyrdd mewnol y safle, meysydd parcio, gwaith a gweithgareddau adeiladu gan gynnwys compowndiau adeiladu ac ardaloedd parcio dros dro, ardaloedd gosod, ardaloedd gweithio a gwaith a strwythurau dros dro, ardal dros dro i wyllo'r gwaith adeiladu, dargyfeirio cyfleustodau, ffens y ffin a ffensys adeiladu a chysylltiadau trydan;
- Gwaith Morol sy'n cynnwys:
  - Gwaith Morol Parhaol: y System Dŵr Oeri, y Cyfleuster Dadlwytho Morol, strwythurau morglawdd, gwaith i ddiogelu'r lan, mannau gollwng draeniau dŵr wyneb, man gollwng carthffrwd dŵr gwastraff (a

draeniau cysylltiedig dŵr wyneb a charthffrwd dŵr gwastraff i'r môr), system achub a dychwelyd pysgod, system atal pysgod, cymhorthion mordwyo a Charthu;

- Gwaith Morol Dros Dro: argaeau coffr dros dro, ramp mynediad dros dro, cymhorthion mordwyo dros dro, mannau gollwng dros dro ac angorfa dros dro i gychod camlas;
- Cyfleusterau Oddi ar Safle'r Orsaf Bŵer: sy'n cynnwys y Ganolfan Rheoli Argyfwng Amgen, y Labordy Arolygon Amgylcheddol a'r Garej Offer Argyfwng Symudol;

### **Datblygiadau Cysylltiedig**

- Campws y Safle yn Ardal Datblygu Wylfa Newydd;
- cyfleuster Parcio a Theithio dros dro yn Dalar Hir ar gyfer gweithwyr adeiladu (Parcio a Theithio);
- Canolfan Logisteg dros dro ym Mharc Cybi (Canolfan Logisteg);
- y Newidiadau i Briffordd yr A5025;
- Gwaith i greu a gwella cynefinoedd gwlyptir i wneud iawn am unrhyw effeithiau posibl ar Safle o Ddiddordeb Gwyddonol Arbennig (SoDdGA) Tre'r Gof yn y safleoedd canlynol:
  - Tŷ Du;
  - Cors Gwawr;
  - Cae Canol-dydd

Mae'r termau canlynol yn cael eu defnyddio wrth ddisgrifio'r ardaloedd daearyddol sy'n gysylltiedig â Phrosiect DCO Wylfa Newydd a'r Gweithgareddau Morol mae angen eu Trwyddedu:

- Safle'r Orsaf Bŵer – yr ardaloedd dangosol o dir a môr lle byddai'r rhan fwyaf o'r Orsaf Bŵer barhaol, Gwaith Morol a datblygiadau eraill ar y safle; ac
- Ardal Datblygu Wylfa Newydd – yr ardaloedd dangosol o dir a môr gan gynnwys Safle'r Orsaf Bŵer a'r ardaloedd cyfagos a fyddai'n cael eu defnyddio ar gyfer adeiladu a gweithredu'r Orsaf Bŵer, y Gwaith Morol, Campws y Safle a datblygiadau eraill ar y safle (Datblygiad Ardal Datblygu Wylfa Newydd).

### **Gweithgareddau Morol mae angen eu Trwyddedu**

Mae'r Gweithgareddau Morol mae angen eu Trwyddedu yn cynnwys y Gwaith Morol a gwaredu'r deunyddiau ar ôl y gwaith Carthu yn y Safle Gwaredu.



## **Gwaith Galluogi**

Mae'r Gwaith Galluogi yn cynnwys y Cynigion ar gyfer Paratoi a Chlirio'r Safle a'r Gwelliannau i Briffordd yr A5025.

Mae Horizon wedi cyflwyno ceisiadau am ganiatâd cynllunio ar gyfer y Gwaith Galluogi o dan Ddeddf Cynllunio Gwlad a Thref 1990 i Gyngor Sir Ynys Môn.

Er mwyn cynnal hyblygrwydd yn y broses gydsynio ar gyfer Prosiect DCO Wylfa Newydd, mae'r Cynigion Paratoi a Chlirio'r Safle hefyd wedi cael eu cynnwys yn y cais am DCO. Nid ydy'r Gwelliannau i Briffordd yr A5025 yn rhan o'r cais am DCO.

## **Ardaloedd astudiaeth**

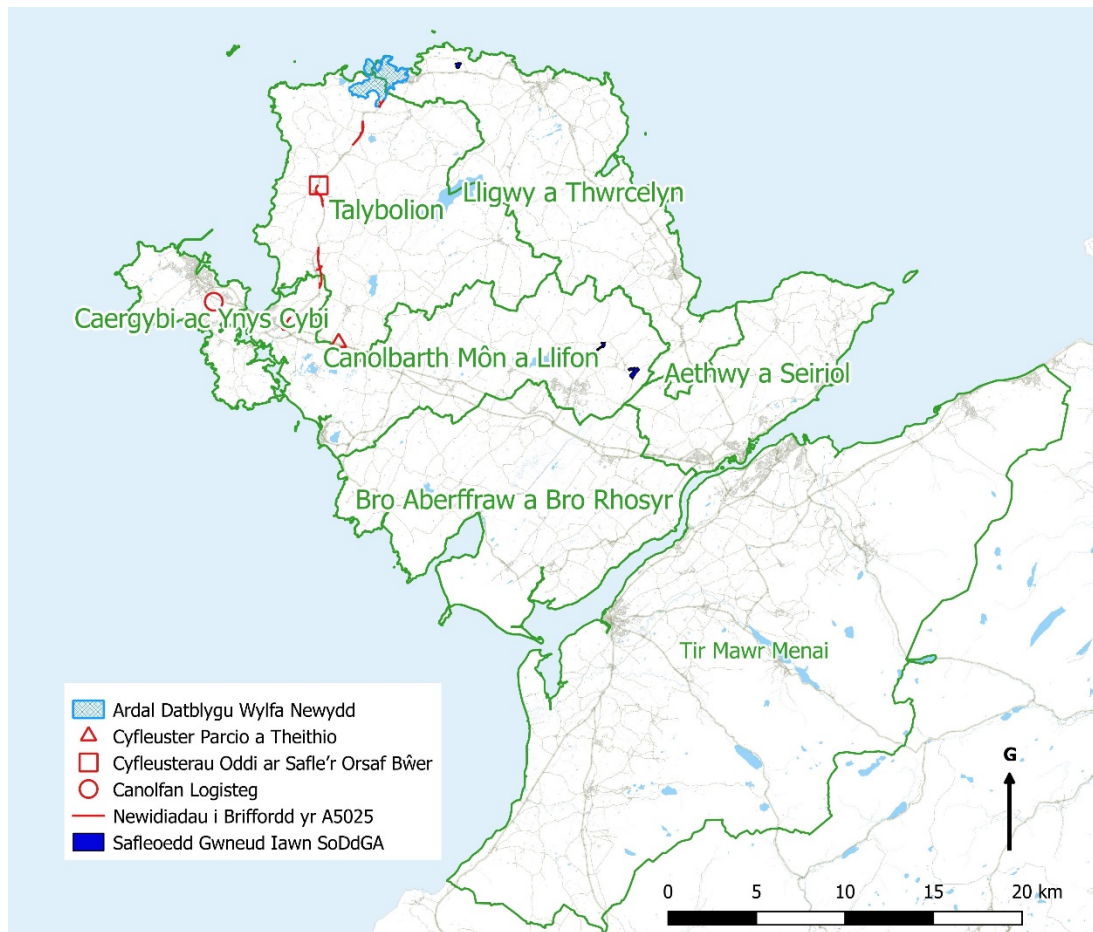
Mae'r Adroddiad hwn yn ystyried yr effeithiau mewn chwe ardal sydd yn cynrychioli Ynys Môn i gyd (sef Ardaloedd yr Asesiad Lles a nodwyd gan Fwrdd Gwasanaethau Cyhoeddus Ynys Môn), yn ogystal â seithfed ardal ar dir mawr Cymru, a ddangosir yn y ffigur isod.

Dyma'r ardaloedd:

- Lligwy a Thwrcelyn (Twrcelyn sydd agosaf at Ardal Datblygu Wylfa Newydd);
- Talybolion;
- Canolbarth Môn a Llifon;
- Caergybi ac Ynys Cybi;
- Bro Aberffraw a Bro Rhosyr;
- Aethwy a Seiriol; a
- Thir Mawr Menai.



**Ffigur E-1: Ardaloedd astudiaeth**



## Y cyd-destun a'r dull gweithredu

Mae cwmpas yr adroddiad hwn yn adlewyrchu adborth o ymgynghori a mewnbwn gan Gyngor Sir Ynys Môn.

Mae Prosiect Wylfa Newydd wedi bod drwy dri cham o Ymgynghori Cyn Ymgeisio (PAC 1-3). Cafwyd mewnbwn gan amrywiaeth eang o unigolion, sefydliadau ac ymgynghoreion statudol, gan gynnwys Cyngor Sir Ynys Môn, Partneriaeth Cyngorau Gogledd Ynys Môn, Partneriaeth Cyrchfan Ynys Môn a nifer o randdeiliaid eraill.

Nid ydy'r Adroddiad hwn ynddo'i hyn yn asesiad o'r effeithiau, ond mae'n defnyddio'r asesiadau sydd wedi cael eu gwneud yn nogfennau'r cais am DCO, gan gynnwys y Datganiad Amgylcheddol, yr Asesiad o'r Effaith ar Iechyd (Cyfeirnod Dogfen y Cais 8.19), Asesiad o'r Effaith ar Gydraddoldeb (Cyfeirnod Dogfen y Cais 8.22) ac Asesiad o'r Effaith ar yr Iaith Gymraeg (Cyfeirnod Dogfen y Cais 8.21). Gyda'i gilydd mae'r dogfennau hynny'n ystyried amrywiaeth lawn effeithiau posibl Prosiect Wylfa Newydd.

Fodd bynnag, nid oes bwriad i'r Adroddiad hwn fod yn grynodedd llawn o'r Datganiad Amgylcheddol a gweddill y dogfennau cais am DCO. Mae'n

canolbwyntio ar effeithiau sylweddol yn unig (fel sy'n cael eu diffinio gan yr Asesiad o'r Effaith Amgylcheddol ac asesiadau eraill) fel y maen nhw'n berthnasol i gymunedau lleol ym mhob ardal.

Mae gan yr Adroddiad hwn benodau ar wahân ar gyfer y saith ardal astudiaeth. Mae pob un yn nodi:

- disgrifiad o'r ardal dan sylw;
- pa ddatblygiad (os o gwbl) fydd yn digwydd yno'n uniongyrchol;
- crynodeb gwaelodlin o'r ardal; a
- crynodeb o'r effeithiau ym mhob ardal o ganlyniad i Brosiect Wylfa Newydd.

Mae'r effeithiau hyn yn cael eu nodi yn ôl pynciau eang (fel elfennau economaidd-gymdeithasol neu drafnidiaeth). Maen nhw'n edrych ar effeithiau prosiect cyfan, fel traffig neu'r galw am lety, a'r effeithiau safle-benodol fel effeithiau gweledol neu sŵn.

#### **Ardaloedd astudiaeth ac effeithiau'r prosiect**

<b>Ardal</b>	<b>Cydrannau'r prosiect</b>	<b>Pynciau effaith</b>
Lligwy a Thwrcelyn (gan gynnwys Cemaes a Thregele)	Ardal Datblygu Wylfa Newydd (rhan, gan gynnwys Campws y Safle) Safle Gwneud lawn Ecolegol (Tŷ Du)	Poblogaeth ac elfennau economaidd-gymdeithasol (gan gynnwys Twristiaeth); Trafnidiaeth; Sŵn a Dirgryndod; Ansawdd yr Aer; Tirwedd ac Effeithiau Gweledol; Mynediad Cyhoeddus a Hamdden; Treftadaeth Ddiwylliannol
Talybolion	Ardal Datblygu Wylfa Newydd (rhan) Newidiadau i Briffordd yr A5025 (rhan) Cyfleusterau Oddi ar Safle'r Orsaf Bŵer Cyfleuster Parcio a Theithio	Poblogaeth ac elfennau economaidd-gymdeithasol; Trafnidiaeth; Sŵn a Dirgryndod; Ansawdd yr Aer; Tirwedd ac Effeithiau Gweledol; Mynediad Cyhoeddus a Hamdden; Treftadaeth Ddiwylliannol
Canolbarth Môn a Llifon	Newidiadau i Briffordd yr A5025 (rhan) Safleoedd Gwneud lawn Ecolegol (Cors Gwawr a Chae Canol-dydd)	Poblogaeth ac elfennau economaidd-gymdeithasol; Trafnidiaeth; Sŵn a Dirgryndod; Ansawdd yr Aer; Tirwedd ac Effeithiau Gweledol; Mynediad Cyhoeddus a Hamdden
Caergybi ac Ynys Cybi	Canolfan Logisteg	Poblogaeth ac elfennau economaidd-gymdeithasol; Trafnidiaeth; Tirwedd ac Effeithiau Gweledol; Mynediad Cyhoeddus a

Ardal	Cydrannau'r prosiect	Pynciau effaith
		Hamdden; Treftadaeth Ddiwylliannol
Bro Aberffraw a Bro Rhosyr	Dim cydrannau prosiect yn yr ardal hon	Poblogaeth ac elfennau economaidd-gymdeithasol; Trafnidiaeth
Aethwy a Seiriol	Dim cydrannau prosiect yn yr ardal hon	Poblogaeth ac elfennau economaidd-gymdeithasol; Trafnidiaeth
Tir Mawr Menai	Dim cydrannau prosiect yn yr ardal hon	Poblogaeth ac elfennau economaidd-gymdeithasol; Trafnidiaeth

## Effeithiau economaidd-gymdeithasol y Prosiect cyfan

Bydd Prosiect Wylfa Newydd yn golygu buddsoddiad sylweddol yn yr ardal leol a bydd yn creu cyfleoedd cyflogaeth sylweddol yn y tymor byr, y tymor canolig a'r tymor hir a manteision economaidd ar gyfer Ynys Môn a gogledd Cymru. Bydd hefyd yn arwain at fanteision cymunedol sylweddol i'r dyfodol, gan gynnwys seilwaith lleol newydd.

Yn ogystal â chyfleoedd cyflogaeth dros dro mawr yn ystod y cam adeiladu, bydd yr Orsaf Bŵer yn creu 850 o swyddi parhaol pan fydd ar waith. Mae'r Strategaeth Swyddi a Sgiliau yn nodi ffyrdd o alluogi rhagor o bobl i gael gafael ar y swyddi hyn.

Diben yr Adroddiad o'r Effaith ar Gymunedau hwn ydy rhoi gwybod am brif effeithiau Prosiect Wylfa Newydd fel y maen nhw'n berthnasol i gymunedau lleol, fodd bynnag bydd rhai o'r effeithiau allweddol yn effeithiau prosiect cyfan. Mae hyn yn arbennig o wir ar gyfer yr effeithiau economaidd-gymdeithasol sy'n deillio o'r llety ar gyfer gweithwyr adeiladu. Mae'r gweithwyr yn debyg o ddod o hyd i lety drwy'r ardaloedd astudiaeth, ond bydd yr effeithiau posibl – gan gynnwys ar y galw am lety a chyfleusterau cymunedol – yn amrywio'n lleol.

Bydd Prosiect Wylfa Newydd yn galw am weithlu adeiladu o hyd at 9,000 o weithwyr yn ystod y cyfnod adeiladu prysuraf. Mae disgwyl i hyd at 4,000 o weithwyr aros yng Nghampws y Safle yn Ardal Datblygu Wylfa Newydd; mae disgwyl i hyd at 3,000 aros mewn llety dros dro arall ar draws yr ardaloedd astudiaeth; ac mae disgwyl i o leiaf 2,000 fod yn byw gartref, gan fyw'n barhaol yn yr Ardal Teithio i'r Gwaith Bob Dydd (Adeiladu). Mae disgwyl y bydd y gweithwyr adeiladu'n cyrraedd yn raddol oherwydd natur raddol y gwaith adeiladu.

Mae'r Asesiad o'r Effaith Amgylcheddol yn rhagweld dosbarthiad tebygol y gweithwyr ar draws yr ynys a'r tir mawr, ar sail gwybodaeth am y gweithlu, y farchnad lafur a phellteroedd teithio. Mae hyn wedi cael ei ddefnyddio i ddynodi dosbarthiad posibl effeithiau'r prosiect cyfan sy'n ymwneud â'r gweithlu.

### Crynodeb o ganlyniadau dosbarthiad y gweithlu

Ardal	Yn byw gartref gweithlu	Gweithlu mudol na fyddant yn byw gartref	Campws y Safle
Gogledd Ynys Môn	521	1,024	4,000
De Ynys Môn	279	633	-
Gorllewin Ynys Môn	456	892	-
Tir Mawr Menai	265	451	-
Ardal ehangach	479	-	-
<b>Cyfanswm y Gweithlu</b>	<b>2,000</b>	<b>3,000</b>	<b>4,000</b>

## Lliniaru

Mae Prosiect Wylfa Newydd yn cynnwys amrywiaeth eang o fesurau lliniaru i leihau'r effeithiau niweidiol a gwella'r effeithiau cadarnhaol. Mae'r rhain yn cynnwys y canlynol:

- elfennau o'r Prosiect ei hun, gan gynnwys y Newidiadau i Briffordd yr A5025, Cyfleuster Parcio a Theithio, Canolfan Logisteg a Champws y Safle;
- mesurau dylunio ychwanegol, fel byndiau sgrinio a phlanhigion i leihau effeithiau fel sŵn neu ymyrraeth weledol;
- lliniaru ffisegol uniongyrchol fel inswleiddio'r eiddo cymwys yr effeithir arnyn nhw rhag sŵn neu adfer llwybrau troed;
- mesurau gweithredol, fel oriau gweithio neu ddefnyddio mathau o beiriannau sy'n achosi llai o aflonyddwch;
- mesurau rheoli, er enghraifft ar recriwtio gweithwyr a gwybodaeth am lety, gan gynnwys gwaith monitro parhaus a chysylltu â rhanddeiliaid lleol; a
- rhagor o fesurau lliniaru gan gynnwys cyfraniadau ariannol, fel y cronfeydd twristiaeth, sgiliau, tai a chymunedol, y cytunir arnyn nhw drwy'r broses cynllunio.

Gyda sawl math o fesurau lliniaru (fel y Gronfa Dai), bydd hi'n bwysig cynnal dull gweithredu hyblyg er mwyn monitro'r effeithiau ar gymunedau a derbynyddion lleol, cynnal y ddeialog â rhanddeiliaid a defnyddio mesurau lliniaru yn ôl yr angen. Felly, byddai rhai mesurau lliniaru'n cael eu haddasu yn ôl yr amgylchiadau wrth i'r Prosiect fynd rhagddo.

## **Crynodeb o'r effeithiau ar ardal y gymuned**

Dydy'r Adroddiad o'r Effaith ar Gymunedau hwn ddim ond yn ystyried effeithiau sy'n berthnasol i gymunedau lleol, a dim ond yr effeithiau hynny yr aseswyd eu bod yn sylweddol. Nid ydy'r crynodeb isod yn gynhwysfawr a rhoddir rhagor o fanylion yng ngweddill yr Adroddiad ac yng ngweddill dogfennau'r DCO.

### ***Lligwy a Thwrcelyn***

Mae disgwyl y bydd nifer o effeithiau'n effeithio'n uniongyrchol ar ardal Lligwy a Thwrcelyn (yn enwedig Twrcelyn, sydd agosaf at Ardal Datblygu Wylfa Newydd). Mae'r rhain gan fwyaf o amgylch Ardal Datblygu Wylfa Newydd a byddant yn effeithio ar Dregele a Chemaes yn benodol. Bydd yr effeithiau'n ymwneud ag effeithiau adeiladu a gweithredu'r Orsaf Bŵer yn ogystal â'r effeithiau oherwydd bod gweithwyr yn chwilio am lety yn yr ardal.

O blith y gweithwyr na fyddant yn byw gartref, mae'r gwaith modelu'n amcangyfrif efallai y bydd 160 yn byw yn Amlwch a 261 ym Menllech/Llanbedrgoch. Bydd y Gwasanaeth Rheoli Llety Gweithwyr yn ceisio cyfateb y galw am lety â'r cyflenwad ac yn monitro'r effeithiau. Bydd Cronfa Dai yn darparu cefnogaeth ar gyfer tai yn yr ardal leol i liniaru'r effeithiau lleol.

Tregele a Chemaes sydd agosaf at Gampws y Safle, lle bydd nifer o weithwyr yn byw. Bydd amrywiaeth o gyfleusterau lles, hamdden, chwaraeon ac adloniant, siopau adwerthu a siopau hwylus, bar a gwasanaethau meddygol ar y safle yn ceisio osgoi neu liniaru'r effeithiau ar gymunedau lleol. Mae Strategaeth Rheoli Gweithlu a Chod Ymarfer Adeiladu yn fesurau eraill i liniaru neu i reoli'r effeithiau, gan gynnwys Grŵp Cyswllt Cymunedol, a Swyddogion Cynnwys y Gymuned, yn ogystal â llinell gymorth arbennig ar gyfer unrhyw faterion a fydd yn codi.

Mae effeithiau manteisiol yn debygol yn yr economi leol a'r farchnad lafur, a nodir effeithiau posibl ar y Gymraeg o ganlyniad i'r gweithlu ychwanegol.

Nodir effeithiau sŵn a dirgryndod ar gyfer yr ardaloedd ger y safle adeiladu, gan gynnwys yn Nhregele a Chemaes, a fyddai'n effeithio ar drigolion ac adeiladau cymunedol gan gynnwys Ysgol Gynradd Cemaes. Mae'r effeithiau hyn yn deillio o weithgareddau adeiladu a thraffig ar yr A5025. Nodir effeithiau cyfun hefyd o effeithiau fel sŵn, dirgryndod, effeithiau gweledol a llwch.

Yn ystod y cam adeiladu a'r cam gweithredu bydd effeithiau gweledol ac effeithiau ar y dirwedd, gan gynnwys ar Ardal o Harddwch Eithriadol Ynys Môn (AHNE), Llwybr Arfordir Cymru, y Trywydd Copr a Hawliau Tramwy Cyhoeddus eraill, yn ogystal ag o Dregele a Chemaes. Byddai effaith ar gyd-destun gweledol Eglwys San Padrig yn Llanbadrig hefyd yn ystod y cam adeiladu.

Bydd nifer o lwybrau troed ac ardaloedd mynediad eraill o amgylch Ardal Datblygu Wylfa Newydd yn cael eu cau neu eu dargyfeirio dros dro neu'n barhaol.

Mae Pennod 2 yn cynnwys rhagor o fanylion am yr effeithiau yn ardal Lligwy a Thwrcelyn.

### ***Talybolion***

Mae'n debyg y bydd ardal Talybolion yn gweld amrywiaeth o effeithiau o ganlyniad i Brosiect Wylfa Newydd. Byddai'r rhain yn effeithio'n benodol ar gymunedau yng ngogledd yr ardal sydd agosaf at Ardal Datblygu Wylfa Newydd fel Llanfechell. Fodd bynnag, bydd effeithiau o'r Datblygiadau Cysylltiedig hefyd i'w gweld mewn ardaloedd eraill yn ardal Talybolion, yn enwedig ar hyd yr A5025.

Yn ogystal â'r effeithiau uniongyrchol o'r adeiladu a'r gweithredu, byddai effeithiau o ganlyniad i weithwyr yn chwilio am lety yn yr ardal. Bydd y Gwasanaeth Rheoli Llety Gweithwyr yn ceisio cyfateb y galw am lety â'r cyflenwad ac yn monitro'r effeithiau. Bydd Cronfa Dai yn darparu cefnogaeth ar gyfer tai yn yr ardal leol i liniaru'r effeithiau lleol.

Mae effeithiau manteisiol yn debygol yn yr economi leol a'r farchnad lafur, a nodir effeithiau posibl ar y Gymraeg o ganlyniad i'r gweithlu ychwanegol.

Byddai defnyddwyr y ffordd, yn enwedig yr A5025, yn gweld mwy o draffig mewn rhai lleoliadau, ond byddai llai o draffig mewn lleoliadau eraill o ganlyniad i'r Newidiadau i Briffordd yr A5025.

Nodir effeithiau sŵn neu ddirgrynod ar gyfer rhai ardaloedd o ganlyniad i weithgareddau adeiladu ar Ardal Datblygu Wylfa Newydd, adeiladu'r Newidiadau i Briffordd yr A5025, neu draffig ar yr A5025 yn ystod y cyfnod adeiladu. Nodir effeithiau cyfun hefyd o effeithiau fel sŵn, dirgryndod, effeithiau gweledol a llwch.

Bydd effeithiau gweledol ac ar y dirwedd oherwydd yr adeiladu a'r gweithredu, gan effeithio ar Lwybr Arfordir Cymru, y Trywydd Copr a'r AHNE yn ogystal ag ymwelwyr achlysurol â Gerddi Cestyll, cofeb William Thomas ar Fynydd y Garn, a'r meini hirion yn Llanfechell. Bydd effeithiau gweledol ac effeithiau ar y dirwedd hefyd i'w gweld o eiddo a thirweddau sydd â golygfeydd o'r Newidiadau i Briffordd yr A5025, y Cyfleusterau Oddi ar Safle'r Orsaf Bŵer a'r Cyfleuster Parcio a Theithio (Dalar Hir).

Bydd cymunedau Llanfechell a Llanfair-yng-Nghornwy yn sylwi ar effaith weledol gronnus oherwydd Prosiect Wylfa Newydd a phrosiectau eraill gan gynnwys datgomisiynu'r Orsaf Bŵer Bresennol.

Bydd nifer o lwybrau troed ac ardaloedd mynediad eraill yn cael eu cau neu eu dargyfeirio dros dro neu'n barhaol. Byddai ymyrraeth yn effeithio ar asedau treftadaeth gan gynnwys Gerddi Cestyll, y Felin ac adeiladau eraill yn Felin Gafnan, a meini hirion Capel Soar.

Mae Pennod 3 yn cynnwys rhagor o fanylion am yr effeithiau yn ardal Talybolion.



### ***Canolbarth Môn a Llifon***

Mae disgwyl i rai effeithiau effeithio ar ardal Canolbarth Môn a Llifon. Mae'r rhain yn ymwneud yn bennaf ag effeithiau economaidd-gymdeithasol gweithwyr, effeithiau traffig ac effeithiau adeiladu'r Newidiadau i Briffordd yr A5025.

O blith y gweithwyr na fyddant yn byw gartref, mae'r gwaith modelu'n amcangyfrif efallai y bydd 60 yn byw yn Llangefni. Bydd y Gwasanaeth Rheoli Llety Gweithwyr yn ceisio cyfateb y galw am lety â'r cyflenwad ac yn monitro'r effeithiau.

Mae effeithiau manteisiol yn debygol yn yr economi leol a'r farchnad lafur, a nodir effeithiau posibl ar y Gymraeg o ganlyniad i'r gweithlu ychwanegol.

Yn ystod y gwaith adeiladu bydd rhai adrannau o'r A5, yr A5025 a'r A5114 yn gweld traffig ychwanegol. Bydd mwy o sŵn mewn rhai ardaloedd oherwydd y traffig neu oherwydd y gwaith o adeiladu'r Newidiadau i Briffordd yr A5025, ond ar ôl gorffen y gwaith yma bydd rhai ardaloedd yn sylwi ar lai o sŵn traffig.

Bydd y Newidiadau i Briffordd yr A5025 hefyd yn creu rhywfaint o ymyrraeth weledol yn ystod y cam adeiladu/gweithredu o rai rhannau o'r Fali. Efallai y bydd rhai eiddo preswyl yn sylwi ar effaith gyfun oherwydd effeithiau gweledol, sŵn, dirgryndod a llwch.

Mae Pennod 4 yn cynnwys rhagor o fanylion am yr effeithiau yn ardal Canolbarth Môn a Llifon.

### ***Caergybi ac Ynys Cybi***

Bydd ardal Caergybi ac Ynys Cybi yn gweld rhai effeithiau uniongyrchol sy'n ymwneud ag adeiladu a gweithredu'r Ganolfan Logisteg ym Mharc Cybi a'r gweithwyr adeiladu a fydd yn chwilio am lety yn yr ardal.

O blith y gweithwyr na fyddant yn byw gartref, mae'r gwaith modelu'n amcangyfrif efallai y bydd 314 yn byw yng Nghaergybi. Bydd y Gwasanaeth Rheoli Llety Gweithwyr yn ceisio cyfateb y galw am lety â'r cyflenwad ac yn monitro'r effeithiau.

Mae effeithiau manteisiol yn debygol yn yr economi leol a'r farchnad lafur, a nodir effeithiau posibl ar y Gymraeg o ganlyniad i'r gweithlu ychwanegol.

Yn ystod y gwaith o adeiladu/gweithredu/datgomisiynu'r Ganolfan Logisteg ym Mharc Cybi, efallai y bydd rhai preswylfeydd yn Kingsland yn sylwi ar effeithiau cronrus/cyfun sŵn traffig/adeiladu ac effeithiau ar olygfeydd.

Efallai bydd y gwaith o adeiladu a gweithredu'r Ganolfan Logisteg hefyd yn effeithio ar dirwedd, amwynder, mynediad neu'n arwain at effeithiau cyfun, gan gynnwys yn yr AHNE, yn siambr gladdu Trefignath a meini hirion Tŷ Mawr, ac o rai ffyrdd, llwybrau troed a llwybr beicio Lôn Trefignath.

Mae Pennod 5 yn cynnwys rhagor o fanylion am yr effeithiau yn ardal Caergybi ac Ynys Cybi.

### ***Bro Aberffraw a Bro Rhosyr***

Mae ardal Bro Aberffraw a Bro Rhosyr yn annhebygol o weld llawer o effeithiau, gan nad oes dim datblygiad yn digwydd yn yr ardal. Bydd yr effeithiau hynny a fydd yn digwydd yn ymwneud yn bennaf ag effeithiau traffig ac effeithiau economaidd-gymdeithasol gweithwyr yn chwilio am lety yn yr ardal.

Bydd y Gwasanaeth Rheoli Llety Gweithwyr yn ceisio cyfateb y galw am lety â'r cyflenwad ac yn monitro'r effeithiau.

Mae effeithiau manteisiol yn debygol yn yr economi leol a'r farchnad lafur, a nodir effeithiau posibl ar y Gymraeg o ganlyniad i'r gweithlu ychwanegol.

Efallai y bydd defnyddwyr yr A5114 yn sylwi ar draffig ychwanegol yn ystod y cyfnod adeiladu.

Mae Pennod 6 yn cynnwys rhagor o fanylion am yr effeithiau yn ardal Bro Aberffraw a Bro Rhosyr.

### ***Aethwy a Seiriol***

Bydd ardal Aethwy a Seiriol yn bennaf yn gweld effeithiau sy'n ymwneud â gweithwyr adeiladu yn chwilio am lety, fel effeithiau posibl ar y Gymraeg.

O blith y gweithwyr na fyddant yn byw gartref, mae'r gwaith modelu'n amcangyfrif y gallai 96 fyw ym Mhorthaethwy a Llanfairpwllgwyngyll, a gallai 34 fyw ym Miwmares. Bydd y Gwasanaeth Rheoli Llety Gweithwyr yn ceisio cyfateb y galw am lety â'r cyflenwad ac yn monitro'r effeithiau.

Mae effeithiau manteisiol yn debygol yn yr economi leol ac i'r farchnad lafur.

Mae Pennod 7 yn cynnwys rhagor o fanylion am yr effeithiau yn ardal Aethwy a Seiriol.

### ***Tir Mawr Menai***

Mae ardal Tir Mawr Menai yn debyg o ddarparu llety ar gyfer rhai gweithwyr adeiladu ychwanegol. Ar ben hynny, bydd traffig sy'n ymwneud â'r gwaith adeiladu yn teithio drwy'r ardal drwy'r A55 a dros Bont Britannia. Fodd bynnag, asesir ei bod hi'n annhebygol y bydd unrhyw effeithiau sylweddol, ac eithrio'r effaith fanteisiol ganolig ar yr economi leol yng ngogledd Cymru.

O blith y gweithwyr adeiladu na fyddant yn byw gartref yn ystod y cyfnod adeiladu prysuraf, mae'r gwaith modelu'n amcangyfrif y gallai 174 fyw ym Mangor, 67 yng Nghaernarfon/Bontnewydd, 26 ym Methesda, 18 ym Methel/Llanrug, wyth yn Neiniolen a thri yn Llandygai. Bydd y Gwasanaeth Rheoli Llety Gweithwyr yn ceisio cyfateb y galw am lety â'r cyflenwad ac yn monitro'r effeithiau.

Mae Pennod 8 yn cynnwys rhagor o fanylion am yr effeithiau yn ardal Tir Mawr Menai.



## 1 Introduction

- 1.1.1 The Wylfa Newydd Project would be one of the largest construction projects in the UK. It will involve the construction of a Power Station on the Isle of Anglesey which will generate up to 3,100 megawatts (MW) of electricity, providing enough secure, low carbon power for around five and a half million homes.
- 1.1.2 As a Nationally Significant Infrastructure Project, the application is made to the Planning Inspectorate after extensive consultation. This is known as a DCO application.
- 1.1.3 There are several parts to the Wylfa Newydd Project, including the WNDA and also supporting infrastructure elsewhere on the Island. The effects are assessed in a series of documents (including an ES) that have been submitted as part of the DCO application. Those documents group the effects by theme, such as transport, air quality, noise etc.
- 1.1.4 The purpose of this CIR is to report the principal effects of the Wylfa Newydd Project as they relate to local communities, however some key effects will be 'project-wide'. It follows the precedent established for the Hinkley Point C DCO, and responds to feedback received through Horizon Nuclear Power Wylfa Limited's (Horizon's) formal consultation and through ongoing engagement with stakeholders, including IACC.
- 1.1.5 The DCO documents identify some project-wide effects. These are effects which by their nature may be experienced to a greater or lesser degree in any given community. For instance, effects from changes in traffic or demand for local accommodation. This CIR helps readers understand how these broader effects will be managed.
- 1.1.6 The DCO documents also identify more specific effects from each part of the application, such as landscape and visual impacts, which can be quite local. In this case the purpose of the CIR is to help the reader by grouping these effects together by area, so they can be more easily identified. Therefore, while the report is structured by area, it also includes within each area some much more local effects, particularly for those communities nearest the WNDA.
- 1.1.7 This Report groups effects in seven areas – one on the mainland and six on Anglesey. See section 1.2 and figure 1-2 below for a full description of the seven study areas.
- 1.1.8 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 (ABWRs); the Cooling Water System (CWS); 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 PRoW; 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 CWS; the Marine Off-Loading Facility (MOLF); breakwater structures; shore protection works; surface water drainage outfalls; waste water effluent outfall (and associated drainage of surface water and waste water effluent to the sea); fish recovery and return system; fish deterrent system; navigation aids; and Dredging;
  - 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 AECC, ESL and a MEEG;

#### **Associated Development**

- the Site Campus within the WNDA;
- 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 SSSI at the following sites:
  - Tŷ Du;
  - Cors Gwawr; and
  - Cae Canol-dydd.

1.1.9 The following terms are used when describing the geographical areas related to the Wylfa Newydd DCO Project and the Licensable Marine Activities:

- 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).

### **Licensable Marine Activities**

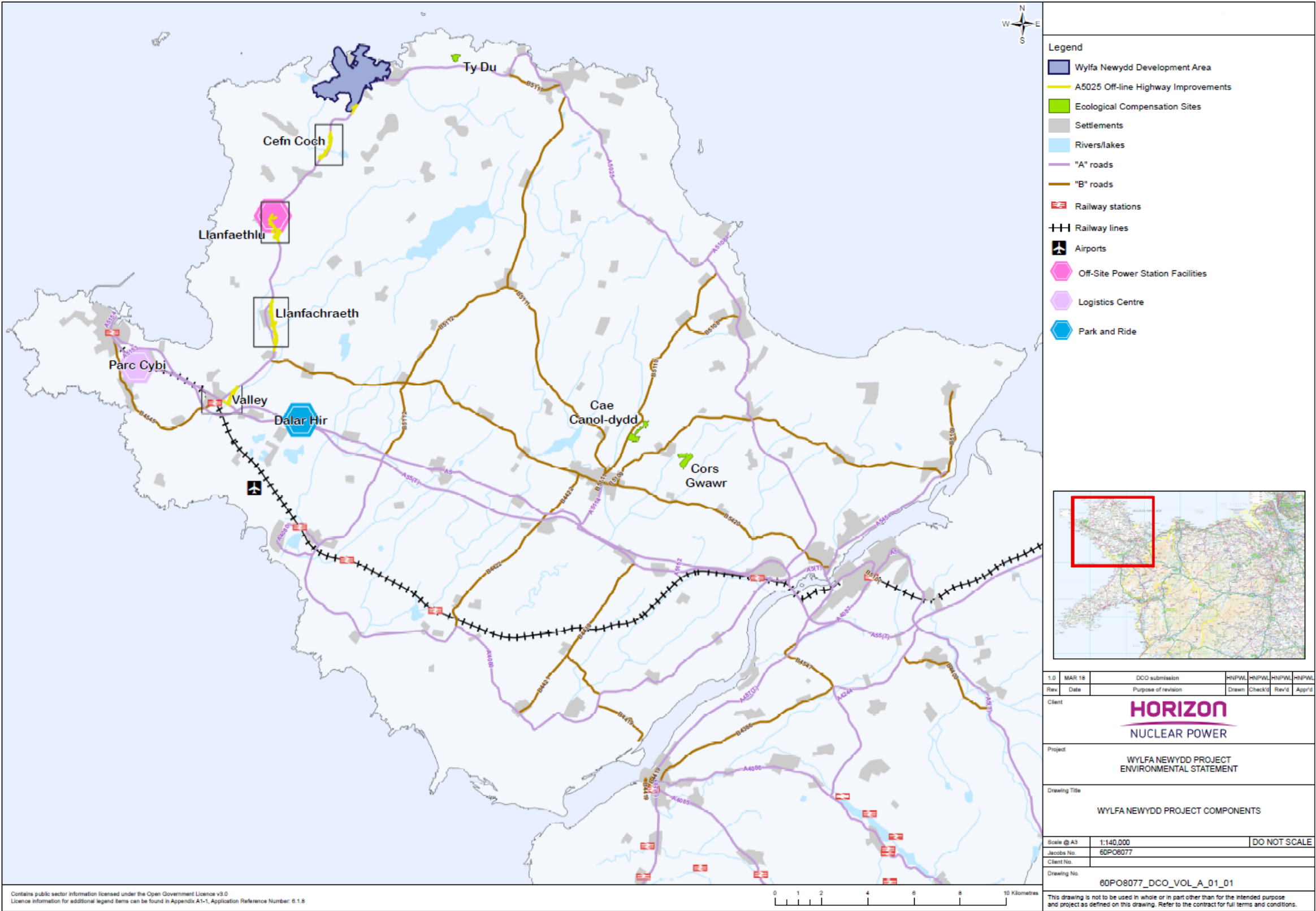
- 1.1.10 The Licensable Marine Activities comprise the Marine Works and the disposal of material from Dredging at the Disposal Site.

### **Enabling Works**

- 1.1.11 The Enabling Works comprise the Site Preparation and Clearance Proposals (SPC Proposals) and the A5025 On-line Highway Improvements.
- 1.1.12 Horizon has submitted applications for planning permission for the Enabling Works under the Town and Country Planning Act 1990 to the Isle of Anglesey County Council (IACC).
- 1.1.13 In order to maintain flexibility in the consenting process for the Wylfa Newydd DCO Project, the SPC Proposals have also been included in the DCO application. The A5025 On-line Highway Improvements are not part of the DCO application.
- 1.1.23 The locations of the proposed developments are shown on figure 1.1 below.
- 1.1.24 Horizon are committed to building a permanent visitor centre on site within five years of the end of construction. This would be consented outside of the Wylfa Newydd DCO Project by planning permission through the Town and Country Planning Act regime. The design and facilities contained within the centre will be subject to discussion with key stakeholders in advance of planning permission being submitted.
- 1.1.25 Horizon will develop suitable arrangements to enable viewing of the construction activity. Initially, this may be a temporary viewing platform available around six months after the start of construction, dependent on availability of safe access and parking capacity. This facility is likely to evolve through the construction period dependant on the positioning of activities through the different phases.

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Figure 1-1 Site locations



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- 1.1.26 Full details of each of the proposed developments for the Wylfa Newydd Project are found in volumes D1, E1, F1, G1 and H1 of the ES (Application Document Reference 6.4.1; 6.5.1; 6.6.1; 6.7.1; 6.8.1).
- 1.1.27 The construction programme for the Power Station is anticipated to begin in the year after development consent is granted. Site Preparation and Clearance Works are anticipated to last approximately 18 months. The main construction phase is anticipated to take approximately seven years, by which point the first ABWR Unit would be operational (with the second Unit operational approximately two years after).
- 1.1.28 The construction of the A5025 Off-line Highway Improvements would commence in year one and last for approximately 18 months, with the works proposed to be completed in time for the start of major construction activities at the WNDA. The construction of the Off-Site Power Station Facilities would commence in year three and last until year five. The A5025 Off-line Highway Improvements would be permanent development, while the Off-Site Power Station Facilities would be in use for the operational lifetime of the Power Station.
- 1.1.29 The construction of the Park and Ride facility at Dalar Hir would commence in year one and last for approximately 18 months. The construction of the Logistics Centre at Parc Cybi would commence in year one and last for approximately 15 months. The Site Campus facilities are required throughout the construction phase of the Power Station, but would be scalable in a minimum of three phases to a maximum of 4,000 bed spaces; the key phases would be capacity of 1,000 bed spaces (Phase 1), 2,500 bed spaces (Phase 2) and 4,000 bed spaces (Phase 3). These Associated Developments are intended to be in use for the construction phase of the Wylfa Newydd Project only and would be decommissioned when construction is complete.
- 1.1.30 A construction timeline is shown below in figure 1-2.



**Figure 1-2 Construction timeline**

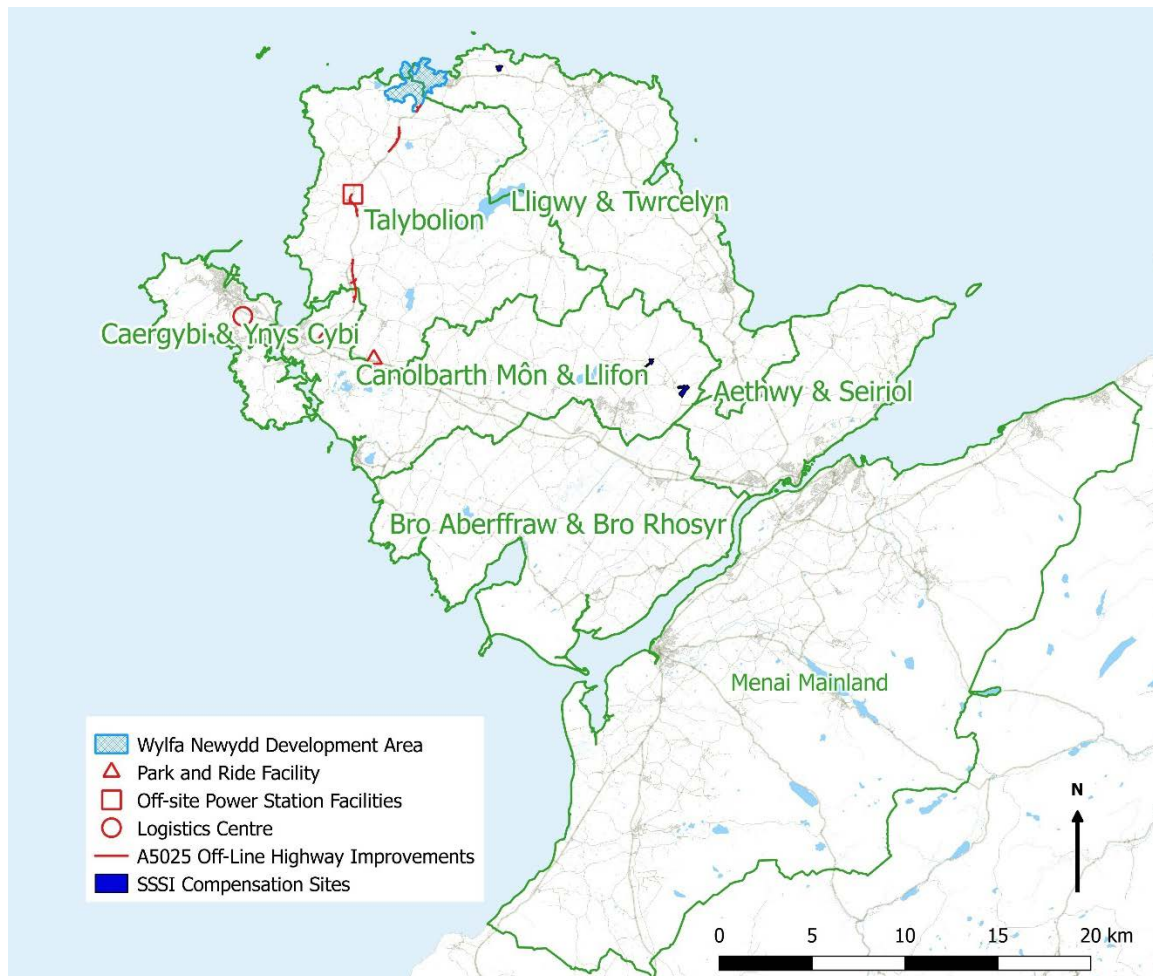


1.1.31 In addition, in order to mitigate potential impacts on the Tre'r Gof SSSI as a result of the Wylfa Newydd Project, Horizon has committed to delivering a compensation package which would create new areas of rich-fen habitat and enhance areas of existing rich-fen habitat at three sites within Anglesey, as shown on figure 1-1.

## 1.2 Study areas

- 1.2.1 This Report considers effects within six areas that cover the whole of the Isle of Anglesey, as well as a seventh area in mainland Wales. Together, these are where most community impacts are expected to occur.
- 1.2.2 The six Anglesey areas are the Well-being Assessment Areas identified by the Anglesey Public Services Board. The IACC has indicated these same areas will also be used in future for well-being assessments. The boundaries are formed by amalgamating the 11 current IACC wards.
- 1.2.3 This Report also considers impacts on the Menai Mainland impact area, which covers parts of Gwynedd and Conwy. This is the mainland section of the Project's Key Socio-economic Study Area (KSA), used within the EIA. It is based on 2011 Census wards and broadly matches the two Travel to Work Areas of 'Bangor, Caernarfon and Llangefni' and 'Holyhead'.
- 1.2.4 Figure 1-3 shows the seven areas considered by this report and the location of the developments associated with the Wylfa Newydd Project.

**Figure 1-3 Study areas**



- 1.2.5 Within these broad areas, some smaller communities will be particularly affected by the Wylfa Newydd Project due to their proximity to development. These include parish/community council areas within the north of Anglesey, particularly the settlements of Tregele and Cemaes in the Llanbadrig parish, Llanfechell in Mechell parish, as well as Amlwch as a nearby larger town. Figure 1-4 shows the location of the community council areas in the north of Anglesey.
- 1.2.6 Figure 1-5 shows how these local community areas relate to other assessment areas referred to in the ES, including the DCCZ.

**Figure 1-4 North-west Anglesey communities**

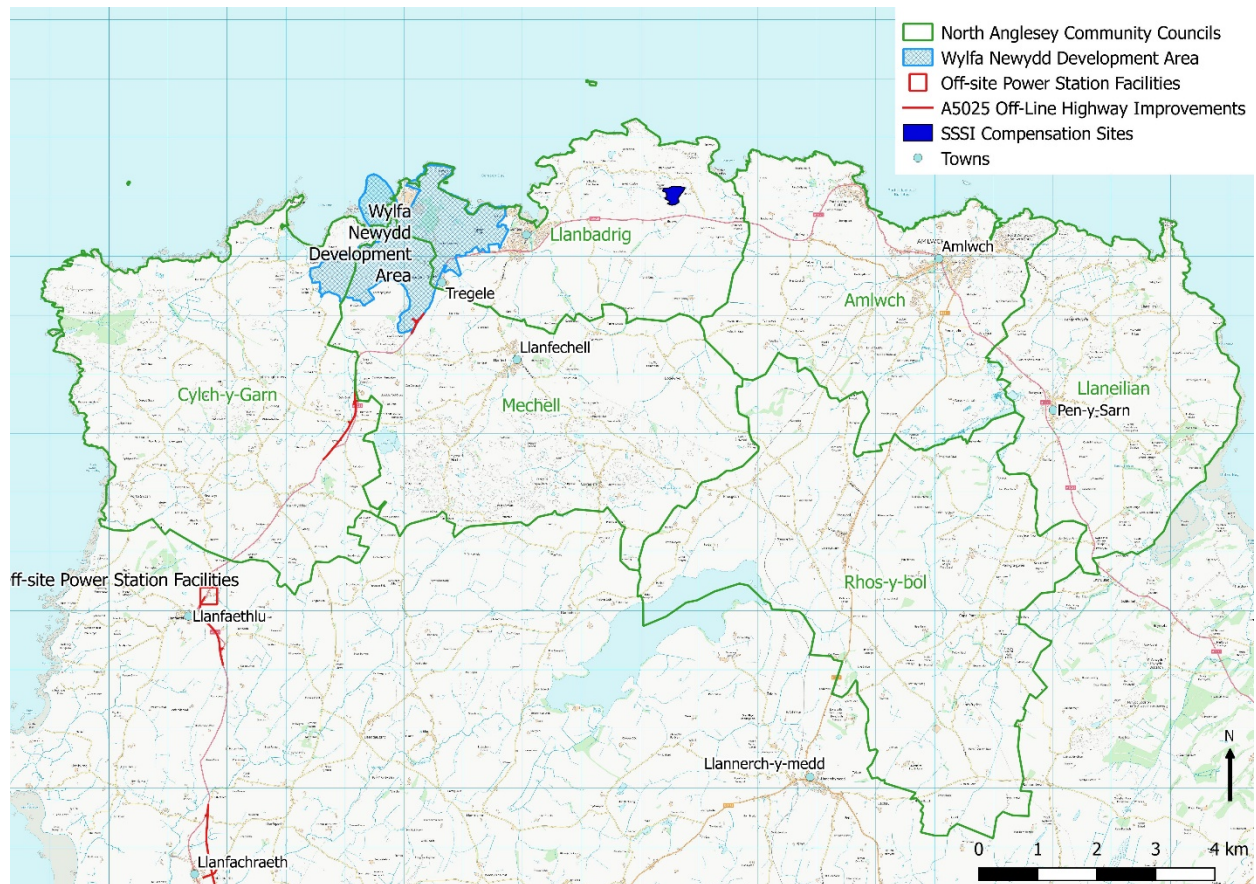
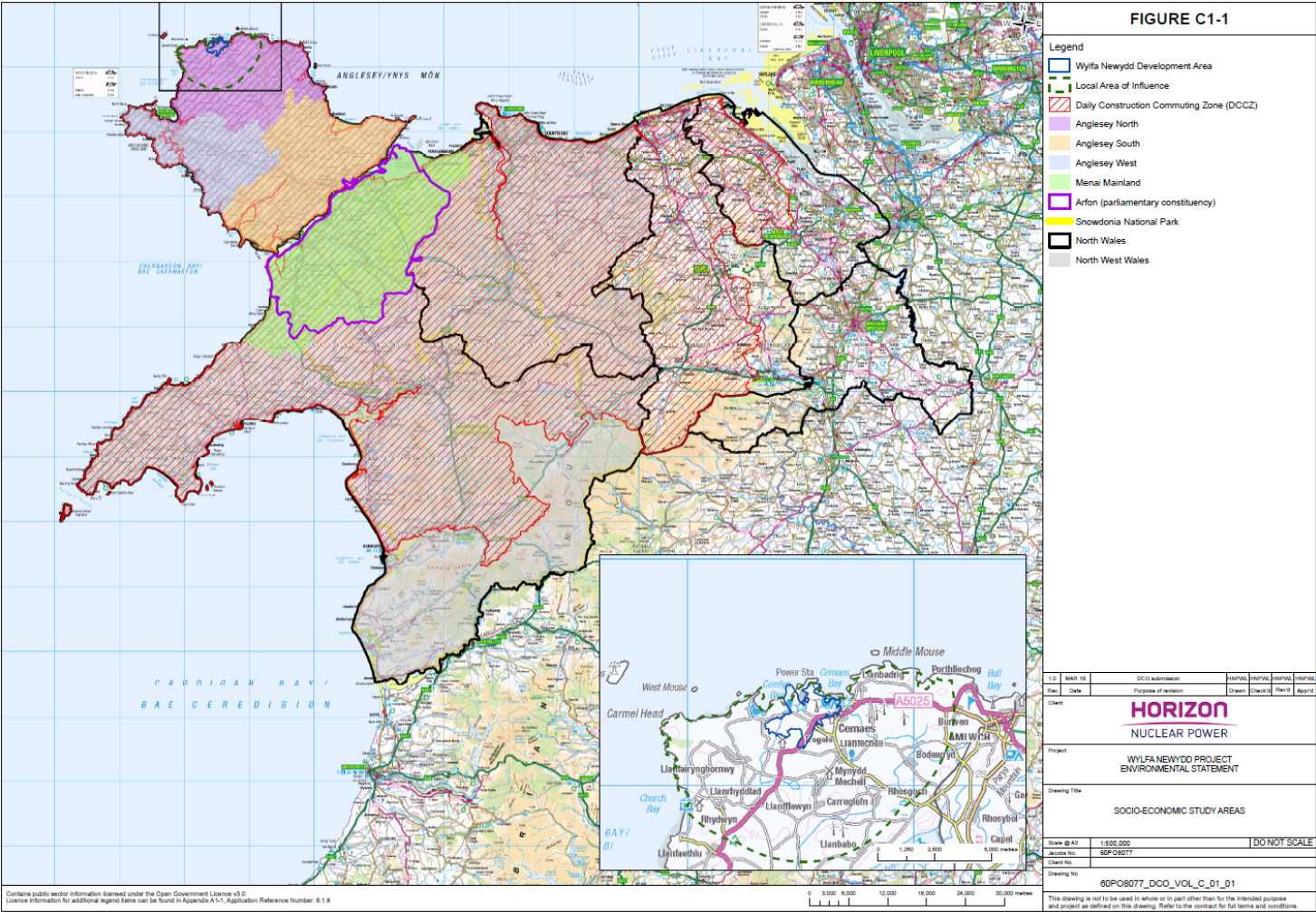




Figure 1-5 DCCZ



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## 1.3 Context and approach

- 1.3.1 The scope of this report reflects feedback from consultation and input from the IACC. An important part of the context for this are the studies and policies for well-being and community that have been developed nationally and locally.
- 1.3.2 The Well-being of Future Generations (Wales) Act 2015 places duties on public bodies. Although these duties do not automatically extend to developers such as Horizon, Horizon wishes to support public bodies in discharging their duties under the Act. To this end, the links to the Well-being Goals are identified in the ES socio-economic assessment (Volume C Appendix C1.3, Application Document Reference 6.3.10), EqIA (Application Document Reference 8.22) and the HIA (Application Document Reference 8.19). The goals are:
- a prosperous Wales;
  - a resilient Wales;
  - a healthier Wales;
  - a more equal Wales;
  - a Wales of cohesive communities;
  - a Wales of vibrant culture and thriving Welsh language; and
  - a globally responsible Wales.
- 1.3.3 Many of the assessments in this report have a bearing on these Well-being Goals.
- 1.3.4 The 2017 Anglesey Well-being Assessment (RD1) has been used to compile the baseline summaries for the study areas in this report. It also included a summary of well-being issues identified for Anglesey. These are:
- The need to maintain the healthy community spirit which is key to well-being.
  - The importance of protecting the natural environment.
  - Understanding the effect of the changing demography on our area.
  - Protecting and promoting the Welsh Language.
  - Promoting the use of natural resources to improve health and well-being in the long term.
  - Improving transport connections to enable access to services and facilities.
  - The need for high quality jobs and housing that is affordable for local people.
  - The effect of living in poverty on well-being.
  - Ensuring every child has the opportunity to succeed.

1.3.5 As with the national well-being goals, these messages from the Anglesey Well-being Assessment relate to many of the different areas assessed in this report.

1.3.6 The 2017 North Wales Population Assessment (RD2) produced by the six North Wales councils and Betsi Cadwaladr University Health Board assesses the care and support needs of the population in North Wales. This identifies a large number of issues and needs for North Wales related to increased forecast need for care services. In terms of Anglesey in particular, the report notes that the population of Anglesey is forecast to decrease steadily and to have a relatively high proportion of residents aged over 65; this implies that increased demand for care services identified in the report will be particularly relevant to Anglesey.

The Wylfa Newydd DCO Project has been through three stages of Pre-Application Consultation (PAC1-3). Input has been received from a wide range of individuals, organisations and statutory consultees, including IACC, the North Anglesey Partnership of Councils, the Destination Anglesey Partnership and many other stakeholders. A number of issues raised by the council and local community are relevant to this CIR. These are summarised below:

- maximising opportunities for education, skills, local employment and supply chains;
- worker accommodation and local housing;
- protecting Welsh language and culture;
- highways and transport, A5025 safety and parking;
- noise, dust, and disturbance to quality of life;
- effects on tourism;
- health and well-being effects;
- displacement of employment in other sectors; and
- effect on capacity of health and other services.

1.3.7 Community concerns about the area and potential impacts have been summarised in the IACC Community Involvement Officer's Report (RD3) of April 2017. This pointed to the importance of issues including:

- health and social care;
- transport;
- community safety;
- housing;
- employment;
- education and training;
- engagement;
- environment;

- displacement;
  - tourism and local businesses; and
  - Welsh language and culture.
- 1.3.8 Where the assessments in the DCO application documents relate to these issues, they have been considered in this report.
- 1.3.9 This Report is not itself an assessment of effects, but rather draws on the assessments undertaken in the DCO application documents, including the ES, HIA (Application Document Reference 8.19), EqIA (Application Document Reference 8.22) and WLIA (Application Document Reference 8.21). Those documents collectively consider the full range of potential effects of the Wylfa Newydd Project.
- 1.3.10 This Report, however, is not intended to be a full summary of the ES and the rest of the DCO application documents. It focuses only on *significant* effects as they relate to local communities and local issues of concern raised through consultation. For this reason, this report does not summarise some environmental topics which are less relevant to communities, such as soils and geology effects or terrestrial and freshwater ecology.
- 1.3.11 The EIA has assigned *significance* to the effects identified as a result of the Wylfa Newydd Project. This is done through having regard for the value or sensitivity of the baseline conditions and the magnitude of the potential change or impact. The EIA establishes whether an effect is significant based on the importance or value of affected resources, the number and sensitivity of affected receptors, the magnitude of change from the baseline condition, the duration, frequency and extent of the effect and whether the effect is reversible. Effects are assessed as major, moderate, minor and negligible; major and moderate effects are significant while minor and negligible effects are not significant. In some cases, assigning significance may involve the use of professional judgement by the experts carrying out assessments. Each topic area within EIA has specific criteria for assessing effects. Further information on the EIA process is provided in the ES Chapter B1 (Application Document Reference 6.2.1), with the methodology for each topic set out in chapters B2 to B16 (Application Document Reference 6.2.2 to 6.2.16).
- 1.3.12 Significant effects differ from place to place; for some areas, visual and landscape impacts will be important, while elsewhere transport or noise will be more relevant. The chapters reflect these differences.
- 1.3.13 This Report has separate chapters for the seven study areas. Each sets out:
- a description of the area covered;
  - what development (if any) will directly occur there;
  - a baseline summary about the area; and
  - a summary of the effects in each area as a result of the Wylfa Newydd Project.



- 1.3.14 These effects are set out according to broad types (such as socio-economic or transport) as summarised in table 1-1. They cover project-wide effects, such as traffic or demand for accommodation, and site-specific effects such as visual impacts or noise. Impacts identified through the HIA (Application Document Reference 8.19), EqlA (Application Document Reference 8.22) and WLIA (Application Document Reference 8.21) have been included under 'population and socio-economics' topics.

**Table 1-1 Study areas and project effects**

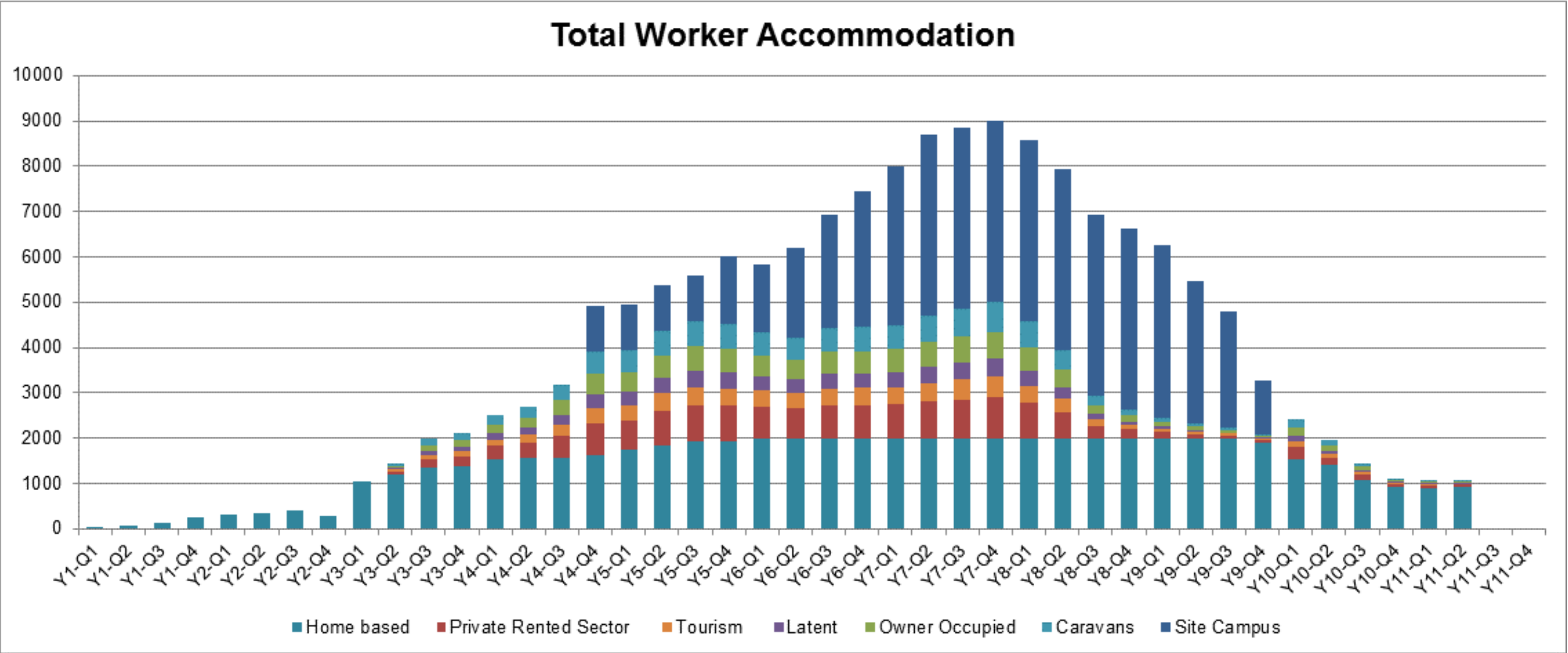
Area	Project Components	Impact Topics
Lligwy and Twrcelyn (including Cemaes & Tregele)	WNSA (part, including Site Campus)	Population and socio-economics (including tourism); Transport; Noise and Vibration; Air Quality; Landscape and Visual Impact; Public Access and Recreation; Cultural Heritage
Talybolion (including Llanfechell)	WNSA (part) A5025 Off-line Highway Improvements (part) Off-Site Power Station Facilities Park & Ride Facility Ecology Compensation Site - Tŷ Du	Population and socio-economics (including tourism); Transport; Noise and Vibration; Air Quality; Landscape and Visual Impact; Public Access and Recreation; Cultural Heritage
Canolbarth Môn & Llifon	A5025 Off-line Highway Improvements (part) Ecology compensation sites – Cae Canol-dydd and Cors Gwawr	Population and socio-economics; Transport; Noise and Vibration; Air Quality; Landscape and Visual Impact; Public Access and Recreation
Caergybi & Ynys Cybi	Logistics Centre	Population and socio-economics; Transport; Landscape and Visual Impact; Public Access and Recreation; Cultural Heritage
Bro Aberffraw & Bro Rhosyr	No project components in this area	Population and socio-economics; Transport
Aethwy & Seiriol	No project components in this area	Population and socio-economics; Transport
Menai Mainland	No project components in this area	Population and socio-economics; Transport

## **1.4 Project-wide socio-economic effects**

- 1.4.1 The Power Station will generate up to 3,100MW (of electricity, providing enough secure, low carbon power for around five and a half million homes. It will involve substantial investment in the local area and the wider North Wales region and create significant short, medium and long-term employment opportunities and economic benefits for Anglesey and North Wales. It will also have significant community legacy benefits, including new local infrastructure.
- 1.4.2 The purpose of this CIR is to report the principal effects of the Wylfa Newydd Project as they relate to local communities, however some key effects will be project-wide. This is particularly the case for socio-economic effects arising from the accommodation of construction workers. Workers are likely to find accommodation throughout the study areas, but the effects – including on demand for accommodation or community facilities – will vary locally. Therefore, this section introduces project-wide socio-economic effects, while succeeding chapters will detail the impacts of these by area.
- 1.4.1 The Wylfa Newydd Project will require a construction workforce of up to 8,500 workers at peak; however, to ensure that the Wylfa Newydd Project can be flexible to the pressures of unforeseen increased demand, the assessment is based on circa 9,000 workers. This position has been taken to represent the worst-case scenario from a socio-economic perspective based on fixed project-wide elements, such as worker-numbers and available bed-spaces across tenures, for the purposes of this ES.
- 1.4.2 There would be some population impacts as a result of this workforce. Up to 4,000 workers at peak are expected to stay at the Site Campus at the WNDA; up to 3,000 at peak are expected to be ‘non-home-based’ and stay in other temporary accommodation across the study areas (which may impact on overall demand for accommodation); and at least 2,000 at peak are expected to be home-based, living permanently within the DCCZ. It is expected that the arrival of construction workers will occur gradually because of the phased nature of construction, as detailed in figure 1-6.

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Figure 1-6 Indicative construction workforce accommodation profile



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- 1.4.3 The EIA has used what is known as a “gravity model” to provide an indication of the likely distribution of construction workers across the island and mainland during the peak construction phase of the Wylfa Newydd Project. This is based on information about the workforce, housing market, and travel distances.
- 1.4.4 Data from this model indicates that while the workforce is estimated to be spread across Anglesey, Gwynedd and the DCCZ, workers are estimated to be particularly likely to be located in the north of Anglesey, with approximately one-third of non-home-based workers modelled as taking up accommodation there, see table 1-2.

**Table 1-2 Summary of workforce distribution results**

Area	Home-based Workforce	Non-home-based migrant workforce	Site Campus
Anglesey North	521	1,024	4,000
Anglesey South	279	633	-
Anglesey West	456	892	-
Menai Mainland	265	451	-
Wider Area	479	-	-
<b>Workforce totals</b>	<b>2,000</b>	<b>3,000</b>	<b>4,000</b>

- 1.4.5 Estimates of demand and available bed spaces across a range of tenures indicate that without mitigation measures (such as the WAMS) for the north of Anglesey there would potentially be a shortfall in supply over predicted demand at peak, whereas there would be excess supply in other areas, see table 1-3.

**Table 1-3 Summary of bed space supply and demand**

Area	Available bed spaces	Demand from non-home-based workforce
Anglesey North	1,106	1,024
Anglesey South	2,486	633
Anglesey West	2,134	892
Menai Mainland	3,989	451
<b>Workforce totals</b>	<b>9,715</b>	<b>3,000</b>

- 1.4.6 While non-home-based workers are estimated to be accommodated throughout Anglesey and the Menai Mainland area across several tenures, major towns and cities in Anglesey and the Menai Mainland area are estimated to accommodate a significant proportion. Modelled estimates for

selected towns within the study areas discussed in this document are shown in table 1-4.

**Table 1-4 Selected settlements bed space demand at peak**

Area	Town/City	Non-home-based workers
Lligwy & Twrcelyn	Amlwch	160
	Benllech & Llanbedrgoch	261
Caergybi & Ynys Cybi	Holyhead	314
Canolbarth Môn & Llifon	Llangefni	60
Aethwy & Seiriol	Beaumaris	34
	Menai Bridge & Llanfairpwllgwyngyll	96
Menai Mainland	Bangor	174
	Caernarfon & Bontnewydd	67
	Bethesda	26
	Bethel & Llanrug	18
	Deiniolen	8
	Llandygai	3

- 1.4.7 It is important to note that these modelled estimates represent a ‘policy-off’ position which means that they are estimates of how workers would be distributed at peak without interventions and mitigation measures. A number of additional measures to help effectively accommodate workers while minimising adverse effects on communities have been proposed in the Workforce Accommodation Strategy (Application Document Reference 8.4), including a Workforce Accommodation Management Service to help match supply and demand as well as a Housing Fund to support housing provision.
- 1.4.8 Further detail of the Project-wide socio-economic impacts and mitigation measures is given in the area chapters that follow this introduction. Each area chapter serves as a standalone summary of the community impacts in that area which entails some repetition across chapters.

## 1.5 Community Safety

- 1.5.1 A range of measures are proposed to promote community safety. These are detailed in the the Wylfa Newydd CoCP (Application Document Reference 8.6).
- 1.5.2 These measures cover mitigation and management to support communities and promote community safety, measures to liaise with emergency services and public services, and points of contact for local communities.

- 1.5.3 Horizon will collaborate closely with public bodies including IACC, North Wales Police, Welsh Ambulance Service, North Wales Fire and Rescue Service and others.
- 1.5.4 Community Safety will be monitored by the Programme Board and Community Liaison Group, through engagement sub-groups, to include a range of issues such as transport, emergency services, and health/well being. Section 106 funding will be released by the Programme Board as appropriate, to address issues identified.
- 1.5.5 As part of the monitoring, the Community Involvement Officers will distribute information packs that include details of how to register any complaints or concerns. A dedicated, free, bilingual telephone hotline will be made available.
- 1.5.6 A Community Safety Management Strategy will be prepared, specifically to address safety in the local area, with a focus on communities within 2.5km of the Wylfa Newydd Nuclear Licensed Site Boundary – including Tregele, Cemaes and Llanfechell.
- 1.5.7 This will detail preparations for any emergency incident, and ensure members of the public are properly informed in advance about what to do.
- 1.5.8 The Community Safety Management Strategy will also set out how Horizon will work with the emergency services to enforce the principles of the Workforce Code of Conduct, to protect community safety.

## **1.6 Mitigation**

- 1.6.1 The Wylfa Newydd Project includes a wide range of mitigation and measures to reduce adverse effects and enhance positive effects. These include:
- elements of the Project itself, including the A5025 Off-line Highway Improvements, Park and Ride, Logistics Centre, and the Site Campus;
  - additional design measures, such as screening bunds and planting to reduce effects such as noise or visual intrusion;
  - direct physical mitigation such as noise insulation of eligible effected properties or reinstatement of footpaths;
  - operational measures, such as hours of working or types of machinery to reduce disturbance;
  - management measures, for example on recruitment of workers and information on accommodation, including on-going monitoring and liaison with local stakeholders; and
  - further mitigation including financial contributions, such as the tourism, housing, skills and community impact funds, agreed through the planning process.



1.6.2 Many of the mitigation measures most relevant to community impacts are outlined in a number of strategies and other documents, including:

- Workforce Accommodation Strategy (Application Document Reference 8.4)
- Workforce Management Strategy (Application Document Reference 8.5)
- Jobs and Skills Strategy (Application Document Reference 8.3)
- Welsh Language and Culture Mitigation and Enhancement Strategy (WLCMES) – part of WLIA ((Application Document Reference 8.2)
- CoCP (Application Document Reference 8.6)
- Code of Operational Practice (Application Document Reference 8.13)
- ES (Application Document Reference 6.1.1 to 6.11)
- HIA (Application Document Reference 8.19)
- Equalities Impact Assessment (Application Document Reference 8.22)
- Phasing Strategy (Application Document Reference 8.29)
- Design and Access Statement Volumes 1-3 (Application Document Reference 8.2.1 to 8.2.3)

1.6.3 It is important to recognise that not all local community effects can be predicted in detail. With many forms of mitigation (such as the Housing Fund), it will be important to maintain a flexible approach, to monitor impacts on local communities and receptors, to maintain dialogue with stakeholders and to apply mitigation as it is needed. Therefore, some mitigation will be adapted to circumstances as the Wylfa Newydd Project progresses.

## 2 Lligwy and Twrcelyn

### 2.1 Introduction

- 2.1.1 The Lligwy and Twrcelyn study area is based on the well-being area of the same name identified by the Gwynedd and Môn Public Services Board as a study area in the 2017 Anglesey Well-being Assessment (RD1). Lligwy and Twrcelyn are two wards in the north and north-east of Anglesey. Part of the WNDA lies in the Twrcelyn part of the Lligwy and Twrcelyn study area. The study area includes Cemaes, Amlwch, Moelfre, Benllech and Pentraeth.
- 2.1.2 This chapter summarises the main effects of the Wylfa Newydd Project in this study area, and should be read alongside chapter 1 which sets the context.
- 2.1.3 This CIR has been developed in response to feedback, including from IACC. It has also been written with regard to key local concerns identified through the statutory consultation process. These are summarised in section 1.4 of this report.
- 2.1.4 This Report looks at how these 'project-wide' effects may be felt locally by the community, including looking at the expected distribution of workers in different areas. It also looks at the more specific local effects of individual parts of the Wylfa Newydd Project, whether it be the WNDA, or Associated Development elsewhere, such as highways. Where relevant the cumulative effect of these different parts of the development together is also considered.
- 2.1.5 As part of the application, various mitigation measures are planned to lessen or avoid many of the potential impacts. Where relevant to local effects these are described in this CIR.
- 2.1.6 This chapter includes a context section describing the area and what development will affect it, and then summarises the effects under topic headings. Many of the local effects, including those arising from the construction workforce, are included in the section on socio-economics. Other topic sections are transport, noise/vibration, air quality, landscape/visual, and access/recreation.
- 2.1.7 This Report is based on the assessments that make up the DCO application, including the ES, WLIA (Application Document Reference 8.21), HIA (Application Document Reference 8.19) and EqIA (Application Document Reference 8.22). Those other documents cover the full range of potential impacts, of which this document summarises only the ones which are significant for local communities. If after reading this chapter you want further information, see appendix 8-2 for details of other relevant documents.

### 2.2 Context

#### *Project development in this area*

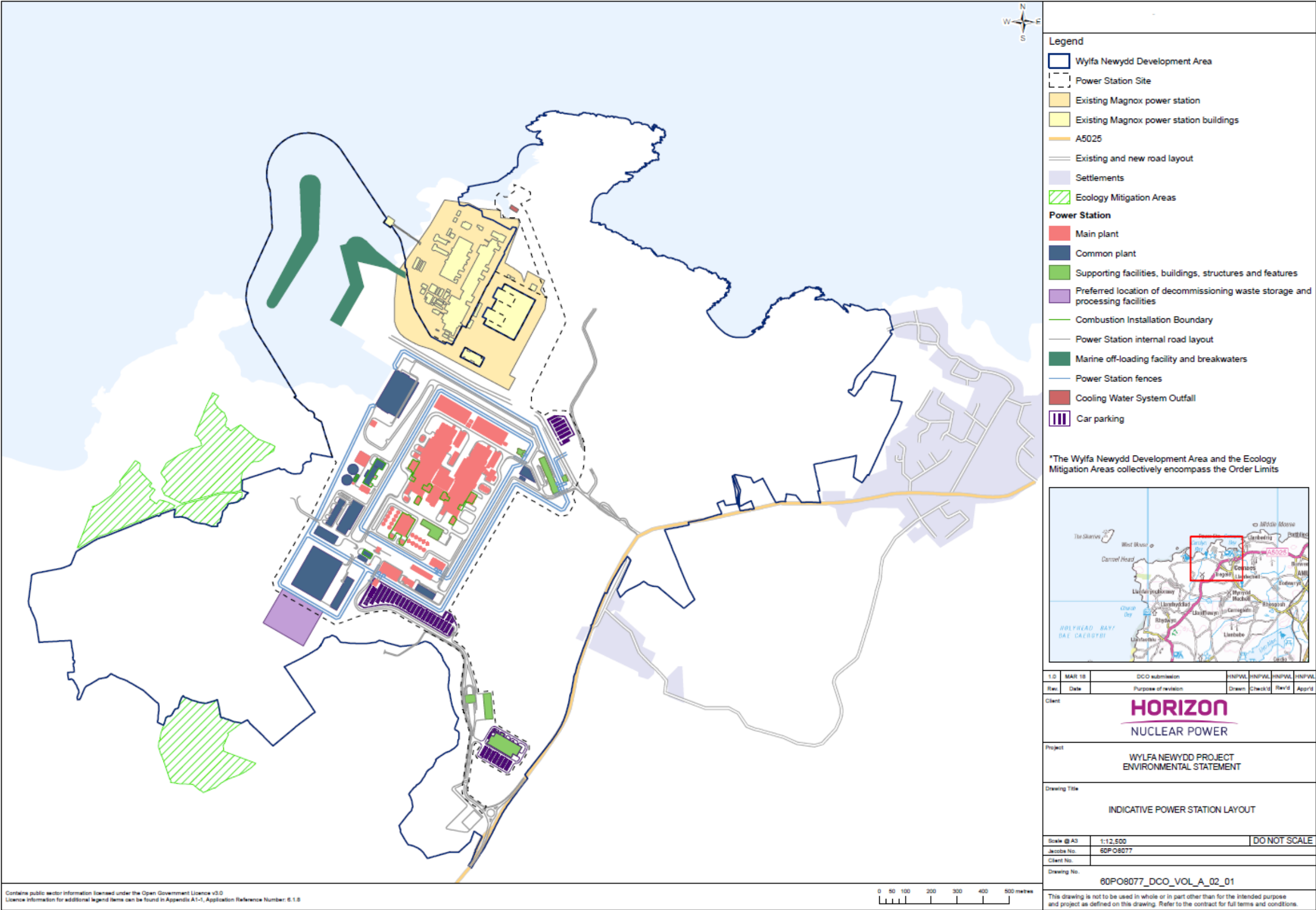
- 2.2.1 The Lligwy and Twrcelyn study area will experience a number of impacts related to the Wylfa Newydd Project which are summarised in table 2-1.

**Table 2-1 Lligwy and Twrcelyn Project components and impacts**

Project Components	Impact Topics
WNSA (part, including Site Campus) Tŷ Du Ecology Compensation Site	Population and socio-economics (including tourism); Transport; Noise and Vibration; Air Quality; Landscape and Visual Impact; Public Access and Recreation; Cultural Heritage

- 2.2.2 Part of the WNSA is in the Twrcelyn part of the Lligwy and Twrcelyn study area. This will be the major development site for the Wylfa Newydd Project and will include the Power Station Site and surrounding areas used for construction and operation of the Power Station as well as the Site Campus. It represents the maximum area that will be physically affected by the Power Station Main Construction. Although just outside the area, the new Power Station Access Road Junction will be located close to the south of Tregele; this location is intended to avoid construction-related traffic on the A5025 travelling through Tregele.
- 2.2.3 The Site Campus will be located in the the Twrcelyn part of the Lligwy and Twrcelyn study area within the WNSA. This will provide accommodation for up to 4,000 workers as well as amenity and welfare facilities and other recreational and amenity spaces including leisure and recreational facilities, retail and convenience stores, a bar and medical services.

Figure 2-1 WNDA Indicative Plan



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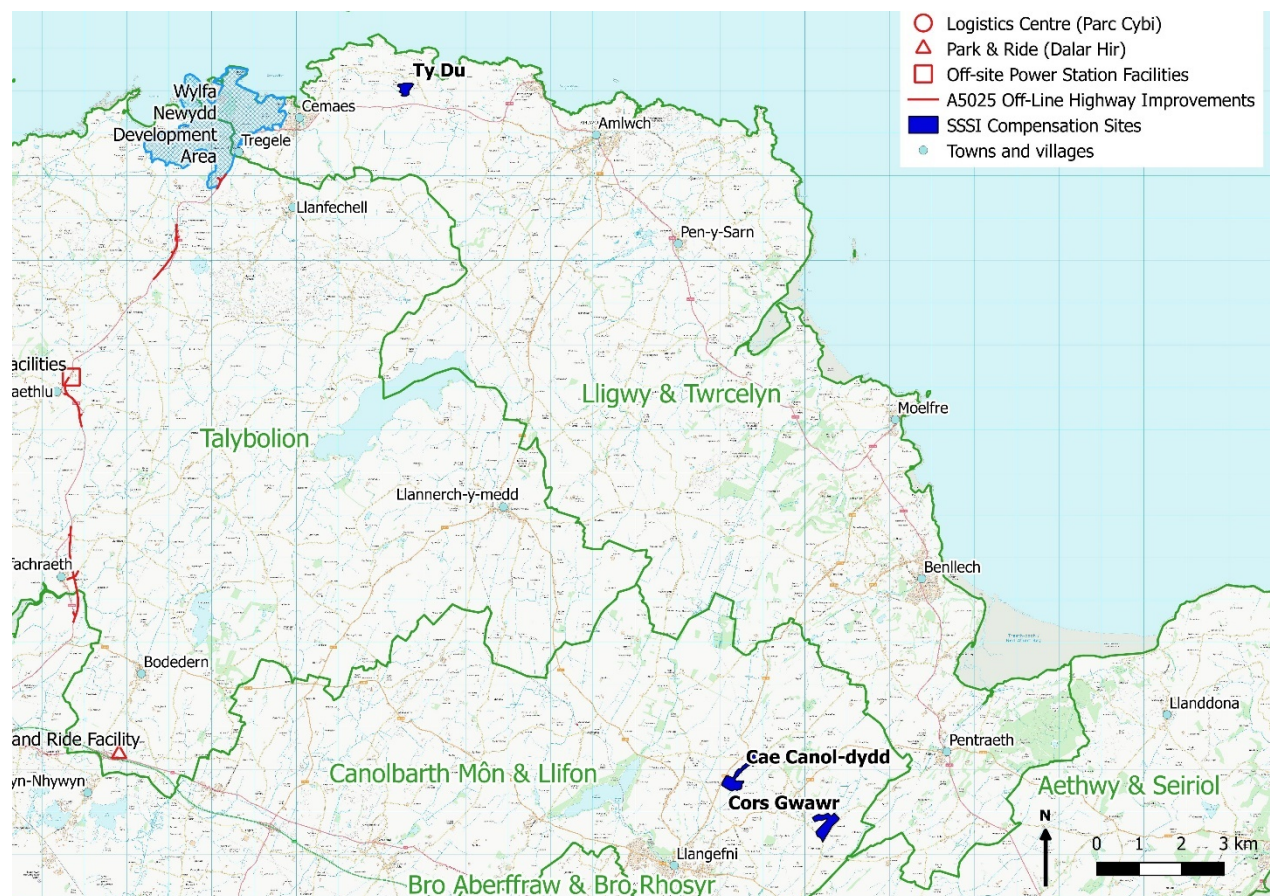


- 2.2.4 Particular attention is paid in this section to the two settlements closest to the WNDA, Tregele and Cemaes, as many of the direct impacts of construction and operation will affect these communities. Community council/parish council areas include Llanbadrig, Amlwch, Llanelian and Rhos-y-bol, which will also experience some direct impacts. Llanfechell is also given particular attention as one of the closest communities; however, this is covered in chapter 3, as it falls within the Talybolion community area.
- 2.2.5 Horizon is also proposing three ecology compensation sites on Anglesey in order to offset the potential adverse effect on Tre'r Gof SSSI as a result of construction at the WNDA. This would involve creating new areas of rich-fen habitat and enhancing areas of existing rich-fen habitat. One of these sites (Tŷ Du) is within the Lligwy and Twrcelyn study area, to the east of Cemaes.

### **Local area**

- 2.2.6 The Lligwy and Twrcelyn study area is a largely rural and coastal area in north Anglesey which includes several settlements, the largest of which are Benllech and Amlwch. A large proportion of the area consists of agricultural land. Figure 2-2 shows this area within Anglesey as a whole.

**Figure 2-2 Lligwy and Twrcelyn Area**



- 2.2.7 The area includes a number of tourism-related uses. There are a large number of caravan and camping sites, particularly in coastal areas. Tourist attractions include beaches, ports and coastal walks. There are also golf courses at Bull Bay and Brynteg.
- 2.2.8 The Existing Power Station is located in the north-west of the area. The main transport route in the area is the A5025 road running through the area along the coast from north to the south-east.
- 2.2.9 Of the three settlements located closest to the WNDA, Tregele and Cemaes are covered here as part of the Lligwy and Twrcelyn chapter, while Llanfechell is covered in chapter 3, Talybolion.

### ***Demographic baseline<sup>1</sup>***

- 2.2.10 The population of the Lligwy and Twrcelyn area was estimated to be 13,670 people in 2014. The area has a relatively elderly population. 15% of residents are aged under 16 compared to 17% in the rest of Anglesey and 18% in Wales, while 29% are aged over 65 compared to 24% in Anglesey and 20% in Wales.
- 2.2.11 The population rose by 9% (1,121) between 2001 and 2011, according to Census data.<sup>2</sup>
- 2.2.12 There are approximately 5,800 homes in the Lligwy and Twrcelyn study area, of which approximately 5,020 are permanently occupied; 14% of homes have no usual residents compared to 10% in Anglesey and 6% in Wales. 77% of homes are owner-occupied, 8% are social rented and 13% are privately rented.<sup>3</sup>
- 2.2.13 24% of the population have no formal qualifications, the same proportion as Anglesey but lower than the rest of Wales (26%). 25% hold level four or higher qualifications (which includes higher education and degree-level qualifications) compared to 26% in Anglesey and 25% in Wales.
- 2.2.14 45% of the population aged three and over can speak, read and write Welsh, compared to 46% in Anglesey and 15% in Wales. 35% have no skills in Welsh, compared to 30% in Anglesey as a whole and 73% in Wales as a whole. The proportion of residents aged three and over who can speak Welsh declined by two percentage points between 2001 and 2011.
- 2.2.15 A high proportion of residents work in skilled trades occupations; 33% compared to 19% in Anglesey and 14% in Wales. 24% of residents work in

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<sup>1</sup> All data apart from housing data, employment data and population growth are taken from the Gwynedd and Anglesey Well-Being Assessment data tables (RD4)

<sup>2</sup> Census 2001 and 2011, using a best-fit of 2011 output areas to current wards where necessary; this data is used as the most reliable time series due to recent ward boundary changes (RD5).

<sup>3</sup> Housing data is from Census 2011, using a best-fit to current wards where necessary (RD5).

lower-skilled sales, process and elementary occupations compared to 28% in Anglesey and 29% in Wales as a whole.

- 2.2.16 60% of the population aged 16-74 in 2011 were economically active, compared to 65% in Anglesey as a whole and 66% in Wales as a whole. 54% were in employment (compared to 58% in Anglesey and Wales) and 4% were economically active but unemployed (compared to 5% in Anglesey and 4% in Wales). 27% were retired, a higher rate than in Anglesey as a whole (20%) and Wales (16%).<sup>4</sup> 3% of the population aged between 16 and 64 claimed Jobseekers Allowance in May 2016 compared to 2.96% in Anglesey and 2.2% in Wales.
- 2.2.17 A high proportion of residents travel 10km or more to work: 46%, compared to 38% in Anglesey and 31% in Wales.
- 2.2.18 This overview of the existing demographics of the area indicates that the area has a relatively elderly population. The area also has a relatively small and declining proportion of children – the number of residents aged 0-15 fell from 2,172 in 2001 to 2,042 in 2011, even though the total population increased from 12,317 to 13,438. The area has a relatively high proportion of Welsh speakers. It also has relatively low rates of economic activity and employment and a relatively high proportion of retirees. It has relatively high rates of both owner-occupied housing and of homes with no usual resident.
- 2.2.19 Some of these have been identified as key community issues in Anglesey. For example, the 2017 Anglesey Well-being Assessment (RD1) identifies an aging population, housing, protecting and promoting the Welsh language and providing job opportunities (especially for young people) as key well-being issues. The EQIA (Application Document Reference 8.22), the HIA (Application Document Reference 8.19) and the WLIA (Application Document Reference 8.21) in particular recognise that these issues are also interlinked – for example, that the strength of the Welsh language is partly linked to local job and housing opportunities for Welsh-speaking young people.

## 2.3 Local impacts and mitigation

### *Population and socio-economics*

- 2.3.2 This section looks at effects assessed in the socio-economic chapter of the ES. This includes the expected local distribution of project-wide effects from the construction workforce. This section also includes information drawn from the WLIA (Application Document Reference 8.21), the HIA (Application Document Reference 8.19), and the EqIA (Application Document Reference 8.22).
- 2.3.3 The EIA has used a 'gravity model' to provide an indication of the likely distribution of workers across the island and mainland during the peak construction phase of the Wylfa Newydd Project. This is based on information

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<sup>4</sup> Census 2011, using a best-fit to current wards where necessary (RD5).



about the workforce, housing market, and travel distances. The information from the gravity model has been used in this report where possible to indicate the potential local distribution of project-wide effects relating to the workforce.

## **Project-wide socio-economic effects during construction**

### ***Construction workforce***

- 2.3.4 The Wylfa Newydd Project will require a substantial construction workforce. The construction workforce is expected to be up to 8,500 workers at peak construction, although impacts from up to 9,000 have been assessed. This will represent a large increase and will have some population impacts. Potential impacts could relate to demand for accommodation or community facilities, as well as effects on the economy and traffic.
- 2.3.5 The vast majority of these workers will be employed at the WNDA with smaller numbers for the Associated Developments, as follows:
- A5025 Off-line Highway Improvements, up to 211 workers;
  - Park and Ride, up to 70 workers;
  - Logistics Centre, up to 50 workers; and
  - Off-Site Power Station Facilities, up to 85 workers.
- 2.3.6 Full information on the construction workforce requirements for the Wylfa Newydd Project is provided in the ES, volume C chapter 1 (Application Document Reference 6.3.1).
- 2.3.7 Of the peak workforce of up to 9,000, at least 2,000 are expected to be home-based and already resident within the DCCZ, which is based on a 90-minute commuting zone from the WNDA. Of these approximately 1,260 are expected to come from Anglesey. These estimates are based on a review of the skills available in the area and of travel expectations. These workers are expected to be permanently resident and do not represent temporary new residents.
- 2.3.8 The Jobs and Skills Strategy (Application Document Reference 8.4) is designed to meet the labour needs of the Wylfa Newydd Project and deliver jobs and economic opportunities locally while avoiding negative labour impacts in the local economy. It will seek to maximise the recruitment of locally-based workers and will seek to increase the number of home-based workers above 2,000 in order to minimise the effects caused by the arrival of construction workers. This will also seek to maximise the economic benefits for local residents that will result from the jobs created as a result of the Wylfa Newydd Project, in partnership with local stakeholders.
- 2.3.9 Measures to maximise local employment include developing the Skills Fund and a Wylfa Newydd Employment and Skills Service (WNESS) in partnership with Welsh Government, the Department for Work and Pensions and other stakeholders. Its role will be to place people into sustainable employment created by the Wylfa Newydd Project. The WNESS will work with contractors and stakeholders to maximise opportunities for local residents, unemployed people, young people and groups that traditionally are under-represented in

the construction workforce. It will provide a pathway for jobseekers into the project, in some cases via initial education or apprenticeship routes to prepare young people for work on the project. For older or unemployed workers outreach or work readiness training will be facilitated. It will also provide a structure for 'backfilling' – allowing local employers to fill vacancies that happen when employees take up jobs on the Wylfa Newydd Project.

- 2.3.10 Of the peak workforce of up to 9,000, up to 4,000 will be accommodated at the Site Campus. Horizon has concluded that on balance, the environmental and social effects of the construction workforce on the existing community is best managed through locating a significant proportion of them in a single, temporary purpose-built campus as close as possible to the Power Station Site. This will be a temporary accommodation facility within the WNDA (and within the Twrcelyn part of the Lligwy and Twrcelyn area) which will include independent living spaces for workers and a range of campus-style amenities and facilities.
- 2.3.11 In addition, 3,000 workers are expected to be non-home-based, from outside the DCCZ and are expected to temporarily take up existing accommodation within the seven assessment areas covered by this report (but not at the Site Campus). This is based on an assessment of the availability of bed spaces across several tenures (including private rented, owner-occupied, hotels, caravans and spare room accommodation) in the study areas. For Anglesey and the Menai Mainland area as a whole, approximately 450 workers are estimated as taking up hotel accommodation, 650 workers as taking up caravan accommodation, 600 workers taking up owned accommodation (i.e. by purchasing a property) and 900 taking up private rented accommodation. Further information on the breakdown of accommodation across tenures and the expected distribution of workers is found in the ES, volume C chapter 1 (Application Document Reference 6.3.1).
- 2.3.12 It is anticipated that workers would take up accommodation throughout the Lligwy and Twrcelyn area based on availability. As a result, it is anticipated that larger settlements such as Amlwch and Benllech would host a significant proportion of these workers as a result of having more potential accommodation spaces. For example, approximately 160 workers are estimated by the gravity model to take up accommodation in Amlwch and approximately 261 workers in Benllech & Llanbedrgoch.
- 2.3.13 In addition to the provision of Temporary Workers' Accommodation for up to 4,000 workers in the WNDA, Horizon has set out two central means of mitigating the impact of non-home-based workers taking up accommodation in Anglesey.
- The WAMS will seek to match accommodation demand to supply in order to effectively distribute workers more widely and prevent excessive localised impacts. All workers will be required to register with the WAMS. Horizon and IACC have agreed to establish a Construction Workforce Accommodation Management Portal (CWAMP) as part of the WAMS to help workers to find suitable and

appropriate accommodation. The WAMS will monitor data and work with stakeholders to ensure workers are able to find this accommodation.

- Horizon has also proposed a flexible Housing Fund to provide support for housing in the local area. This would be used to mitigate a range of effects and to boost the supply of housing, including increasing availability of existing stock and funding council officers' time relating to additional housing matters (such as enforcement or dealing with residents' housing needs).

2.3.14 Horizon will use a 'plan, monitor and manage' approach in order to minimise adverse community impacts and flexibly respond to localised impacts if and when they occur. Full details of Horizon's approach to accommodation and mitigation are set out in the Workforce Accommodation Strategy (Application Document Reference 8.4).

2.3.15 As the nearest communities, Tregle and Cemaes are most sensitive to any socio-economic impacts resulting from workers staying at the Site Campus. The ES, volume D chapter 3 (Application Document Reference 6.4.3) assesses some of the principal potential socio-economic effects arising from workers at the Site Campus, which may relate to demand for accommodation or community facilities.

2.3.16 A range of facilities will be provided within the Site Campus itself for workers, including welfare, leisure, sport and recreational amenities, retail and convenience stores, a bar and medical services. These are intended to mitigate the socio-economic effects of the Site Campus and the Project as a whole by reducing demand from workers for important community services such as healthcare.

2.3.17 Horizon will put in place a series of measures to manage worker behaviour and maintain a balance between workers spending money in the local economy and avoiding impacts on local communities. These measures are intended to adapt to potential impacts through monitoring and would be managed as appropriate. The Workforce Management Strategy (Application Document Reference 8.5) sets out the principles by which Horizon will manage the impact of workers. This will apply to all workers, and will stipulate a Code of Conduct which will explain expected behaviour to workers and require workers to conduct themselves responsibly at all times. Examples include:

- a compulsory project induction programme for workers which will include information on community relations and expectations of the workforce in the local communities;
- an education and awareness program as part of the induction process covering a number of issues including health and safety, security, Code of Conduct as well as awareness of the Welsh language and culture;
- security checks for all personnel; and

- all personnel will be subject to random drug and alcohol testing and related searches.
- 2.3.18 The Wylfa Newydd CoCP (Application Document Reference 8.6) details the site management strategy for the Project, including working hours and site security. It also sets out the Project approach to community and stakeholder liaison and communications. A key part of this will be a CLG including local residents, businesses and community representatives to exchange information and promote dialogue between Horizon and the local community during construction. As set out in the CoCP, Horizon will appoint also bilingual Community Involvement Officers to liaise with local communities during the construction phase.
- 2.3.19 Horizon will notify occupiers of nearby properties in advance of works taking place including the type and duration of the activity. This will ensure occupiers are notified of key construction activities that might result in increased noise or disturbance. Horizon will display the name and contact details of the person(s) accountable for construction works on the site boundary. Horizon will also display the head or regional office contact information on the site boundary. All notifications will be bilingual in Welsh and English, and accompanied with a contact name, telephone number and address to which enquiries should be directed
- 2.3.20 Horizon will establish a dedicated and free telephone hotline to be available for anyone with concerns about the construction programme or Project. It will deal with enquiries or complaints from the public, the IACC or other key stakeholders. The system will be staffed by bilingual personnel, will be widely advertised by appropriate means and will ensure that appropriate action is taken in response to any non-compliance with approved plans or construction arrangements, or in the event of physical damage, in accordance with an enforcement protocol.
- 2.3.21 A complaints register will be maintained by Horizon. All calls will be logged and mapped, together with a record of the responses and action taken. Mapping will be used to record where key concerns are raised by individuals, local communities or other stakeholders. The complaints register will be made available to the IACC upon request.

### ***Business and tourism***

- 2.3.22 It is likely that some local businesses located near the WNDA could experience an increase in income due to the presence of these workers. Some workers may choose to spend in local businesses rather than Site Campus services. However, this is anticipated to be a 'spill-over' effect because the provision of on-site commercial services and facilities is intended to meet the commercial needs of these workers and ensure existing local services are not adversely affected. This effect is difficult to quantify because of this.
- 2.3.23 Local businesses would also potentially experience beneficial supply chain effects. While it is not possible at present to estimate how much of the Wylfa Newydd Project value would be spent locally, according to the ES chapter C1

(Application Document Reference 6.3.1) if between 2% and 4% was spent locally (as at other nuclear project examples such as Sizewell B), this would be equal to an investment of between £200 million and £400 million within north Wales over the construction period, providing a range of opportunities for local businesses. Horizon's Supply Chain Charter and Action Plan set out its approach to procurement and would seek to support businesses to engage in the Wylfa Newydd Project and benefit directly. The Supply Chain Service will oversee the delivery of the Action Plan and is jointly formed of stakeholders and key delivery partners from the Wylfa Newydd Supply Chain.

- 2.3.24 Tourism is a vital part of the economy of Anglesey and the Lligwy and Twrcelyn area, and the Wylfa Newydd Project may have some effects on the sector. Visitor behaviour may change in response to the construction of the Power Station. However, a survey of visitors to Anglesey in 2015 found almost 90% of respondents indicated that the construction of the new Power Station would have no impact on their intention to return to Anglesey. Visitors noted concerns related to traffic and general construction impacts. Based on a detailed review of these responses and on Project mitigation which would address potential tourist concerns, the ES (Application Document Reference 6.4.3) states that the actual number of tourism visits that may be lost during construction is likely to be small. This could nevertheless represent a change in revenue for some businesses. However, this could be countered by spending from workers throughout the island and any impact would be limited and would vary by the type and location of the business.
- 2.3.25 Tourist accommodation businesses would benefit from demand for accommodation from construction workers. Across Anglesey and the Menai Mainland area it is estimated that up to 450 tourism bed spaces could be occupied by workers within hotels and bed and breakfast accommodation, and a further 650 bed spaces within caravan and camping accommodation at registered sites. This is based on Horizon's estimates of capacity. This would provide revenue to tourist accommodation providers, particularly in the winter months. However, to prevent excess demand from workers 'crowding out' tourists or affecting the quality of accommodation, measures in the Workforce Accommodation Strategy (Application Document Reference 8.4) will seek to avoid adverse effects including through the WAMS.
- 2.3.26 Horizon has proposed a Tourism Fund (secured through planning obligations) to identify and help address any material effects on the local tourism sector in Anglesey as a result of the Wylfa Newydd DCO Project. Although the terms of reference and governance structure of this are subject to agreement, it would be administered via a Tourism Oversight Board attended by Horizon, IACC, Welsh Government and local sector representatives as appropriate.

### ***Community safety, health and well-being***

- 2.3.27 The ES, volume D chapter 3 (Application Document Reference 6.4.3) examines the potential effects of workers living at the Site Campus on public safety. As a rural area with a low population, crime is currently relatively low in communities around the WNDA.

- 2.3.28 An increase in the resident population may potentially lead to an increase in crime. However, a number of measures will mitigate this potential effect. The number of workers resident is expected to rise gradually. The provision of facilities and services on-site is expected to minimise the need for workers to use off-site services. Measures such as on-site security and lighting will be put in place. Furthermore, the Site Campus and the Project generally will be the subject of a Workforce Management Strategy (Application Document Reference 8.5) which will require workers to adhere to an expected standard of conduct throughout their stay at the Site Campus. As a result, levels of reported crime are not expected to rise significantly. Effects on public safety have been assessed in the ES, volume D chapter 3 (Application Document Reference 6.4.3) as minor adverse, and not significant.
- 2.3.29 The possibility of a perception of increased risk of crime has also been assessed as a potential adverse effect for local communities. However, the embedded mitigation to prevent an increase in crime including site design, the presence of on-site security and lighting is likely to significantly ease any potential perceived fear of crime over time.
- 2.3.30 The potential health effects of the Wylfa Newydd Project have been assessed in the HIA (Application Document Reference 8.19). It also assesses the cumulative health effects from site-specific and combined impacts across all sites for local population groups around the WNDA and the Associated Development sites.
- 2.3.31 The HIA considers the Project-wide health and well-being effects relating to:
- road safety, air quality and noise around the road network including the mitigating effects of highway improvements;
  - tourism and housing displacement pressure, including mitigation measures such as the WAMS;
  - demand for and journey times to access healthcare services, including mitigation such as the on-site campus health facilities;
  - safety, lifestyle and behaviour;
  - identity and culture;
  - employment, income and economic development;
  - education and training;
  - public understanding of risk; and
  - low carbon energy generation.
- 2.3.32 For the general population near the WNDA the overall health effects are assessed as being negligible in the HIA (Application Document Reference 8.19). There will also be beneficial effects related to road improvements as well as the economic and employment opportunities created by the Project since employment and economic investment are linked to physical and mental health.

2.3.33 The HIA summarises effects for four population groups based on their sensitivity to potential changes attributable to the Wylfa Newydd Project (beneficial or adverse):

- children and young people;
- older people;
- people with existing poor health (physical and mental health); and
- people living in deprivation, including those on low incomes.

For these groups, effects are assessed as up to moderate adverse for those near the WNDA and the local road network including the A5025 due to combined effects from traffic, noise, dust, air quality and other construction effects. However, these impacts are likely to be localised and site-specific in nature. The HIA also details a number of mitigation strategies and best practice to address any health impacts (many of which are secured in other documents and summarised in this document), including monitoring of construction effects such as noise or dust, community liaison, promoting road safety, workforce management and workforce accommodation mitigation.

2.3.34 Horizon will establish and chair an external stakeholder group (the Health and Well-being Monitoring Group) that will include members of the health and emergency services to monitor the implementation of the HIA mitigation strategy and provide advice on its delivery. As mentioned previously Horizon would also appoint bilingual Community Involvement Officers; the scope for this role would also include developing and implementing some HIA mitigation measures.

2.3.35 One effect assessed in the HIA is the 'public understanding of risk' which in part assesses public perceptions of living with nuclear power. While for the most part this cannot be disaggregated down to a geographical area, the HIA does note that responses to a survey about nuclear power in Anglesey differed slightly in Cemaes compared to the rest of Anglesey. Although a majority of people near Cemaes (59%) agree that they supported having nuclear power on Anglesey, a lower proportion of people there agree than in the rest of Anglesey (67%). This suggests that people living closest to the WNDA may be expected to have slightly less favourable perceptions of living with nuclear power. The HIA proposes a number of measures to help address this including dialogue and outreach with local communities and disseminating information about operational safety; the employment of Community Involvement Officers will help to meet this objective.

2.3.36 Healthcare facilities in nearby communities such as Cemaes are assessed as not likely to experience significant effects during construction, due to measures minimising traffic impacts and workers using community services. Horizon will require all construction workers to register with and prioritise the use of the on-site medical and healthcare services rather than using the community National Health Service (NHS) services.

### ***Equalities***

2.3.37 The EqlA (Application Document Reference 8.22) assesses potential equalities effects the Wylfa Newydd Project could have. It assesses potential effects on people with 'protected characteristics' as defined by the Equality Act 2010 as:

- age;
- race;
- religion or belief;
- marriage and civil partnership;
- pregnancy and maternity;
- sex;
- sexual orientation;
- disability; and
- gender reassignment.

It also assesses potential effects on socio-economically deprived communities. It also considers the extent to which the Project would contribute towards the goals of 'a more equal Wales', and 'a Wales of cohesive communities' set out in the Future Generations and Well-being (Wales) Act 2015.

2.3.38 The EqlA has identified five categories of effects as potentially occurring for some of these groups (which reflect the main Project impacts):

- noise;
- employment and skills;
- traffic, transport and access;
- community infrastructure and public services; and
- community cohesion.

2.3.39 Noise effects (considered in more detail from paragraph 2.3.71 onwards) would occur mainly due to construction activities at the WNDA as well as construction of the A5025 Off-line Highway Improvements. In the Twrcelyn part of the Lligwy and Twrcelyn study area this would affect residential buildings in Cemaes and Tregele as well as noise impacts on Ysgol Gynradd Cemaes and St Patrick's Church, Llanbadrig. Noise impacts on residential properties would disproportionately affect those people who spend more time in the home during the day, including older people, disabled people, and carers of new-born and small children. Noise impacts on Ysgol Gynradd Cemaes may affect children including children with a disability or additional learning difficulty. Noise impacts on St Patrick's Church, Llanbadrig would potentially affect those with religious beliefs who attend the church. The noise and vibration section below summarises these noise impacts and mitigation measures.



- 2.3.40 Traffic impacts including potential increases in traffic on the A5025 before the Off-line Highway Improvements become operational (see the transport section from paragraph 2.3.62) would have differential adverse effects on those at greater risk of traffic accidents and their consequences, including older people, children, disabled people. Transport mitigation measures including traffic management would mitigate these.
- 2.3.41 A population rise as a result of construction workers temporarily moving to the local area may affect communities if they impact on health services, which would affect groups most reliant on these; however, as noted above mitigation measures are designed to prevent this. Community cohesion may be affected if the Project and a disproportionate increase in the male population of the north-west part of the Isle of Anglesey gave rise to a heightened risk or perception of crime, which would potentially affect older people, women and Black, Asian and Minority Ethnic (BAME) residents in particular. Changes in social mix could affect social networks in an area where many older people would feel part of a small, close-knit community, according to the **Wylfa Newydd Project HIA Report Community Survey (Application Reference Number 8.19)**; however, it also indicates that younger people may view the impact on social networks of new residents positively. Furthermore, if prices rise locally for private rented sector housing this may adversely impact existing residents who experience housing deprivation. However, many of the measures which are designed to mitigate the general socio-economic effects of the construction workforce including the Site Campus, the Community Impact Fund and the Housing Fund would also mitigate these equality issues.
- 2.3.42 The Project would also have beneficial equalities effects through providing short- and long-term employment opportunities and a legacy of a more skilled workforce. This would be beneficial in particular for young people and deprived communities.

### ***Community facilities***

- 2.3.43 The Site Campus will provide a range of facilities that will cater to the needs of workers who live there. Some of these will also be available to workers living off-site, thereby reducing demand from them for existing services. This includes health facilities which will represent the easiest way of registering for primary care services for the visiting workforce. UK based workers who are registered for Primary and Dental care services at their home location may not wish to register with a local provider (noting that there are existing NHS provisions for providing services for any person who cannot attend their own registered practice through temporary registration arrangements). As a result of this on-site provision the HIA (Application Document Reference 8.19) has found the changes in demand for local health services would not have a significant impact for local resident groups.
- 2.3.44 It is recognised in the ES, volume C chapter 1 (Application Document Reference 6.3.1) that extra demand from non-home-based workers in Anglesey for leisure facilities such as in Amlwch is a key community concern. For a worst-case scenario, the increased population could result in an increase in visits of 11% over current visit levels on Anglesey (no breakdown

at local level is available for this). As a result of provision in the Site Campus and available places in existing leisure facilities, this is not assessed as likely to be a significant adverse effect. However, while no significant effect has been identified it is proposed (subject to agreement with stakeholders) that a mechanism for the provision of funding for leisure services via a proposed Community Impact Fund is in place to address adverse effects. This would be implemented should monitoring by providers identify significant additional demand that is not already funded via other mechanisms (for example, council tax provision).

- 2.3.45 Where workers are non-home-based and they bring family and dependants to the area (who will not be living in the Site Campus), these family and dependants will be expected to register with local NHS services such as general practitioner (GP) and dental provisions. This is assessed as not likely to have a significant adverse demand on these local health services. Further details are available in the HIA (Application Document Reference 8.19).
- 2.3.46 Specific arrangements are not proposed for dental care. It is expected that the majority of UK based workers will remain registered with their permanent dental services provider. It is expected that NHS services would be used for emergency dental services.
- 2.3.47 In terms of school places, whilst there is capacity in some schools now, that may not be the case in the future. IACC will monitor school enrolment. Should localised issues arise where applications are made for places in schools at capacity and IACC can demonstrate the nature of the resulting effect (e.g. temporary short-fall in funding, additional costs for appeals processes etc.) Horizon will provide funding to address this via the Community Impact Fund.
- 2.3.48 However, the nearest school to the WNDA, Ysgol Gynradd Cemaes, is assessed as likely to experience a moderate adverse noise impact with a small magnitude of change as a result of noise from construction, following additional mitigation of noise impacts. The impact on this school and proposed mitigation is further discussed in the noise and vibration section below.

### ***Welsh language***

- 2.3.49 The Lligwy and Twrcelyn area is an area with a relatively high proportion of Welsh speakers. The WLIA (Application Document Reference 8.21) states that the arrival of workers to Anglesey during the construction period will lead to a reduction in the relative proportion of Welsh speakers, since most of these workers will be non-Welsh speakers. The assessment indicates that this would be an overall moderate adverse effect. As the Twrcelyn part of the Lligwy and Twrcelyn study area will experience a larger increase in population than other areas as a result of workers at the Site Campus and elsewhere in the area, this change can be expected to be greater there than in other areas.
- 2.3.50 The assessment considers the effects of population changes on the Welsh language at some local area levels. It states that in the absence of mitigation measures Amlwch would be expected to experience approximately a 6%

increase in population as a result of the Wylfa Newydd Project, potentially leading to a decrease of 3.6% in the percentage point of Welsh speakers in Amlwch. Rural areas will also experience population change; the Site Campus would entail a large increase in the population of Llanbadrig parish (by approximately 4,000) and a temporary reduction in the proportion of Welsh speakers in this area will result.

- 2.3.51 The assessment also considers the impact of the Wylfa Newydd Project on other topics relevant to the Welsh Language including quality of life, economic factors, infrastructure supply and education and social and cultural aspects. Some project-wide effects would impact these factors. The assessment finds that without additional mitigation there would be:
- a potential moderate adverse effect on the language due to an increase in the proportion of non-Welsh speakers in the KSA;
  - a moderate adverse effect on the language due to potential increases in the cost of housing;
  - a moderate adverse effect on the language as a result of increased demand for schools from non-Welsh speakers; and
  - a potential moderate adverse effect on Welsh traditions and culture as a result of the in-migration of non-Welsh-speaking workers.
- 2.3.52 The change in the proportion of Welsh speakers in the population as a result of the in-migration of construction workers would in particular potentially affect areas of northern Anglesey, where construction workers are likely to live; the up to 4,000 workers living in the Site Campus are also likely to be mostly non-Welsh-speaking.
- 2.3.53 Several mitigation measures will be provided by Horizon which are set out in the **WLCMES**. These include providing language awareness raising to Wylfa Newydd Project staff and appointing a Welsh Language and Culture Co-ordinator (WLCC) to focus on the development and implementation of Welsh language and culture mitigation and enhancement measures during construction and operation of Wylfa Newydd.
- 2.3.54 However, the assessment also notes that mitigation measures developed for the Wylfa Newydd Project as a whole, such as the WAMS, Housing Fund and accommodating workers at the Site Campus, will also serve to mitigate the impacts on the Welsh language.
- 2.3.55 In addition, the creation of job opportunities during construction and operation provides opportunities to aid the Welsh language through reducing the out-migration of Welsh-speaking young people from local communities. The assessment notes that there has been a continuous net out-flow and population decrease of young people from Anglesey in recent years, with a net out-flow of 220 among 15-29 year olds between 2014 and 2015. It notes that this may be partly due to a lack of job opportunities, with a reduction of 889 (5.4%) in the number of full-time equivalents (FTEs) in employment between 2009 and 2014. The Wylfa Newydd Project will directly provide a large number of skilled jobs for local young people in Anglesey during

construction and operation of the Power Station. It will also provide indirect benefits to local businesses through additional spending from workers, contracts for local supply chain businesses and revenue to tourism accommodation businesses for bed spaces occupied by workers. This will provide further job opportunities for local people in the Lligwy and Twrcelyn area and result in a moderate beneficial effect in terms of the Welsh language.

- 2.3.56 Several strategies to maximise these opportunities for the Welsh language are also provided in the **WLCMES**<sup>5</sup>, such as advertising jobs through recruitment channels targeting Welsh speakers, distributing information on job opportunities at Wylfa Newydd to young people including through bilingual channels, and through apprenticeship opportunities. In view of this, on balance the effect of population change on the Welsh language is assessed as negligible adverse during construction and minor beneficial during operation.

### Project-wide effects during operation and decommissioning

- 2.3.57 During operation, the workforce for the Wylfa Newydd Power Station is expected to consist of around 850 staff. However, no spatial breakdown of where these workers will live within Anglesey is available and cannot be assessed at the level of the Lligwy and Twrcelyn area. The Project is expected to produce a number of local economic benefits through providing new jobs.
- 2.3.58 Potential socio-economic effects during decommissioning of the Main Power Station are described in the ES, volume C chapter 1 (Application Document Reference 6.3.1). While decommissioning would lead to the loss of jobs and other effects, due to uncertainties over such a long time scale these effects cannot be assessed at the Lligwy and Twrcelyn area level.

### Cumulative population and socio-economic effects

- 2.3.59 Cumulative socio-economic effects as a result of both the Wylfa Newydd Project and other projects are assessed in the ES, volume I chapter 5 (Application Document Reference 6.9.5).
- 2.3.60 There will be cumulative economic benefits as a result of the combination of project-wide effects and the effects of other projects within Anglesey and elsewhere. Increased demand for the local construction sector and the local labour market from the Wylfa Newydd Project and other projects will create opportunities for local workers and businesses. Investment in the local economy would increase as a result of the cumulative effects of increased spending and investments across all projects.
- 2.3.61 A potential cumulative effect has been identified for businesses (including tourism receptors) in Cemaes and Tregele due to combined effects from potential environmental effects and traffic of construction works on local businesses as a result of the Wylfa Newydd Project along with potential adverse environmental effects from the A5025 On-line Highway Improvement

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<sup>5</sup> Appendix to WLIA

works. This has been assessed as a potential minor to moderate adverse effect, although the combination is likely to be temporary and short-term.

### ***Transport***

- 2.3.62 The Wylfa Newydd Project will result in a number of impacts on transport and traffic. This is primarily due to trips generated by workers and freight transport during the construction and operational phases. A full assessment of these impacts is given in the Transport Assessment (Application Document Reference 6.3.14).
- 2.3.63 An assessment of the traffic and transport impact of the Wylfa Newydd Project is also found in the ES, volume C chapter 2 (Application Document Reference 6.3.2); section 2.5 of this document details the forecasted traffic level changes on individual sections of road throughout Anglesey and the Menai Mainland for the opening year of the A5025 Off-line Highway Improvements (both before and after they open), the year of peak construction, and the year of peak operation of the Power Station.
- 2.3.64 During the construction phases of the Wylfa Newydd Project, goods deliveries, heavy goods vehicles (HGVs) and most commuting workers will use the A5025 between Valley and the main access road for the WNDA south of Tregele. As a result, the majority of trips to the WNDA are not likely to directly affect the Lligwy and Twrcelyn study area and will not pass through Tregele and Cemaes.
- 2.3.65 At peak construction, traffic flows along the A5025 (with bypasses) between Tregele and Valley would be increased by between 30% and 58%, with HGV flows increase by between 71% and 101%. However, due to the A5025 On-line and Off-line Highway Improvements, journey times are not expected to increase significantly. A full summary of traffic effects for roads in the Talybolion area (which may be relevant to southbound trips from the Lligwy and Twrcelyn area) is given in section 3.3.
- 2.3.66 Some workers based in the Lligwy and Twrcelyn area and other areas will use the eastern sections of the A5025 to travel to the WNDA through the Lligwy and Twrcelyn area.
- 2.3.67 Trips along the A5025 between Amlwch and Tregele are forecast to rise by a relatively small amount, with a 4% increase over the baseline for peak construction. Other roads in the Lligwy and Twrcelyn area are forecast to experience smaller or negligible increases. No significant effects are expected during operation of the Power Station.
- 2.3.68 Horizon has proposed a network of shuttle buses to transport workers to the WNDA. These would operate from major towns and cities like Holyhead, Bangor and Caernarfon together with settlements in the north and east of Anglesey, as needed. These services are also intended to be flexible, with routes refined to reflect the actual distribution of workers. This is intended to reduce the number of vehicles travelling on roads throughout Anglesey and to minimise traffic impacts during morning and evening peaks. Shuttle buses will

also travel to and from the Park and Ride facility at Dalar Hir which is also intended to minimise traffic impacts due to commuting workers.

- 2.3.69 A Construction Traffic Management Strategy is included within the Wylfa Newydd CoCP (Application Document Reference 8.6) setting out measures to mitigate the impact of traffic; this will include measures and monitoring to ensure construction traffic uses approved routes while travelling. A Traffic Incident Management Strategy to manage incidents on the public highway network would also be provided within the Wylfa Newydd CoCP (Application Document Reference 8.6).
- 2.3.70 It is possible that workers travelling home from the Wylfa Newydd Project sites at the end of the working week may use alternative routes such as through the centre of the island via the B5111. This may potentially impact communities other than those on the A5025. However, this will be spread over several hours at the end of the working week in one direction only, and in the reverse direction on a Sunday evening. This effect therefore has been assessed as not significant given that many of these workers would continue to use the A5025 south of Tregle as intended in the CoCP.

## ***Noise and vibration***

### **Project-wide noise and vibration effects during construction**

- 2.3.71 The Project-wide noise and vibration effects as a result of traffic are assessed in the ES, volume C chapter 5 (Application Document Reference 6.3.5). It indicates that a number of receptors including residential properties will experience noise impacts as a result of the increased traffic levels on certain parts of the road network as a result of the Wylfa Newydd Project.
- 2.3.72 These impacts will include both day- and night-time impacts. These impacts are primarily concentrated along the A5025 south of Tregle; however, some properties in the vicinity of Tregle are assessed as likely to experience noise impacts.<sup>6</sup> During peak construction there are likely to be increases in noise levels as a result of traffic along the A5025 at Tregle; however, the magnitude of this change is assessed likely to be small. A small number of properties near the A5025 at Tregle are likely to experience a small increase in traffic noise levels. A small number of properties in these locations are also likely to experience a small increase in night-time noise levels.
- 2.3.73 The assessment considers three scenarios during construction: two consider the opening year of the A5025 Off-line Highway Improvements, one with and one without improvements – i.e. considering effects before and after the road improvements and bypasses open. Another considers the year of peak construction at the WNDA.
- 2.3.74 Some residential properties located close to the A5025 near Tregle (either outlying properties to the south of Tregle, properties in Tregle itself, or

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<sup>6</sup> See ES Volume C5 Figures (Application Document Reference 6.3.32) for noise maps

properties along the A5025 between Tregele and Cemaes) would experience noise effects during the opening year of the A5025 Off-line Highway Improvements. Without bypasses (i.e. before the new Power Station Access Road Junction opens), 11 properties would experience moderate adverse noise effects. With bypasses (i.e. with the Power Station Access Road Junction open), 16 properties would experience moderate adverse noise effects. During the year of peak construction, 33 properties in the vicinity of Tregele are assessed as likely to experience a moderate adverse noise effect as a result of traffic due to the Wylfa Newydd Project.

- 2.3.75 The ES assessment and the Wylfa Newydd CoCP (Application Document Reference 8.6) sets out strategies to address noise effects from traffic. Noise insulation for residential properties affected by new or altered roads is a statutory duty as set out in national regulations. The Local Noise Mitigation Strategy has been developed which would offer secondary noise insulation to eligible properties. It is estimated that overall this would be offered to 174 residential properties across all areas in the opening year of the A5025 Off-line Highway Improvements without bypasses scenario, 87 in the opening year with bypasses scenario, 94 in the 'peak construction' scenario and 70 in the 'peak operation' scenario. This insulation is intended to lower indoor noise levels in bedrooms and so minimise sleep disturbance; it would not mitigate outdoor noise levels.

### **Project-wide noise and vibration effects during operation**

- 2.3.76 Noise effects from traffic are also assessed as likely to occur during operation of the Power Station; some properties in the vicinity of Tregele are assessed as likely to experience increases in night-time noise during operation. Eight properties in the vicinity of Tregele are assessed as likely to experience a major adverse noise effect as a result of traffic during peak operation while 38 are assessed as likely to experience a moderate adverse effect.

### **Site-specific noise and vibration effects during construction**

- 2.3.77 The noise and vibration effects caused by construction and operation at the WNDA are assessed in the ES, volume D chapter 6 (Application Document Reference 6.4.6). This assesses that residential properties and other receptors closest to the WNDA will experience the largest noise and vibration impacts, which includes receptors in Cemaes and Tregele. These effects will vary in magnitude and significance based on the receptor. This chapter also includes several maps illustrating the geographical spread of noise from the WNDA.
- 2.3.78 Noise effects during construction at the WNDA would result from a number of activities. Site Preparation and Clearance Works would occur first (and only in the daytime) and include vegetation clearance, building demolition and other activities. Site grading would involve topsoil clearance, construction of site routes and some blasting to remove rock outcrops. Other activities include deep excavation to form platforms for construction of the Units, rock processing, Marine Works including construction of the MOLF, construction of



the Power Station Units, concrete production, site logistics and Site Campus construction. A full description of the works that the noise assessment has considered is given in the ES volume D chapter 6.

- 2.3.79 In terms of noise, the assessment finds a small number of residential properties (approximately 11 across all areas) will experience a major significant effect with a large magnitude of change. These mostly are residential properties on the A5025 between Cemaes and Treglele and residential properties in Treglele.
- 2.3.80 A larger number of residential properties (approximately 310 across all areas) are assessed as likely to experience a major significant effect with a medium magnitude of change. These include properties in Cemaes, with a smaller number in Treglele.
- 2.3.81 A further 850 properties are assessed as likely to experience a moderate adverse effect and a small magnitude of effect. Many of these are properties in Cemaes; others fall into the category of 'any property over 1,000m from the WNDA'. The latter includes properties south of the WNDA in the Talybolion area as well as properties within the Twrcelyn part of the Lligwy and Twrcelyn study area.
- 2.3.82 A major adverse noise impact with a medium magnitude of change is assessed as likely to occur for one hotel (Gadlys Hotel near Cemaes). A moderate adverse impact with a medium magnitude of change is assessed for one place of worship (St. Patrick's Church, Llanbadrig, north of Cemaes; see the Cultural Heritage section below for details on mitigation for this historic church). Moderate adverse impacts with small magnitudes of change are assessed as likely to occur for four other hotels in Cemaes and one school (Ysgol Gynradd Cemaes).
- 2.3.83 Horizon is committed to liaising with Ysgol Gynradd Cemaes to identify practical mitigation measures to reduce or manage these residual effects. These measures could include the installation of noise insulation measures to reduce noise levels within teaching spaces and/or the provision of additional teaching resources. Funding will be made available through the Community Impact Fund to implement agreed mitigation measures. These measures would be secured through a Section 106 agreement.
- 2.3.84 A large magnitude of change is assessed as likely to occur for one commercial premise between Treglele and Cemaes; however, this will be a moderate adverse effect since commercial buildings are assessed as being less sensitive to noise effects. Minor adverse (and not significant) or negligible impacts with small or negligible magnitudes of change are assessed as likely to occur for other community buildings, schools, places of worship and commercial buildings near the WNDA including in Cemaes and Treglele.
- 2.3.85 A number of embedded and good practice measures will be incorporated into construction phase design and activities. These include best practice construction measures set out in the Wylfa Newydd CoCP (Application Document Reference 8.6) and in the CoCPs for each Associated Development. A number of additional mitigation measures have been



proposed within the ES to address identified potential impacts. These measures will reduce the magnitude of effects experienced at a number of residential properties as well as at schools and other community buildings, but will not avoid impacts entirely; the above effects are those occurring following mitigation.

- 2.3.86 A small number of properties near the WNDA are also assessed as likely to experience some vibration effects as a result of construction activity. Additional mitigation measures are proposed to address these effects, including the use of alternate working methods and vibration monitoring. These are assessed as likely to reduce the magnitude and significance of effects; as a result, the impacts are assessed as likely to be of a small magnitude of change and of moderate adverse significance.
- 2.3.87 The ES, volume G chapter 6 (Application Document Reference 6.7.6) assesses potential noise and vibration effects expected to occur as a result of the construction of the A5025 Off-line Highway Improvements. It states that no significant noise or vibration effects are likely to occur as a result of the construction of the new Power Station Access Road Junction to the south of Treglele.

#### **Site-specific noise and vibration effects during operation**

- 2.3.88 During normal operation of the Power Station, no significant adverse noise effects are expected to occur. It is possible that some occasional noise effects may occur as a result of emergency testing and drills (for example the testing of emergency alarms) as well as the routine testing of Emergency Diesel Generators, but these effects are not assessed as a significant impact.

#### **Site-specific noise and vibration effects during decommissioning**

- 2.3.89 Some residential properties and other buildings are assessed as likely to be exposed to long-term noise levels as a result of decommissioning of the Power Station. While noise levels would be lower than during construction, these would also occur over a much longer period. However, given that decommissioning would occur some considerable time in the future, it is not possible to quantify the properties affected.

#### **Cumulative noise and vibration effects**

- 2.3.90 Cumulative effects as a result of both the Wylfa Newydd Project and other projects are assessed in the ES, volume I chapter 5 (Application Document Reference 6.9.5). It identifies potential cumulative noise effects arising for some residential receptors in Treglele as a result of the combination of noise as a result of the Wylfa Newydd Project (including traffic on the A5025) and the potential for noise and vibration effects due to the Existing Power Station decommissioning. Similar potential cumulative effects have been identified for community buildings, places of worship, schools and hotels in Treglele and Cemaes. The potential effects result from the overlapping of the Projects and are assessed as moderate adverse.

## ***Air Quality***

- 2.3.91 Air quality effects as a result of the Wylfa Newydd Project are assessed as possible during construction phases as a result of project-wide traffic and from site-specific activities; no significant effects are expected during operational phases.

### **Project-wide air quality effects**

- 2.3.92 The potential project-wide air quality effects of traffic are assessed in the ES, volume C chapter 4 (Application Document Reference 6.3.4). This states that at peak construction (the period with the highest potential impacts), most air quality effects are expected to occur on the A5025 between Valley and the proposed new Power Station Access Road Junction south of Tregele.
- 2.3.93 The assessment calculates changes to air quality as a percentage change on Air Quality Objectives (AQOs), which are set by IACC and are used as a reference to describe relative change.
- 2.3.94 Additional road traffic using the A5025 at Cemaes and Tregele is predicted to change annual mean NO<sub>2</sub> concentrations by the equivalent of between +1% and +3% of the AQO value. Within Cemaes and Tregele, the magnitude of the change decreases to less than 1% of the AQO values rapidly with increasing distance from the A5025. The additional road traffic on the A5025 between Cemaes and Amlwch is assessed as causing a negligible adverse effect on local air quality.
- 2.3.95 Air quality effects of traffic on ecological receptors including the SSSIs are not assessed as significant.

### **Site-specific air quality effects**

- 2.3.96 The potential air quality effects of the WNDA are assessed in the ES, volume D chapter 5 (Application Document Reference 6.4.5).
- 2.3.97 During construction, there will be a number of activities with the potential to cause air quality impacts for receptors such as residential properties in/near Tregele and Cemaes as well as other receptors such as PRoW users or ecological receptors. Potential impacts include dust emissions, odour emissions from excavation and the proposed package sewage treatment plant and emissions from plant, machinery and marine vessels.
- 2.3.98 A large number of good practice, embedded and additional mitigation measures have been proposed in the assessment for the construction period. Dust emissions will be controlled through water suppression to dampen stockpiles, sheeting of vehicles containing dusty materials and several other measures. Odour emissions will be controlled through monitoring, the use of spill kits and other measures. Air emissions will be controlled through restricting idling engines, using electric equipment where practicable and other measures. These strategies are specified within the dust and air quality management strategies in the CoCP.

- 2.3.99 Without additional mitigation, some receptors including residential properties in/near Tregele and Cemaes and users of footpaths are assessed as likely to experience significant adverse air quality effects as a result of air emissions from construction activities; these would result from emissions of NO<sub>x</sub> from construction plant and machinery during peak earthworks and Marine Works leading to potential exceedances of the one-hour mean AQO for NO<sub>2</sub> and large increases in annual mean NO<sub>2</sub> concentrations. However, with the application of additional mitigation measures set out in the ES no significant effects are assessed as likely to occur.
- 2.3.100 No significant air quality effects are assessed as likely to occur during operation or decommissioning of the Power Station.
- 2.3.101 The potential air quality effects of the construction of the A5025 Off-line Highway Improvements have been assessed in the ES, volume G chapter 5 (Application Document Reference 6.7.5). Due to embedded and good practice mitigation, no significant adverse dust emissions or other air quality effects are assessed as likely to occur during construction of the new Power Station Access Road Junction to the south of Tregele.

### ***Landscape and visual***

- 2.3.102 Some receptors within the Lligwy and Twrcelyn study area (particularly within the Twrcelyn part of this study area) will experience a landscape and visual impacts as a result of the Wylfa Newydd Project. This is because of the presence of the WNDA within the area. It is anticipated that these effects will be concentrated in the north-west due to the proximity of the WNDA.
- 2.3.103 Adverse impacts on the landscape will occur because of the removal of some landscape elements such as fields and rocky shorelines, the intrusive effect of construction activities such as earthworks or temporary buildings, and the introduction of new development into the landscape. Adverse visual impacts occur where a receptor (i.e. a person likely to view the activity, such as local residents, users of local roads and PRowS, visitors and local communities) would be able to view construction activities or new elements which would be intrusive and detrimental to existing views.
- 2.3.104 The landscape and visual impacts of the WNDA are assessed in the ES, volume D chapter 10 (Application Document Reference 6.4.10). The construction of the Power Station and other facilities within the WNDA will both impact on the landscape through construction activities and introduce a number of new, large and incongruous structures and features.
- 2.3.105 All field boundaries, including hedgerows, stone walls and cloddiau<sup>7</sup> within the WNDA would be removed, with the exception of those outside the proposed perimeter fence, which would be retained.
- 2.3.106 A number of significant landscape and visual impacts would occur in relation to the Anglesey AONB and the non-designated wider landscape (which is land

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<sup>7</sup> Stone-faced earth banks built to traditional Welsh patterns.

within the ES study area but which is not within the AONB or the Anglesey and Gwynedd Joint Local Development Plan's Special Landscape Areas (SLAs)) as well as local landscape areas. This would occur as a result of Site Preparation and Clearance Works, Main Construction and operation. Effects would include clearance and fencing during Site Preparation and Clearance Works, groundworks and excavation, formation of storage mounds, movement of plant and machinery and loss of existing landscape elements.

- 2.3.107 During Main Construction, the existing drumlin<sup>8</sup> landform of the AONB within the WNDA would be permanently altered. The rocky shoreline of Porth-y-pistyll bay would be altered by the erection of engineered structures for the construction of the MOLF and CWS intake. The construction of the Power Station would also have significant landscape impacts including the erection of tall cranes up to 250m high.
- 2.3.108 The North Anglesey Heritage Coast would also be affected by construction activities. This would include in particular the construction of the MOLF, breakwaters and CWS intake structures. The effect is assessed as moderate adverse for Site Preparation and Clearance Works and major adverse for Main Construction. Local Seascape Character Areas (LSCA) will similarly be affected by construction activities on both land and sea with impacts ranging from major adverse to minor adverse based on proximity of direct impacts. Some Enabling Works and construction activities will directly impact Wylfa Head, which will be close to the Site Campus. Outer Cemaes Bay will also be impacted by construction of the Site Campus and bulk earthworks.
- 2.3.109 Direct visual impacts as a result of Site Preparation and Clearance Works and Main Construction will affect communities in the area, principally Tregele and Cemaes. Site Preparation and Clearance Works would mostly generate significant visual effects up to approximately 1km distance. The most significant visual impacts generated by Main Construction activities would be for up to approximately 3km distances. They would also vary over time as different construction activities occur throughout the site.
- 2.3.110 Other groups affected by visual impacts as a result of construction would include walkers on the WCP, users of PRoWs and road users.
- 2.3.111 Users of the WCP and other PRoWs would be most affected at sections which give large open views towards the WNDA. Users of PRoWs and other walkers would experience effects varying based on location; impacts would vary from moderate to major adverse for affected sections.
- 2.3.112 The Cemaes community would be exposed to some visual impacts and views of construction. Bulk earthworks and landscape mounds would be visible from the western fringe of the village. Cranes would also be visible from Cemaes. Views from Cemaes would vary based on location and are assessed as varying from moderate to major adverse.

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<sup>8</sup> Elongated hills created by glacial deposition.

- 2.3.113 The Tregele community would also experience some visual impacts, in particular relating to fencing and preparation works. A 7m high landscaped bund would be formed adjacent to Tregele on the south-eastern edge of the WNDA, alongside the A5025, in the early stages of construction. This is intended to mitigate visual impacts. However, some aspects of construction would remain visible, particularly tall cranes.
- 2.3.114 As part of mitigating environmental effects on the Tre'r Gof SSSI, a site at Tŷ Du to the east of Cemaes has been chosen to regenerate and manage a mire habitat. This site is in a rural area; however, some activities at the site including setting up management infrastructure and scrub clearance would be visible from one residential property to the east and one PRow, with a moderate adverse effect. This activity would also open up views across the site due to scrub clearance and views would be affected when activity is complete.
- 2.3.115 A number of landscape and visual impacts are also expected during operation of the Power Station. However, these would generally be lower than during construction. Mitigation and landscaping measures would address these impacts and would help to partially integrate the Power Station into the local landscape. These would also become more effective over time as planting and hedgerows mature.
- 2.3.116 There would be some permanent effects on the AONB including from the Power Station, breakwaters and the MOLF; there would be a localised impact on the affected section of the AONB of major adverse nature, although this would not be permanently significant for the AONB as a whole. The North Anglesey Heritage Coast, LSCAs, Non-designated wider landscape and Local Landscape Character Areas (LLCAs) would also be permanently affected in a similar fashion, depending on proximity.
- 2.3.117 A number of embedded and good practice mitigation features will be implemented during the construction and operation phases. For the construction phase this will include:
- landscaping including optimised earthworks design, landscape mounding and planting to help soften views; and
  - construction management as set out in the Wylfa Newydd CoCP (Application Document Reference 8.6) and site-specific sub-CoCPs.

During operation mitigation measures would include the implementation of a long-term landscape strategy; woodland, hedgerow and scrub planting; and the return of land to pasture and landscape restoration. The Wylfa Newydd Code of Operational Practice (Application Document Reference 8.13) also contains a landscape and visual strategy to manage and mitigate landscape and visual impacts during operation of the Power Station. A series of additional mitigation measures have also been set out in section 10.6 of the ES, volume D chapter 10 (Application Document Reference 6.4.10).

### **Cumulative landscape and visual effects**

- 2.3.118 Cumulative effects as a result of both the Wylfa Newydd Project and other projects are assessed in the ES, volume I chapter 5 (Application Document Reference 6.9.5). A number of other developments will have landscape and visual impacts leading to some cumulative impacts in combination with those of the Wylfa Newydd Project listed above.
- 2.3.119 In terms of the Anglesey AONB, there would be adverse cumulative landscape effects as a result of the combination of visual intrusions from the Wylfa Newydd Project and other projects including the Existing Power Station decommissioning. However, these would be localised and range from major adverse locally to a minor adverse effect on the overall AONB. There would be similarly localised cumulative landscape effects on LLCAs, potentially of major adverse effect locally. The North Anglesey Heritage Coast would be locally affected by cumulative impacts from the Wylfa Newydd Project and other projects including the Existing Power Station decommissioning, with major adverse effects locally but minor adverse effects overall.
- 2.3.120 In terms of visual impacts, users of the WCP, local PRoWs, the Copper Trail/NCN Route 566, open access land and the local road network would experience changes in visual amenity and a cumulative visual effect as the result of both the Wylfa Newydd Project and other projects. Users would experience sequential, simultaneous and/or consecutive visibility at localised sections. This cumulative effect has been assessed as moderate adverse.
- 2.3.121 The community of Cemaes would potentially experience moderate to major adverse visual impacts as a result of simultaneous and/or consecutive views of the Wylfa Newydd Project (principally the WNDA) along with other projects including the Existing Power Station decommissioning, the North Wales Connection Project, the Rhyd-y-Groes Re-power (the consented onshore windfarm) and the Wylfa Newydd Potable Water Supply. Effects on visual amenity associated with these projects would be greatest during their associated construction phases as a result of the presence of construction vehicles, the potential loss of groundcover and/or landscape features such as hedgerows and trees. These cumulative effects would be long term and greatest during the construction phase at the WNDA. Residual effects would decrease over time as mitigation planting matures.
- 2.3.122 The community of Tregele would also potentially experience moderate adverse visual impacts as a result of simultaneous and/or consecutive views of the Wylfa Newydd Project (principally the WNDA) along with other projects. Effects on visual amenity associated with these projects would be greatest during their associated construction phases as a result of the presence of construction vehicles, the potential loss of groundcover and/or landscape features such as hedgerows and trees. These cumulative effects would be long term and greatest during the construction phase at the WNDA. Residual effects would decrease over time as mitigation planting matures.



### ***Public access and recreation***

- 2.3.123 The nature of the Wylfa Newydd Project will entail a number of impacts on the access and amenity of users of public recreation features in the Twrcelyn part of the Lligwy and Twrcelyn study area. This will be as a result of work at the WNDA.
- 2.3.124 The impacts of the WNDA on public access and recreation are summarised in the ES, volume D chapter 4 (Application Document Reference 6.4.4).
- 2.3.125 During construction, the erection of perimeter fencing will result in the permanent closure of 32 PRoWs within the WNDA. These are listed in full in the ES. Some PRoWs outside but near the WNDA may be affected by impacts from construction such as noise, dust or visual amenity. These impacts would range from minor to moderate adverse depending on the section of PRoW.
- 2.3.126 Sections of the WCP would also be permanently diverted following the erection of perimeter fencing. During construction, a temporary alternative route between Cemlyn Bay and Cemaes around the boundary of the perimeter fencing has been identified, although this would be a longer route than at present by approximately 4.7km. This would represent a major adverse effect. This route would also be affected by the change in the nature of the footpath due to the wire-mesh perimeter fencing, views of construction activity and the loss of sea views for this section leading to a loss in attractiveness. The WCP would also be affected by loss of amenity during Main Construction due to impacts from activities such as noise, dust and visual effects, such as those associated with the construction of the Site Campus near the WCP between Porth Wylfa and Wylfa Head.
- 2.3.127 A section of the Copper Trail/NCN Route 566 between Cemlyn Bay and Llanfechell (via Tregele) along Cemlyn Road would be permanently closed. The Copper Trail would be diverted along Nanner Road and would also have to use the A5025 to link between minor roads to Llanfechell. While Horizon has completed improvements to Nanner Road in anticipation of the closure of Cemlyn Road, it is nevertheless a narrower road and is likely to experience additional traffic, resulting in a reduction of amenity. In addition to improvements to Nanner Road, Horizon would provide a segregated cycle path along the A5025 for the section between Nanner Road and Llanfechell which will mitigate the impact of diversions at this section.
- 2.3.128 Access to Wylfa Head including from Cemaes would be maintained throughout construction as a significant local recreational resource. However, there would be a reduction in recreational amenity. Visitors to Wylfa Head would be affected by the closure of the Fisherman's car park due to the erection of perimeter fencing, which would affect some current users. Visitors may also be affected by the introduction of some incongruous views of fencing and cranes as well as other impacts such as noise and dust.

- 2.3.129 There would be a moderate adverse effect on the GeoMôn Geopark<sup>9</sup> which would affect visitors to this site. The construction of an outfall through the cliff face would necessitate the removal and destruction of part of the Porth Wnal Regionally Important Geological/Geodiversity Site.
- 2.3.130 Porth Wylfa and Porth yr Ogof beaches would be affected by the closure of Fisherman's car park, with increased distance to the nearest car park which may discourage some visitors, representing a moderate adverse effect. These beaches would also be affected by impacts from construction such as noise.
- 2.3.131 In order to mitigate the effects of the construction of the Power Station on public access, Horizon will provide a contribution to IACC to fund improvements to the PRoW network near to the WNDA, the A5025 between Valley and Tregele or to sections of the WCP. In discussions with IACC, emphasis would be placed on improving PRoWs that are in close proximity to the Wylfa Newydd Development Area or adjoin the A5025 between Valley and Tregele or on sections of the Wales Coast Path at any location on Anglesey. This would be secured through a Section 106 agreement. This mitigation would reduce the effect as result of the loss of PRoWs within the WNDA to moderate adverse; however, this would depend on the sum of money and number of PRoWs that could be improved. Horizon would also contribute a payment for Sustrans to update the Copper Trail leaflet to reflect permanent diversions and for IACC to update signage.
- 2.3.132 Once construction is complete, the WCP would be diverted again along a shorter route between Cemlyn Bay and Wylfa Head, with a replacement car park provided and the existing WCP resurfaced. This route has been designed to be as close to the sea as practicable and would be an improvement on the diverted route during construction, although it would still be about 1.5km longer than the original route and would represent a major adverse effect compared to the original.
- 2.3.133 A new car park would be provided during operation at the location of Fisherman's car park which will reinstate accessibility to Wylfa Head and the beaches. Views from Wylfa Head may be affected by the introduction of the Power Station as an incongruous industrial building; however, landscaping features for the Power Station such as mounding are designed to mitigate this impact.
- 2.3.134 New PRoWs would be created within the WNDA during operation as well as a nature trail and the provision of picnic tables, the new car park and interpretation boards.

### ***WNDA Cultural heritage***

- 2.3.135 It is recognised that the effects on the setting of cultural heritage assets is a key community concern. The ES, volume D chapter 11 (Application Document

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<sup>9</sup> A European Geopark is a territory, which includes a particular geological heritage and a sustainable territorial development strategy supported by a European programme to promote development.



Reference 6.4.11) assesses the impacts of the WNDA on cultural heritage. It states that construction activities would intrude on views on the approach to St. Patrick's Church, Llanbadrig as well as on views over the roof of the church from the east extension of the graveyard. Noise from construction activities would also detract from the quietness of the church's setting. This would lead to a moderate adverse effect on this asset. Views of construction would be in the context of the Existing Power Station, and would be screened from the church and the historic graveyard by local topography. Other attributes of the church's setting would not be affected. A photographic survey would be carried out to create a permanent record of the church's setting.

- 2.3.136 In addition, Horizon is committed to identify practical mitigation measures for St. Patrick's Church, Llanbadrig to reduce or manage residual noise effects due to construction noise from the WNDA. These measures could include the installation of noise insulation measures to reduce noise levels within the church, however any potential cultural heritage effects will have to be considered. Alternative measures, such as a speech amplification system, will also be discussed. Funding will be made available through the Community Impact Fund to implement agreed mitigation measures. These measures would be secured through the Section 106 agreement.

## **2.4 Combined topic effects and summary**

### **Combined topic effects**

- 2.4.1 Some in-combination effects (those where a receptor is affected in more than one way) are assessed as likely to occur for communities in the Twrcelyn part of the Lligwy and Twrcelyn area. Significant combined effects are assessed in the ES, volume D chapter 16 (Application Document Reference 6.4.16) as likely to occur for Tregle and Cemaes during construction and decommissioning as a result of impacts identified above such as noise, vibration and visual impacts, in combination with minor air quality impacts from dust, and a not significant increase in flood risk. Significant combined effects are assessed as likely to occur for residential properties on the western edge of Tregle during construction and decommissioning as a result of the combination of impacts identified above including noise, visual amenity and minor dust effects.
- 2.4.2 Some potential combined effects are assessed in the ES, volume G chapter 12 (Application Document Reference 6.7.12) as likely to occur as a result of the construction of the A5025 Off-line Highway Improvements. At Tregle (north of the proposed new Power Station Access Road Junction), combined effects may occur for some properties as a result of the combination of noise effects, visual impacts and some minor and not significant effects.
- 2.4.3 There are likely to be some combined effects on residents in the vicinity of Tŷ Du during construction due to adverse effects resulting from an increase in noise levels and vibration, in combination with changes in visual amenity. These could arise as a result of minor adverse noise effects at two properties located in close proximity to the north and east of the site, in combination with

moderate adverse effects on visual amenity. It is likely that some people affected would perceive this combined effect to be significant.

### **Neighbourhood Support Scheme**

- 2.4.4 Horizon has developed a Neighbourhood Support Scheme which includes a Property Price Support plan. The Property Price Support plan is a voluntary support plan for eligible residents living near the Power Station Site who wish to move but experience difficulties in achieving a reasonable market price for their property due to the Wylfa Newydd Project. The Property Price Support plan is intended to offer residents of eligible properties within the scheme area the difference between their property values with and without the Wylfa Newydd Project as well as a £5,000 sum towards the costs of moving and professional fees. This scheme came into effect in April 2015 and is expected to remain in place until construction of the Power Station is completed.

### **Summary and residual effects**

- 2.4.5 In summary, a number of impacts are expected to directly affect the Lligwy and Twrcelyn study area. These are particularly concentrated around the WNDA in the Twrcelyn part of the study area and will particularly affect Tregele and Cemaes. Impacts will relate to the effects of construction and operation of the Power Station as well as impacts as a result of workers seeking accommodation in the area.
- 2.4.6 Of the non-home-based workers, modelling estimates that 160 may live in Amlwch and 261 in Benllech/Llanbedrgoch. The WAMS will seek to match accommodation demand to supply, and monitor the effects. A Housing Fund will provide support for housing in the local area to mitigate localised impacts.
- 2.4.7 Tregele and Cemaes are closest to the Site Campus, where many workers will live. A range of on-site welfare, leisure, sport and recreational amenities, retail and convenience stores, a bar and medical services aim to mitigate the effects on local communities. A Workforce Management Strategy and CoCP are other measures, including a CLG, and Community Involvement Officers, as well as a dedicated hotline.
- 2.4.8 Beneficial effects are likely in the local economy and labour market, while potential effects on the Welsh language are identified as a result of the additional workforce.
- 2.4.9 Noise and vibration effects are identified for areas near the construction site, including in Tregele and Cemaes, affecting residents and community buildings including Ysgol Gynradd Cemaes. These effects result from construction activity and traffic on the A5025.
- 2.4.10 During construction and operation there will be landscape and visual impacts, including on the AONB, the WCP, Copper Trail and other PRoWs, as well as from Tregele and Cemaes. The setting of St Patrick's Church in Llanbadrig would also be affected during construction.
- 2.4.11 A number of footpaths and other areas of access around the WNDA will be affected by temporary or permanent closures or diversions.

- 2.4.12 Following mitigation, there will be some significant residual effects (including but not limited to cumulative and in-combination effects) across all topics. Table 2-2 below summarises residual effects in the Lligwy and Twrcelyn area.

**Table 2-2 Residual effects (after mitigation), Lligwy and Twrcelyn area**

Receptor	Description of Effect	Phase	Additional Mitigation	Residual effect
<b>Socio-economics</b>				
Labour market on Anglesey	Increase in employment as a result of construction and operation.	Construction/operation	-	Major beneficial
Private Rented Stock (PRS) accommodation in the key socio-economic study area (KSA)	Increase in demand for bed spaces.	Construction	Workforce Accommodation Strategy measures	Minor adverse
Tourism sector in Anglesey	Damage to brand and attractiveness of Anglesey tourism.	Construction	Tourism fund	Minor adverse
Local economy in north Wales	Investment in local economy.	Construction and operation	-	Moderate beneficial
Community Amenity (Tregele and Cemaes)	Reduction in amenity due to construction impacts and traffic.	Construction	Community Impact Fund to mitigate unforeseen impacts	Moderate adverse
Local businesses (including tourism), Tregele and Cemaes	Reduction of amenity in Local Area of Influence (LAI) in Tregele and Cemaes may affect.	Construction	Community Impact Fund to mitigate unforeseen impacts	Minor-moderate adverse
Welsh language - moderate adverse as result of population change	Drop in relative proportion of Welsh speakers due to in-migration of construction workers.	Construction	Measures in WLCMES and in Workforce Accommodation Strategy	Potential moderate adverse (to be monitored)

Receptor	Description of Effect	Phase	Additional Mitigation	Residual effect
Welsh language - change in proportion in Amlwch	Drop in relative proportion of Welsh speakers due to in-migration of construction workers.	Construction	Measures in WLCMES and in Workforce Accommodation Strategy	Potential moderate adverse (to be monitored)
Welsh language - potential effects due to housing demand	Increased cost of housing for local Welsh speakers.	Construction	Measures in WLCMES and in Workforce Accommodation Strategy including Housing Fund	Potential moderate adverse (to be monitored)
Welsh language - potential effects due to school demand	Potential increase in the number of non-Welsh speaking children in local schools, altering balance of Welsh speakers and non-speakers in schools.	Construction	Measures in WLCMES	Potential moderate adverse (to be monitored)
Welsh language - potential effects on traditions & culture	In-migration of non-Welsh speakers from different background/culture.	Construction	Measures in WLCMES and in Workforce Accommodation Strategy including Housing Fund	Potential moderate adverse (to be monitored)
Welsh language - beneficial effects from economic benefits, investment, employment	Economic benefits of Project creating jobs for local people and reducing out-migration of Welsh-speaking young people.	Construction and operation	Enhancement measures in WLCMES	Moderate beneficial
Cumulative effect - economic investment	Local economic investment and spending as a result of Wylfa Newydd Project and other projects.	Construction and operation	-	Moderate beneficial
Cumulative - businesses in	Combined effects from Project and others including A5025 On-line	Construction and operation	-	Moderate beneficial

Receptor	Description of Effect	Phase	Additional Mitigation	Residual effect
Cemaes and Tregele	Improvements: prolonged time period of exposure to effects.			
Vulnerable groups identified in HIA living near WNDA/local road network	Combined effects from traffic, air quality etc.	Construction	Measures in HIA	Up to moderate adverse
<b>Noise and Vibration</b>				
Residential receptors in the vicinity of Tregele	Increased noise levels from traffic on the A5025 before A5025 Off-line Highway Improvements completed.	Opening year of the A5025 Off-line Highway Improvements	Offers of noise mitigation/insulation to occupants of eligible properties	Moderate adverse (11)
Residential receptors in the vicinity of Tregele	Increased noise levels from traffic on the A5025 with A5025 Off-line Highway Improvements completed and operational.	Opening year of the A5025 Off-line Highway Improvements	Offers of noise mitigation/insulation to occupants of eligible properties	Moderate adverse (16)
Residential receptors in the vicinity of Tregele	Increased noise levels from traffic on the A5025 with A5025 Off-line Highway Improvements completed and operational.	Peak construction	Offers of noise mitigation/insulation to occupants of eligible properties	Moderate adverse (33)
Residential receptors in the vicinity of Tregele	Increased noise levels (long-term) from traffic on the A5025 with A5025 Off-line Highway Improvements completed and operational.	Peak operation	Offers of noise mitigation/insulation to occupants of eligible properties	Major adverse (8) Moderate adverse (35)
Residential properties near the WNDA	Noise as a result of construction activities.	Construction	Noise barriers in the form of bunds and working behind	Major adverse (321 properties,

Receptor	Description of Effect	Phase	Additional Mitigation	Residual effect
			outer faces of mounds; offers of noise mitigation/insulation to occupants of eligible properties; Continuous noise monitoring will be undertaken and escalation actions undertaken in the case that they exceed threshold levels.	across all areas); moderate adverse (850 properties, across all areas)
Hotels in Cemaes	Noise as a result of construction activities.	Construction	Noise barriers in the form of bunds and working behind outer faces of mounds	Major adverse at one, moderate adverse at four
Community receptors in Tregele and Cemaes	Noise as a result of construction activities.	Construction	Noise barriers in the form of bunds and working behind outer faces of mounds	Moderate adverse at one school (Ysgol Gynradd Cemaes); Moderate adverse at one place of worship (St. Patrick's Church, Llanbadrig)
Commercial premises (Tregele/Cemaes)	Noise as a result of construction activities.	Construction	Noise barriers in the form of bunds and working behind	Moderate adverse at one

Receptor	Description of Effect	Phase	Additional Mitigation	Residual effect
			outer faces of mounds	commercial premise
Residential properties near the WNDA	Vibration as a result of construction activities.	Construction	Vibration control and monitoring measures set out in ES.	Moderate adverse
Cumulative - residential properties and community buildings Tregele/Cemaes	Noise from Project and Existing Power Station decommissioning; effect arising from overlap of effects.	Construction	N/A	Moderate adverse
<b>Landscape and visual</b>				
North Anglesey Heritage Coast/LSCAs	Construction of MOLF breakwaters, CWS intake etc.	Construction	Protection of existing rocky shoreline and intertidal zone. Use of appropriate materials for MOLF and breakwaters.	Moderate to major adverse (directly affected area)
Anglesey AONB	Impacts including removal of landscape features, removal of field boundaries, etc in WNDA.	Construction	Measures in ES.	Major adverse [area directly affected]



Receptor	Description of Effect	Phase	Additional Mitigation	Residual effect
Non-designated wider landscape (directly affected area)	Impacts including removal of landscape features, removal of field boundaries, etc in WNDAs.	Construction	As above	Major adverse
LLCAs	Impacts including removal of landscape features, removal of field boundaries, etc in WNDAs.	Construction	As above	Moderate to major adverse
Communities of Tregele and Cemaes	Views of construction activities, including cranes, earthworks etc.	Construction	As above	Moderate to major adverse
Residential receptors in/near Cemaes and Tregele	Views of construction activities, including cranes, earthworks etc.	Construction	As above	Moderate to major adverse
Users of WCP, PRowS, local road users	Views of construction activities, including cranes, earthworks etc.	Construction	As above	Moderate to major adverse
Copper Trail/NCN Route 566	Views of construction activities, including cranes, earthworks etc.	Construction	As above	Moderate adverse
Anglesey AONB (directly affected area)	Permanent effect as a result of the Power Station buildings, breakwaters and MOLF.	Operation	Implementation of a long-term landscape strategy; measures in ES.	Major adverse decreasing over time to moderate adverse
Non-designated wider landscape (directly affected area)	Permanent effect as a result of the Power Station buildings, breakwaters and MOLF.	Operation	As above	Major adverse decreasing over time to moderate adverse

Receptor	Description of Effect	Phase	Additional Mitigation	Residual effect
Heritage Coast, LSCAs, LLCAs	Permanent effect as a result of the Power Station buildings, breakwaters and MOLF.	Operation	As above	Minor to major adverse (directly affected areas)
Users of WCP, PRowS, local road users	Permanent effect as a result of the Power Station buildings.	Operation	As above	Minor to major adverse (effects decreasing over time)
Communities of Tregele and Cemaes	Permanent effect as a result of the Power Station buildings.	Operation	As above	Moderate to major adverse (effects decreasing over time)
AONB/ Non-designated wider landscape (directly affected area)	Cumulative effect from multiple projects.	Construction /operation	Measures in ES	Major adverse locally, minor adverse overall
Users of WCP, PRowS, local road users	Cumulative effect from multiple projects.	Construction/ operation	As above	Major adverse locally, minor adverse overall
Community of Cemaes	Cumulative effect from multiple projects.	Construction/ operation	As above	Moderate to major adverse
Community of Tregele	Cumulative effect from multiple projects.	Construction/ operation	As above	Moderate to major adverse
One residential property and users of one PRow with views of Tŷ Du	Potential views of works including scrub clearance.	Construction/ operation	None proposed	Moderate adverse

Receptor	Description of Effect	Phase	Additional Mitigation	Residual effect
Ecology Compensation Site				
<b>Public access and recreation</b>				
PRoWs in WNDA	Permanent closure of 32 PRoWs in WNDA.	Construction	Payment to IACC for them to spend on improving other PRoW in the vicinity of the site as an overall improvement to the PRoW network beyond the Wylfa Newydd Development Area during construction.	Major to moderate adverse
PRoWs near WNDA	Loss of amenity due to construction impacts.	Construction	None identified	Minor to moderate adverse
WCP	Permanent closure of sections; diversions leading to longer route; loss of amenity due to construction impacts.	Construction	None identified	Major adverse
Visitors to Wylfa Head	Reduction in amenity due to construction impacts including noise, dust, visual intrusion and closure of Fisherman's car park.	Construction	None identified	Moderate adverse
GeoMôn Geopark	Damage to part of Porth Wnal site due to construction of an outfall.	Construction	Erection of interpretation boards explaining the RIGS	Moderate adverse

Receptor	Description of Effect	Phase	Additional Mitigation	Residual effect
WCP	Permanent increase in length of route and loss of sea views.	Operation	None identified	Major adverse
Users of PROWs	Creation of new PROWs during operation including provision of routes suitable for wheelchair users, picnic areas, interpretation boards and a nature trail.	Operation	-	Moderate beneficial
WCP users	Cumulative effect from impacts of multiple projects, increasing length of time affected.	Construction/operation	None identified	Major adverse
<b>Cultural Heritage</b>				
St. Patrick's Church, Llanbadrig	Construction activities and Site Campus would affect views. Construction noise would detract from the quietness that forms part of this heritage asset's setting.	Construction	Photographic survey of asset.	Moderate adverse

## 3 Talybolion

### 3.1 Introduction

- 3.1.1 The Talybolion Area consists entirely of a ward of the same name in the north-west of the Isle of Anglesey. It is largely rural and includes the villages of Llanfechell, Llannerch-y-medd, Llanfaethlu, Carreglefn, Elim and a number of other small settlements.
- 3.1.2 This chapter summarises the main effects of the Wylfa Newydd Project in this area, and should be read alongside chapter 1 which sets the context.
- 3.1.3 This CIR has been developed in response to feedback, including from IACC. It has also been written with regard to key local concerns identified through the statutory consultation process. These are summarised in section 1.4 of this report.
- 3.1.4 This report looks at how these project-wide effects may be felt locally by the community, including looking at the expected distribution of workers in different areas. It also looks at the more specific local effects of individual parts of the Wylfa Newydd Project, whether it be the WNDA, or Associated Development elsewhere, such as A5025 Off-line Highway Improvements. Where relevant the cumulative effect of these different parts of the development together is also considered.
- 3.1.5 As part of the application, various mitigation measures are planned to lessen or avoid many of the potential impacts. Where relevant to local effects these are described in this CIR.
- 3.1.6 This chapter includes a context section describing the area and what development will affect it, and then summarises the effects under topic headings. Many of the local effects, including those arising from the construction workforce, are included in the section on socio-economics. Other topic sections are transport, noise/vibration, air quality, landscape/visual, and public access and recreation.
- 3.1.7 This report is based on the assessments that make up the DCO application, including the ES, WLIA (Application Document Reference 8.21), HIA (Application Document Reference 8.19) and EqIA (Application Document Reference 8.22). Those other documents cover the full range of potential impacts, of which this document summarises only the ones which are significant for local communities. If after reading this chapter you want further information, see appendix 8-2 for details of other relevant documents.

### 3.2 Context

#### *Project development in this area*

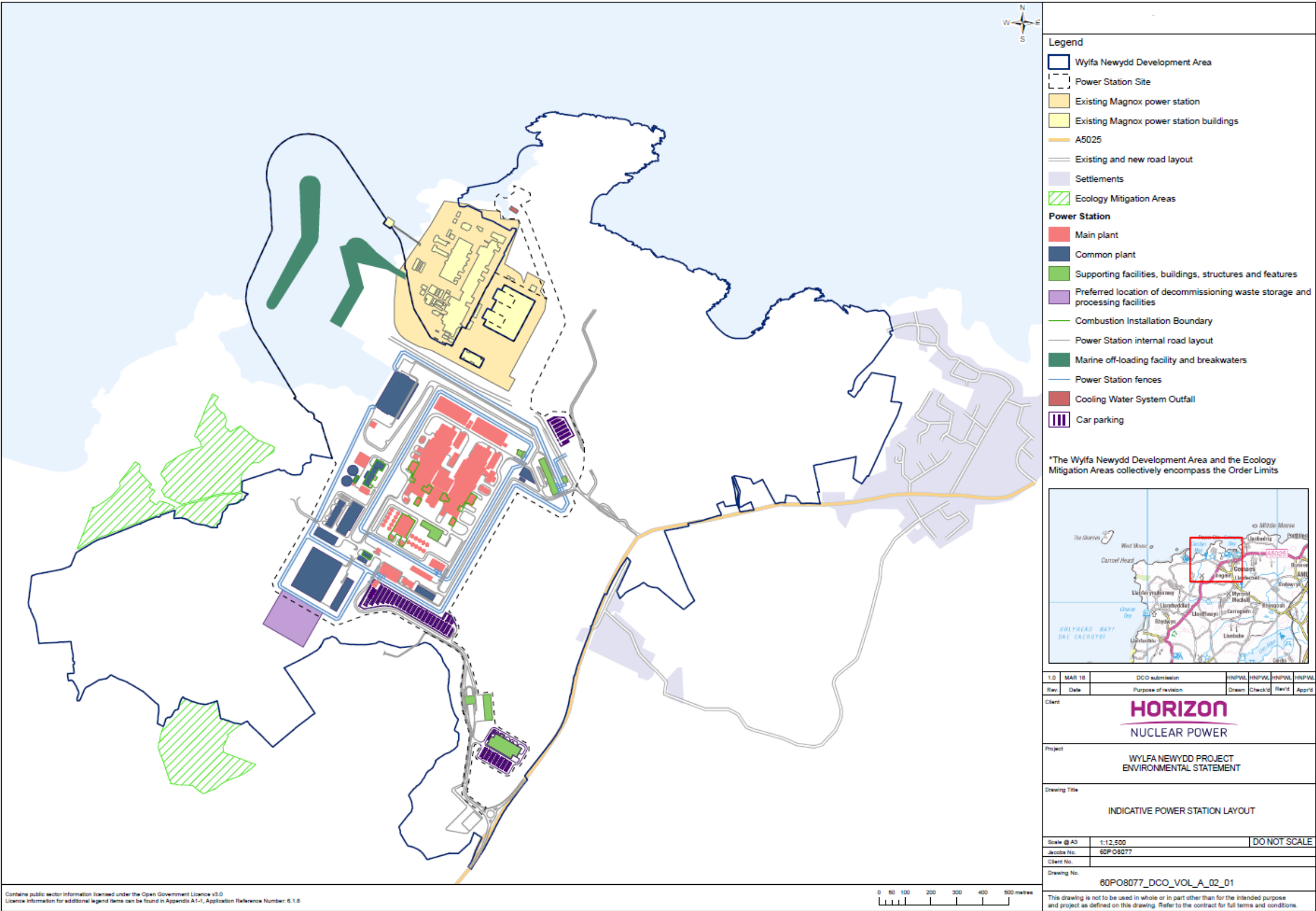
- 3.2.2 Talybolion will experience a number of impacts related to the Wylfa Newydd Project which are summarised in table 3-1.

**Table 3-1 Talybolion Project Components and Impacts**

Project Components	Impact Topics
WYDA (part) A5025 Off-line Highway Improvements (part) Off-Site Power Station Facilities Park and Ride facility	Population and socio-economics (including tourism); Transport; Noise and Vibration; Air Quality; Landscape and Visual Impact; Public access and recreation; Cultural Heritage

- 3.2.3 Part of the WYDA falls within the north of the ward. This will be the major development site for the Wylfa Newydd Project and will include the Power Station Site and surrounding areas used for construction and operation of the Power Station. It represents the maximum area that will be physically affected by the Power Station Main Construction.

Figure 3-1 WND A Indicative Plan





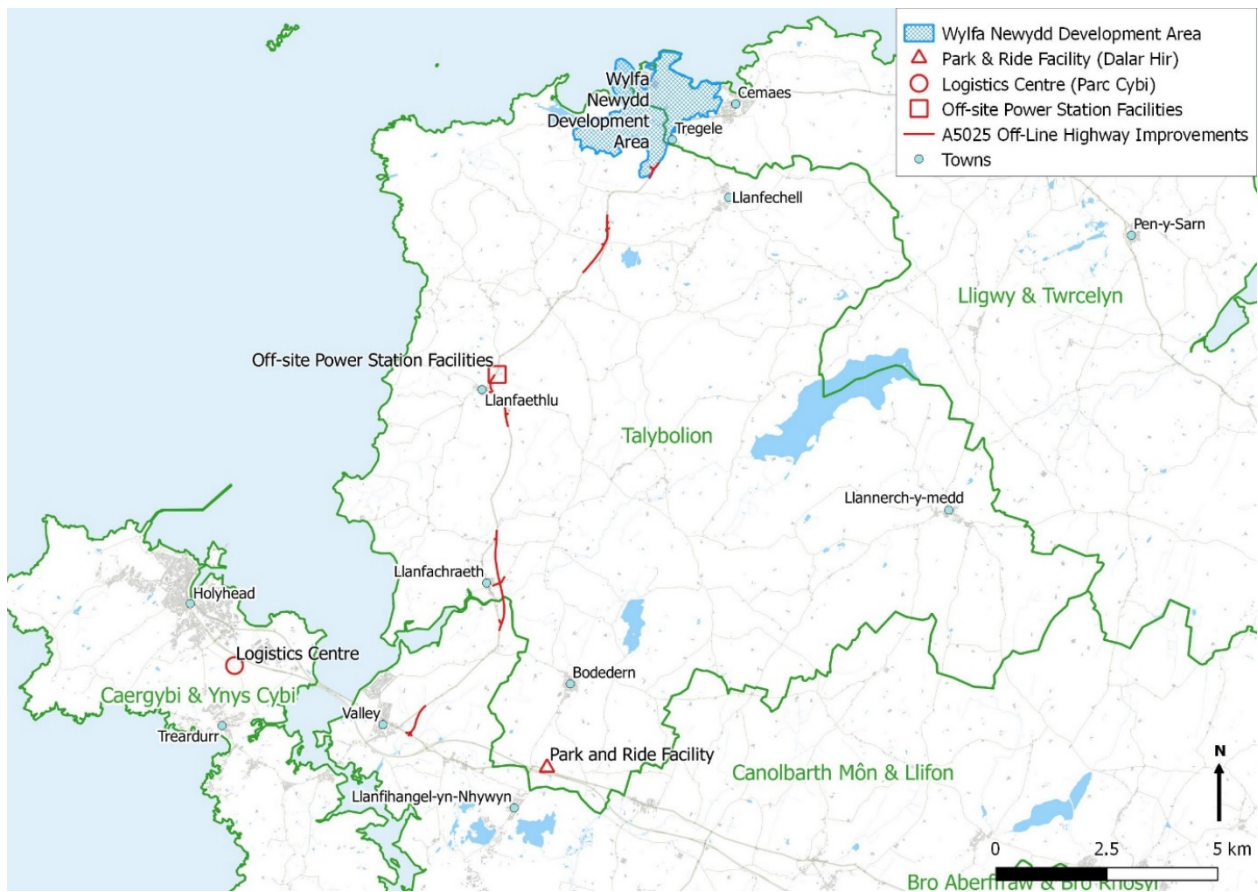
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- 3.2.4 Four sections of the A5025 Off-line Highway Improvements, the Off-Site Power Station Facilities (including the MEEG, AECC and ESL) at Llanfaethlu, and the proposed Park and Ride facility at Dalar Hir also fall within this ward. On-line Highway Improvements are also proposed along the A5025.
- 3.2.5 The A5025 Off-line Highway Improvements consist of a new Power Station Access Road Junction south of Tregle to provide site access for the WNDA; bypassing two existing substandard bends in Llanrhwydrus between Llanrhuddlad and Cefn Coch; bypassing Llanfaethlu and two existing substandard bends near the Black Lion pub and the Old Coffee Shop; and bypassing Llanfachraeth to the east of the village with a new 2km highway.
- 3.2.6 The Off-Site Power Station Facilities comprising the MEEG/AECC/ESL facilities at Llanfaethlu will be used during operation of the Power Station for environmental monitoring and for storage and management facilities necessary for responding to emergencies.
- 3.2.7 The works associated with the Wylfa Newydd Project listed above will occur alongside or near the A5025 which is the main transport link in this area. This is anticipated to be the main route for construction-related traffic and most of the traffic-related impacts in the Talybolion area will occur along this route.
- 3.2.8 The Park and Ride facility will be located at Dalar Hir in the south of the area and will allow for construction workers travelling by car on the A55/A5 to be transported by bus to the WNDA. This will significantly mitigate construction worker traffic along the A5025.

### ***Local area***

- 3.2.9 The Talybolion Area predominantly consists of agricultural land with a number of villages and scattered settlements. Llanfechell and Llannerch-y-medd are the largest villages and it includes the Cylch-y-Garn and Mechell parishes which will experience a number of direct impacts. It also includes some lakes and large sections of coastline.

**Figure 3-2 Talybolion Area**



### ***Demographic baseline<sup>10</sup>***

- 3.2.10 The population of Talybolion in 2014 was estimated to be 6,308. 18% of the population are aged under 16 (compared to 18% in Wales and 17% in Anglesey as a whole) and 22% of the population are aged over 65 (compared to 20% in Wales and 24% in Anglesey). The population grew by 289 or 5.2% between 2001 and 2011.<sup>11</sup>
- 3.2.11 There are approximately 2,870 homes in Talybolion of which 2,590 are permanently occupied. 69% of homes are owner-occupied, 15% are social rented and 12% are privately rented; 3% of households are living rent free.<sup>12</sup>
- 3.2.12 A slightly lower proportion of the population is educated to level 4 or higher, with 23% holding a level 4 or higher qualification compared to 26% in Anglesey

<sup>10</sup> All data apart from housing data, employment data and population growth are taken from the Gwynedd and Anglesey Well-Being Assessment data tables (RD4)

<sup>11</sup> Census 2001 and 2011, using a best-fit of 2011 output areas to current wards where necessary; this data is used as the most reliable time series due to recent ward boundary changes (RD5).

<sup>12</sup> Housing data is from Census 2011, using a best-fit to current wards where necessary (RD5).

and 25% in Wales. 10% of the population hold apprenticeships or other qualifications.

- 3.2.13 Unemployment is relatively low with 2.2% of people aged between 16 and 64 claiming Jobseekers Allowance compared to 3% in Anglesey. 29% of residents working in lower-skilled sales, process and elementary occupations, compared to 28% in Anglesey and 30% in Wales as a whole. 64% of the population aged 16-74 in 2011 were economically active, with 58% in employment and 4% economically active but unemployed.<sup>13</sup>
- 3.2.14 A high proportion of residents are proficient in Welsh: 57% of the population of Talybolion aged 3 and over can speak, read and write Welsh compared to 46% in Anglesey and 15% in Wales. 26% have no skills in Welsh, compared to 30% in Anglesey as a whole and 73% in Wales as a whole. The proportion of residents aged 3 and over who can speak Welsh remained steady between 2001 and 2011 at 66%.
- 3.2.15 This overview of the demographics of Talybolion suggests that it is a predominately rural area with a relatively small population (the smallest total population of Anglesey's six well-being areas). Unemployment is low, although residents are slightly less likely to hold degree-level qualifications than in Wales or Anglesey as a whole. The housing stock is relatively small and mostly owner-occupied. The Welsh language is particularly strong in Talybolion. Some of these are key issues in Anglesey as a whole – the 2017 Anglesey Well-being Assessment (RD1) identifies housing and protecting and promoting the Welsh language in particular as key well-being issues in Anglesey. They are also interlinked – for example, the strength of the Welsh language is partly influenced by what housing and job opportunities exist for young people in Welsh-speaking communities.

### **3.3 Local impacts and mitigation**

- 3.3.1 Because several sites of the Wylfa Newydd Project are located in the Talybolion area, a number of effects are predicted.

#### ***Population and socio-economics***

- 3.3.2 This section looks at effects assessed in the socio-economic chapter of the ES. This includes the expected local distribution of project-wide effects from the construction workforce. This section also includes information drawn from the WLIA (Application Document Reference 8.21), the HIA (Application Document Reference 8.19), and the EqIA (Application Document Reference 8.22).
- 3.3.3 The EIA has used as a gravity model to provide an indication of the likely distribution of workers across the island and mainland during the peak construction phase of the Wylfa Newydd Project. This is based on information

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<sup>13</sup> Census 2011, using a best-fit to current wards where necessary (RD5).

about the workforce, housing market, and travel distances. The information from the gravity model has been used in this report where possible to indicate the potential local distribution of project-wide effects relating to the workforce.

## **Project-wide socio-economic effects during construction**

### ***Construction workforce***

- 3.3.4 The Wylfa Newydd Project will require a substantial construction workforce. The construction workforce is expected to be up to 8,500 workers at peak construction, although impacts from up to 9,000 have been assessed. This will represent a large increase and will have some population impacts. Potential impacts could relate to demand for accommodation or community facilities, as well as effects on the economy and traffic.
- 3.3.5 The vast majority of these workers will be employed at the WNDA. with smaller numbers for the Associated Developments, as follows:
- A5025 Off-line Highway Improvements, up to 211 workers;
  - Park and Ride, up to 70 workers;
  - Logistics Centre, up to 50 workers; and
  - Off-Site Power Station Facilities, up to 85 workers.
- 3.3.6 Full information on the construction workforce requirements for the Wylfa Newydd Project is provided in the ES, volume C chapter 1 (Application Document Reference 6.3.1).
- 3.3.7 Of the peak workforce of up to 9,000, at least 2,000 are expected to be home-based and already resident within the DCCZ, which is based on a 90-minute commuting zone from the WNDA. Of these approximately 1,260 are expected to come from Anglesey. These estimates are based on a review of the skills available in the area and of travel expectations. These workers are expected to be permanently resident and do not represent temporary new residents.
- 3.3.8 The Jobs and Skills Strategy (Application Document Reference 8.4) is designed to meet the labour needs of the Wylfa Newydd Project and deliver jobs and economic opportunities locally while avoiding negative labour impacts in the local economy. It will seek to maximise the recruitment of locally-based workers and will seek to increase the number of home-based workers above 2,000 in order to minimise the effects caused by the arrival of construction workers. This will also seek to maximise the economic benefits for local residents that will result from the jobs created as a result of the Wylfa Newydd Project, in partnership with local stakeholders.
- 3.3.9 Measures to maximise local employment include developing a Skills Fund to support a range of education, training and employment initiatives relating to both the construction and operational phases of the Wylfa Newydd Project as well as a WNESS in partnership with Welsh Government, the Department for Work and Pensions and other stakeholders. Its role will be to place people into sustainable employment created by the Wylfa Newydd Project. The WNESS

will work with contractors and stakeholders to maximise opportunities for local residents, unemployed people, young people and groups that traditionally are under-represented in the construction workforce. It will provide a pathway for jobseekers into the project, in some cases via initial education or apprenticeship routes to prepare young people for work on the project. For older or unemployed workers outreach or work readiness training will be facilitated. It will also provide a structure for 'backfilling' – allowing local employers to fill vacancies that happen when employees take up jobs on the Wylfa Newydd Project.

- 3.3.10 Of the peak workforce of up to 9,000, up to 4,000 will be accommodated at the Site Campus. Horizon has concluded that on balance, the environmental and social effects of the construction workforce on the existing community is best managed through locating a significant proportion of them in a single, temporary purpose-built campus as close as possible to the Power Station Site. This will be a temporary accommodation facility within the WNDA which will include independent living spaces for workers and a range of campus-style amenities and facilities.
- 3.3.11 In addition, 3,000 workers are expected to be non-home-based, from outside the DCCZ and are expected to take up existing accommodation temporarily within the seven assessment areas covered by this report. This is based on an assessment of the availability of bed spaces across several tenures (including private rented, owner-occupied, hotels, caravans and spare room accommodation) in the study areas. For Anglesey and the Menai Mainland area as a whole, approximately 450 workers are estimated as taking up hotel accommodation, 650 workers as taking up caravan accommodation, 600 workers taking up owned accommodation (i.e. by purchasing a property) and 900 taking up private rented accommodation. Further information on the breakdown of accommodation across tenures and the expected distribution of workers is found in the ES, volume C chapter 1 (Application Document Reference 6.3.1).
- 3.3.12 In addition to the provision of Temporary Workers' Accommodation for up to 4,000 workers at the Site Campus, Horizon has set out two central means of mitigating the impact of non-home-based workers taking up accommodation in Anglesey.
- The WAMS will seek to match accommodation demand to supply in order to effectively distribute workers more widely and prevent excessive localised impacts. All workers will be required to register with the WAMS. Horizon and IACC have agreed to establish a CWAMP as part of the WAMS to help workers to find suitable and appropriate accommodation. The WAMS will monitor data and work with stakeholders to ensure workers are able to find this accommodation.
  - Horizon has also proposed a flexible Housing Fund to provide support for housing in the local area. This would be used to mitigate a range

of effects and to boost the supply of housing, including increasing availability of existing stock and funding council officers' time relating to additional housing matters (such as enforcement or dealing with residents' housing needs).

- 3.3.13 Horizon will use a 'plan, monitor and manage' approach in order to minimise adverse community impacts and flexibly respond to localised impacts if and when they occur. Full details of Horizon's approach to accommodation and mitigation are set out in the Workforce Accommodation Strategy (Application Document Reference 8.4).
- 3.3.14 As the Site Campus will be within the WNDA, it will not be located directly within the Talybolion Area. However, there are some settlements in the Talybolion area located near to the WNDA, the closest of which is Llanfechell. These settlements may experience some impacts from the presence of workers at the Site Campus.
- 3.3.15 A range of facilities will be provided within the Site Campus itself for workers, including welfare, leisure, sport and recreational amenities, retail and convenience stores, a bar and medical services. These are intended to mitigate the socio-economic effects of the Site Campus and the Project as a whole by reducing demand from workers for important community services such as healthcare.
- 3.3.16 Horizon will put in place a series of measures to manage worker behaviour and maintain a balance between workers spending money in the local economy and avoiding impacts on local communities. It is not possible to estimate what the full range of impacts may be in advance as it is not possible to estimate how many workers in the Site Campus will, say, go to particular pubs. These measures are intended to deal flexibly with potential impacts.
- 3.3.17 The Workforce Management Strategy (Application Document Reference 8.5) sets out the principles by which Horizon will manage the impact of workers. This will apply to all workers, and will stipulate a Code of Conduct which will explain expected behaviour to workers and require workers to conduct themselves responsibly. Examples include:
- A compulsory project induction programme for workers which will include information on community relations and expectations of the workforce in the local communities;
  - an education and awareness program as part of the induction process covering a number of issues including health and safety, security, Code of Conduct as well as awareness of the Welsh language and culture;
  - security checks for all personnel; and
  - all personnel will be subject to random drug and alcohol testing and related searches.



- 3.3.18 The Wylfa Newydd CoCP (Application Document Reference 8.6) details the site management strategy for the Project, including working hours and site security. It also sets out the Project approach to community and stakeholder liaison and communications. A key part of this will be a CLG including local residents, businesses and community representatives to exchange information and promote dialogue between Horizon and the local community during construction. As set out in the CoCP, Horizon will also appoint bilingual Community Involvement Officers to liaise with local communities during the construction phase.
- 3.3.19 Horizon will notify occupiers of nearby properties as well as Ysgol Rhyd y Llan, Llanfaethlu in advance of works taking place including the type and duration of the activity. This will ensure occupiers are notified of key construction activities that might result in increased noise or disturbance. Horizon will display the name and contact details of the person(s) accountable for construction works on the site boundary. Horizon will also display the head or regional office contact information on the site boundary. All notifications will be bilingual in Welsh and English, and accompanied with a contact name, telephone number and address to which enquiries should be directed
- 3.3.20 Horizon will establish a dedicated and free telephone hotline to be available for anyone with concerns about the construction programme or Project. It will deal with enquiries or complaints from the public, the IACC or other key stakeholders. The system will be staffed by bilingual personnel, will be widely advertised by appropriate means and will ensure that appropriate action is taken in response to any non-compliance with approved plans or construction arrangements, or in the event of physical damage, in accordance with an enforcement protocol.
- 3.3.21 A complaints register will be maintained by Horizon. All calls will be logged and mapped, together with a record of the responses and action taken. Mapping will be used to record where key concerns are raised by individuals, local communities or other stakeholders. The complaints register will be made available to the IACC upon request.

### ***Business and tourism***

- 3.3.22 It is likely that some local businesses located near the WNDA could experience an increase in income due to the presence of these workers. Some workers may choose to spend in local businesses rather than Site Campus services. However, this is anticipated to be a 'spill-over' effect because the provision of on-site commercial services and facilities is intended to meet the commercial needs of these workers and ensure existing local services are not adversely affected. This effect is difficult to quantify because of this.
- 3.3.23 Local businesses would also potentially experience beneficial supply chain effects. While it is not possible at present to estimate how much of the Wylfa Newydd Project value would be spent locally, according to the ES chapter C1 (Application Document Reference 6.3.1) if between 2% and 4% was spent

locally (as at other nuclear project examples such as Sizewell B), this would be equal to an investment of between £200 million and £400 million within north Wales over the construction period, providing a range of opportunities for local businesses. Horizon's Supply Chain Charter and Action Plan set out its approach to procurement and would seek to support businesses to engage in the Wylfa Newydd Project and benefit directly.

- 3.3.24 Tourism is a vital part of the economy of Anglesey and the Talybolion area, and the Wylfa Newydd Project may have some effects on the sector. Visitor behaviour may change in response to the construction of the Power Station. However, a survey of visitors to Anglesey in 2015 found almost 90% of respondents indicated that the construction of the new Power Station would have no impact on their intention to return to Anglesey. Visitors noted concerns related to traffic and general construction impacts. Based on a detailed review of these responses and on Project mitigation which would address potential tourist concerns, the ES (Application Document Reference 6.4.3) states that the actual number of tourism visits that may be lost during construction is likely to be small. This could nevertheless represent a change in revenue for some businesses. However, this could be countered by spending from workers throughout the island and any impact would be limited and would vary by the type and location of the business.
- 3.3.25 Tourist accommodation businesses would benefit from demand for accommodation from construction workers. Across Anglesey and the Menai Mainland area it is estimated that up to 450 tourism bed spaces could be occupied by workers within hotels and bed and breakfast accommodation, and a further 650 bed spaces within caravan and camping accommodation at registered sites. This is based on Horizon's estimates of capacity. This would provide revenue to tourist accommodation providers, particularly in the winter months. However, to prevent excess demand from workers 'crowding out' tourists or affecting the quality of accommodation, measures in the Workforce Accommodation Strategy (Application Document Reference 8.4) will seek to avoid adverse effects including through the WAMS.
- 3.3.26 Horizon has proposed a Tourism Fund (secured through planning obligations) to help address any material effects on the local tourism sector in Anglesey as a result of the Wylfa Newydd DCO Project. Although the terms of reference and governance structure of this are subject to agreement, it would be administered via a Tourism Oversight Board attended by Horizon, IACC, Welsh Government and local sector representatives as appropriate.

***Community safety, health and well-being***

- 3.3.27 The ES, volume D chapter 3 (Application Document Reference 6.4.3) examines the potential effects of workers living at the Site Campus on public safety. As a rural area with a low population, crime is currently relatively low in communities around the WNDA.
- 3.3.28 In terms of public safety, an increase in the resident population may potentially lead to an increase in crime. However, a number of measures will mitigate

this potential effect. The number of workers resident is expected to rise gradually. The provision of facilities and services on-site is expected to minimise the need for workers to use off-site services. Measures such as on-site security and lighting will be put in place. Furthermore, the Site Campus and the Project generally will be the subject of a Workforce Management Strategy (Application Document Reference 8.5) which will require workers to adhere to an expected standard of conduct throughout their stay at the Site Campus. As a result, levels of reported crime are not expected to rise significantly. Effects on public safety have been assessed in the ES, volume D chapter 3 (Application Document Reference 6.4.3) as minor adverse, and not significant.

- 3.3.29 The possibility of a perception of increased risk of crime has also been assessed as a potential adverse effect for local communities. However, the embedded mitigation to prevent an increase in crime including site design, the presence of on-site security and lighting is likely to significantly ease any potential perceived fear of crime over time.
- 3.3.30 The potential health effects of the Wylfa Newydd Project have been assessed in the HIA (Application Document Reference 8.19). It also assesses the cumulative health effects from site-specific and combined impacts across all sites for local population groups around the WNDA and the Associated Development sites.
- 3.3.31 The HIA considers the Project-wide health and well-being effects relating to:
- road safety, air quality and noise around the road network including the mitigating effects of highway improvements;
  - tourism and housing displacement pressure, including mitigation measures such as the WAMS;
  - demand for and journey times to access healthcare services, including mitigation such as the on-site campus health facilities;
  - safety, lifestyle and behaviour;
  - identity and culture;
  - employment, income and economic development;
  - education and training;
  - public understanding of risk; and
  - low carbon energy generation.
- 3.3.32 For the general population near the WNDA, the local road network including the A5025 and the Park and Ride facility the overall health effects are assessed as being negligible. There will also be beneficial effects related to road improvements as well as the economic and employment opportunities created by the Project since employment and economic investment are linked to physical and mental health.

3.3.33 The HIA summarises effects for four population groups based on their sensitivity to potential changes attributable to the Wylfa Newydd Project (beneficial or adverse):

- children and young people;
- older people;
- people with existing poor health (physical and mental health); and
- people living in deprivation, including those on low incomes.

For these groups, effects are assessed as up to moderate adverse for those near the WNDA and the local road network including the A5025 due to combined effects from traffic, noise, dust, air quality and other construction effects. Some of these effects would potentially occur in the Talybolion area due to proximity to the A5025 which will be used by traffic to and from the WNDA. The HIA also details a number of mitigation strategies and best practice to address any health impacts many of which are secured in other documents and summarised in this document), including monitoring of construction effects such as noise or dust, community liaison, promoting road safety, workforce management and workforce accommodation mitigation.

3.3.34 Horizon will establish and chair an external stakeholder group (the Health and Well-being Monitoring Group) that will include members of the health and emergency services to monitor the implementation of the HIA mitigation strategy and provide advice on its delivery. As mentioned above Horizon would also appoint bilingual Community Involvement Officers; the scope for this role would also include developing and implementing some HIA mitigation measures.

3.3.35 One effect assessed in the HIA is the public understanding of risk which in part assesses public perceptions of living with nuclear power. While for the most part this cannot be disaggregated down to a geographical area, the HIA does note that responses to a survey about nuclear power in Anglesey differed slightly in Cemaes compared to the rest of Anglesey. Although a majority of people near Cemaes (59%) agree that they supported having nuclear power on Anglesey, a lower proportion of people there agree than in the rest of Anglesey (67%). This suggests that people living closest to the WNDA may be expected to have slightly less favourable perceptions of living with nuclear power. The HIA proposes a number of measures to help address this including dialogue and outreach with local communities and disseminating information about operational safety; the employment of Community Involvement Officers will help to meet this objective.

3.3.36 Healthcare facilities in nearby communities are assessed as not likely to experience significant effects during construction, due to measures minimising traffic impacts and workers using community services. Horizon will require all construction workers to register with and prioritise the use of the on-site medical and healthcare services rather than using the community NHS services.

### ***Equalities***

- 3.3.37 The EqlA (Application Document Reference 8.22) assesses potential equalities effects the Wylfa Newydd Project could have. It assesses potential effects on people with 'protected characteristics' as defined by the Equality Act 2010 (which are age, race, religion or belief, marriage and civil partnership, pregnancy and maternity, sex, sexual orientation, disability, and gender reassignment) as well as on socio-economically deprived communities. It also considers the extent to which the Project would contribute towards the goals of 'a more equal Wales', and 'a Wales of cohesive communities' set out in the Future Generations and Well-being (Wales) Act 2015.
- 3.3.38 The EqlA has identified five categories of effects as potentially occurring for some of these groups (which reflect the main Project impacts):
- noise;
  - employment and skills;
  - traffic, transport and access;
  - community infrastructure and public services; and
  - community cohesion.
- 3.3.39 Noise effects would occur mainly due to construction activities at the WND A as well as construction of the A5025 Off-line Highway Improvements. This would affect some properties in the Talybolion area close to the WND A and the A5025. Noise impacts on residential properties would disproportionately affect those people who spend more time in the home during the day, including older people, disabled people, and carers of new-born and small children. The Noise and Vibration section below summarises these noise impacts and mitigation measures.
- 3.3.40 Traffic impacts including potential increases in traffic on the A5025 (see the Transport section below) would have differential adverse effects on those at greater risk of traffic accidents and their consequences, including older people, children, disabled people. Transport mitigation measures including traffic management would mitigate these.
- 3.3.41 A population rise as a result of construction workers temporarily moving to the local area may affect communities if they impact on health services, which would affect groups most reliant on these; however, as noted above mitigation measures are designed to prevent this. Community cohesion may be affected if the Project and a disproportionate increase in the male population of the north-west part of the Isle of Anglesey gave rise to a heightened risk or perception of crime, which would potentially affect older people, women and BAME residents in particular. Changes in social mix could affect social networks in an area where many older people would feel part of a small, close-knit community, according to the Wylfa Newydd Project HIA Report Community Survey (Application Reference Number 8.19); however, it also indicates that younger people may view the impact on social networks of new

residents positively. Furthermore, if prices rise locally for private rented sector housing this may adversely impact existing residents who experience housing deprivation. However, many of the measures which are designed to mitigate the general socio-economic effects of the construction workforce including the Site Campus, the Community Impact Fund and the Housing Fund would also mitigate these equality issues.

- 3.3.42 The Project would also have beneficial equalities effects through providing short- and long-term employment opportunities and a legacy of a more skilled workforce. This would be beneficial in particular for young people and deprived communities.

### ***Community facilities***

- 3.3.43 The Site Campus will provide a range of facilities that will cater to the needs of workers who live there. Some of these will also be available to workers living off-site, thereby reducing demand from them for existing services. This includes health facilities which will represent the easiest way of registering for primary care services for the visiting workforce. UK based workers who are registered for Primary and Dental care services at their home location may not wish to register with a local provider (noting that there are existing NHS provisions for providing services for any person who cannot attend their own registered practice through temporary registration arrangements). As a result of this on-site provision, the HIA (Application Document Reference 8.19) has found the changes in demand for local health services would not have a significant impact for local resident groups.
- 3.3.44 Where workers are non-home-based and they bring family and dependants to the area (who will not be living in the Site Campus), these family and dependants will be expected to register with local NHS services such as GP and dental provisions. This is assessed as not likely to have a significant adverse demand on these local health services. Further details are available in the HIA (Application Document Reference 8.19).
- 3.3.45 Specific arrangements are not proposed for dental care. It is expected that the majority of UK based workers will remain registered with their dental services provider. It is expected that NHS services would be used for emergency dental services.
- 3.3.46 In terms of school places, IACC will monitor school enrolment. Should localised issues arise where applications are made for places in schools at capacity and IACC can demonstrate the nature of the resulting effect (e.g. temporary short-fall in funding, additional costs for appeals processes etc.), Horizon will provide funding to address this via the proposed Community Impact Fund.

### ***Welsh language***

- 3.3.47 In terms of the Welsh language, the Talybolion area is an area with a relatively high proportion of Welsh speakers. The WLIA (Application Document

Reference 8.21) states that the arrival of workers to Anglesey during the construction period will lead to a change in the relative proportion of Welsh speakers, since most of these workers will be non-Welsh speakers. The assessment indicates that this would be an overall moderate adverse effect. As noted above, the Talybolion area would experience a population increase of approximately 5%. This relative population increase is greater than in some other areas of Anglesey and thus the Talybolion area can be expected to be more affected by a relative decline in the proportion of Welsh speakers than some other areas.

- 3.3.48 The assessment considers the effects of population changes on the Welsh language at some local area levels. Without intervention, rural areas will experience population change, with Mechell parish affected by its proximity to the WNDA.
- 3.3.49 The assessment also considers the impact of the Wylfa Newydd Project on other topics relevant to the Welsh Language including quality of life, economic factors, infrastructure supply and education and social and cultural aspects. Some project-wide effects would impact these factors. The assessment finds that without additional mitigation there would be a potential moderate adverse effect on the language:
- due to an increase in the proportion of non-Welsh speakers in the KSA;
  - due to potential increases in the cost of housing;
  - as a result of increased demand for schools from non-Welsh speakers; and
  - on Welsh traditions and culture as a result of the in-migration of non-Welsh-speaking workers.
- 3.3.50 The change in the proportion of Welsh speakers as a result of the in-migration of construction workers would in particular potentially affect areas of northern Anglesey, where construction workers are likely to live; the up to 4,000 workers living in the Site Campus are also likely to be mostly non-Welsh-speaking.
- 3.3.51 Several mitigation measures will be provided by Horizon which are set out in the **WLCMES**. These include providing language awareness raising to Wylfa Newydd Project staff and appointing a WLCC to focus on the development and implementation of Welsh language and culture mitigation and enhancement measures during construction and operation of Wylfa Newydd.
- 3.3.52 However, the assessment also notes that the embedded mitigation for the Wylfa Newydd Project such as the WAMS, Housing Fund and accommodating workers at the Site Campus to mitigate the impact of the arrival of workers will also serve to mitigate the impacts on the Welsh language.
- 3.3.53 In addition, the creation of job opportunities during construction and operation provides opportunities to aid the Welsh language through reducing the out-migration of Welsh-speaking young people from local communities. The



assessment notes that there has been a continuous net out-flow and population decrease of young people from Anglesey in recent years, with a net out-flow of 220 among 15-29 year olds between 2014 and 2015. It notes that this may be partly due to a lack of job opportunities, with a reduction of 889 (5.4%) in the number of FTEs in employment between 2009 and 2014. The Wylfa Newydd Project will directly provide a large number of skilled jobs for local young people in Anglesey during construction and operation of the Power Station. It will also provide indirect benefits to local businesses through additional spending from workers, contracts for local supply chain businesses and revenue to tourism accommodation businesses for bed spaces occupied by workers. This will provide further job opportunities for local people in the Talybolion area and result in a moderate beneficial effect in terms of the Welsh language.

- 3.3.54 Several strategies to maximise these opportunities for the Welsh language are also provided in the **WLCMES**<sup>14</sup>, such as advertising jobs through recruitment channels targeting Welsh speakers, distributing information on job opportunities at Wylfa Newydd to young people including through bilingual channels, and through apprenticeship opportunities. In view of this, on balance the effect of population change on the Welsh language is assessed as negligible adverse during construction and minor beneficial during operation.
- 3.3.55 No impacts on the Welsh language have been assessed as likely to occur as a result of the Associated Developments.

***Land and severance effects from Associated Development***

- 3.3.56 In terms of the Associated Development projects within the Talybolion area, separate volumes assessing the full impact for each have been produced as part of the ES.
- 3.3.57 The Park and Ride facility at Dalar Hir is assessed in the ES, volume F chapter 3 (Application Document Reference 6.6.3) as not causing any significant socio-economic effects during construction, operation and decommissioning following mitigation. It should be noted that this facility is itself intended as a mitigation measure to minimise traffic impacts caused by the Wylfa Newydd Project.
- 3.3.58 The Off-Site Power Station Facilities at Llanfaethlu is assessed in the ES, volume E chapter 3 (Application Document Reference 6.5.3) as not causing any significant socio-economic effects during construction, operation and decommissioning.
- 3.3.59 The A5025 Off-line Highway Improvements are assessed in the ES, volume G chapter 3 (Application Document Reference 6.7.3) as having some potential significant socio-economic effects relating to land take and severance. The

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<sup>14</sup> Appendix to WLIA

sections within the Talybolion area will result in the loss of some agricultural and other land. Some minor effects from bypassing existing sections of the A5025 may result in slightly longer journey times for local communities. Section 3: Llanfachraeth and section 5: Llanfaethlu will bypass the settlements of Llanfachraeth and Llanfaethlu which may result in a reduction of passing trade for local businesses. However, these road improvements are also intended as a form of mitigation for the Wylfa Newydd Project to reduce the impact of traffic flows to the WNDA and improve journeys along the A5025. Llanfachraeth in particular is expected to experience a major beneficial effect from the reduction in traffic levels.

### **Project-wide effects during operation and decommissioning**

- 3.3.60 During operation, the workforce for the Wylfa Newydd Power Station is expected to consist of around 850 staff. However, no spatial breakdown of where these workers will live within Anglesey is available and cannot be assessed at the level of the Talybolion area. The Project is expected to produce a number of local economic benefits through providing new jobs.
- 3.3.61 Potential socio-economic effects during decommissioning of the Power Station are described in the ES, volume C chapter 1 (Application Document Reference 6.3.1). While decommissioning would lead to the loss of jobs and other effects, due to uncertainties over such a long time scale these effects cannot be assessed at the Talybolion area level.

### **Cumulative population and socio-economic effects**

- 3.3.62 Cumulative socio-economic effects as a result of both the Wylfa Newydd Project and other projects are assessed in the ES, volume I chapter 5 (Application Document Reference 6.9.5).
- 3.3.63 There will be cumulative economic benefits as a result of the combination of project-wide effects and the effects of other projects within Anglesey and elsewhere. Increased demand for the local construction sector and the local labour market from the Wylfa Newydd Project and other projects will create opportunities for local workers and businesses. Investment in the local economy would increase as a result of the cumulative effects of increased spending and investments across all projects.

### **Transport**

- 3.3.64 The Wylfa Newydd Project will result in a number of impacts on transport and traffic. This is primarily due to trips generated by workers and freight transport during the construction and operational phases. A full assessment of these impacts is given in the Transport Assessment (Application Document Reference 6.3.14).
- 3.3.65 The Project-wide traffic and transport effects of the Wylfa Newydd Project are also assessed in the ES, volume C chapter 2 (Application Document Reference 6.3.2). Section 2.5 of this document details the forecasted traffic

changes on individual sections of road throughout Anglesey and the Menai Mainland for the year the A5025 Off-line Highway Improvements are completed (both before and after completion of the improvements), the year of peak construction and the year of peak operation of the Power Station.

- 3.3.66 Within the Talybolion area, the A5025 will be the main route for trips generated to the WNDA. Increased volumes of traffic in the opening year of the A5025 Off-line Highway Improvements scenario would be associated with construction activity at the WNDA and mainly confined to the A5025 between Valley and the entrance to the WNDA at Tregelle. Two scenarios were assessed, one with the A5025 Off-line Highway Improvements operational and one without (i.e. before and after bypasses open). These show that traffic on the A5025 through the villages of Llanfachraeth and Llanfaethlu would increase significantly in the absence of bypasses. However, when completed the A5025 Off-line Highway Improvements will direct traffic away from local communities. They will reduce total through traffic flows on the existing section of A5025 at Llanfachraeth by 75% and on the existing section of A5025 at Llanfaethlu by 100% in the opening year of the A5025 Off-line Highway Improvements. They would also reduce flows on bypassed road sections at Cefn Coch by 86% and reduce journey times along the A5025 compared to what they would be without bypasses.
- 3.3.67 At peak construction, traffic flows along the A5025 (with bypasses) between Valley and Tregelle would be increased by between 30% and 58%, with HGV flows increase by between 71% and 101% (i.e. up to twice current levels).
- 3.3.68 This traffic would use the A5025 Off-line Highway Improvements, bypassing sections of the A5025 at Llanfachraeth, Llanfaethlu and Cefn Coch. The bypassed sections of A5025 at these locations would experience reductions of through traffic of 76%, 100% and 91% respectively due being bypassed by the A5025 Off-line Highway Improvements. Due to the On- and Off-line A5025 Highway Improvements, journey times are not expected to increase significantly.
- 3.3.69 Traffic flows at a section of the A5 at Dalar Hir are predicted to increase by 26% in the year of peak construction. This increase will be caused by construction workers driving to/from the Park and Ride facility as well as by the buses transporting them to/from the WNDA. However, these flows will take place because of shift changes and will only coincide with part of the morning and evening peak periods.
- 3.3.70 Horizon has proposed a network of shuttle buses to transport workers to the WNDA. These would operate from major towns and cities like Holyhead, Bangor and Caernarfon together with settlements in the north and east of Anglesey, as needed. These services are also intended to be flexible, with routes refined to reflect the actual distribution of workers. This is intended to reduce the number of vehicles travelling on roads throughout Anglesey and to minimise traffic impacts during morning and evening peaks. Shuttle buses will also travel to and from the Park and Ride facility at Dalar Hir which is also intended to minimise traffic impacts due to commuting workers.

- 3.3.71 It is possible that workers travelling home from the Wylfa Newydd Project sites at the end of the working week may use alternative routes such as through the centre of the island via the B5111/B5112. This may potentially impact communities such as Llannerch-y-medd. However, this will be spread over several hours at the end of the working week in one direction only, and in the reverse direction on a Sunday evening. This effect therefore has been assessed as not significant.
- 3.3.72 Other parts of the Talybolion area are not likely to be significantly affected by increases in traffic associated with the Wylfa Newydd DCO Project. This is because construction vehicles and workers will use the A55 and the A5025 between Valley and Tregele.
- 3.3.73 During the year of peak operation of the Power Station, traffic flows along the A5025 between Valley and Tregele are forecast to be between 22% and 48% above the baseline scenario. HGV flows would be between 24% and 38% higher. As for the year of peak construction, flows would bypass Llanfachraeth, Llanfaethlu and Cefn Coch. Other sections of the road network in the Talybolion area are not forecast to be significantly affected during the operational period. Trips generated by workers will be significantly lower than during peak construction due to the smaller workforce.
- 3.3.74 A **Construction Traffic Management Strategy** is included within the Wylfa Newydd CoCP (Application Document Reference 8.6) setting out measures to mitigate the impact of traffic; this will include measures and monitoring to ensure construction traffic uses approved routes while travelling. A Traffic Incident Management Strategy to manage incidents on the public highway network would also be provided within the Wylfa Newydd CoCP (Application Document Reference 8.6).

## **Noise and vibration**

### **Project-wide noise and vibration effects during construction**

- 3.3.75 The Project-wide noise and vibration effects as a result of traffic are assessed in the ES, volume C chapter 5 (Application Document Reference 6.3.5). It indicates that a number of receptors including residential properties will experience noise impacts as a result of the increased traffic levels on certain parts of the road network as a result of the Wylfa Newydd Project. This chapter also includes several maps illustrating the geographical spread of noise from the WNDA.
- 3.3.76 These impacts will include both day- and night-time impacts. These impacts are primarily concentrated along the A5025. During peak construction, there are likely to be increases in noise levels as a result of traffic along the A5025; a number of properties in the Talybolion area will be affected.
- 3.3.77 The assessment considers three scenarios during construction: two consider the opening year of the A5025 Off-line Highway Improvements, one with and one without improvements – i.e. considering effects before and after the

improvements and bypasses open. Another considers the year of peak construction at the WNDA.

- 3.3.78 Several areas adjacent to sections of A5025 between Valley and Tregale are assessed as likely to experience an increase in noise levels as a result of increased traffic levels.
- 3.3.79 In the opening year of the A5025 Off-line Highway Improvements scenario without improvements, approximately 50 residential properties are assessed as experiencing major adverse noise effects and 225 as experiencing moderate adverse noise effects. However, with the improvements open, about 53 would experience major adverse impacts and 90 would experience moderate adverse impacts. However, in addition 6 properties near Section 3: Llanfachraeth would experience major beneficial effects and 12 would experience moderate beneficial effects, since road noise would decrease following the opening of this bypass.
- 3.3.80 At peak construction, about 73 properties would experience a major adverse noise effect and 92 properties would experience a moderate adverse effect due to increases in noise from traffic. The geographical breakdown of these impacts is given in table 3-2 at the end of this chapter.
- 3.3.81 A number of embedded mitigation measures will be in place, which are summarised in the ES and in the Wylfa Newydd CoCP (Application Document Reference 8.6). Movements of construction and commuting traffic to the WNDA along the A5025 will be controlled through the measures described in the transport section above, including restricted times for HGV deliveries, controlling movements from the Logistics Centre and the use of shuttle buses for workers from the Park and Ride facility. These will also help to reduce noise impacts.
- 3.3.82 Two PRowS at Llanfachraeth are also assessed as likely to be affected by increased traffic noise; however, the effects on users would be localised and occur at crossing points at the A5025.
- 3.3.83 Approximately four properties are assessed as likely to experience a moderate adverse noise impact as a result of traffic at the Park and Ride facility at Dalar Hir.
- 3.3.84 The A5025 Off-line Highway Improvements will bypass a number of properties in the Talybolion area. Noise levels near bypassed sections will significantly decrease. As a result, a number of properties (including at Llanfachraeth) will experience decreases in day-time and night-time traffic noise at bypassed sections. A play area at Llanfachraeth will also experience a long-term beneficial decrease in traffic noise.

### **Project-wide noise and vibration effects during operation**

- 3.3.85 Noise effects are also assessed as likely to occur during operation of the Power Station; some properties along the A5025 are assessed as likely to experience increases in day-time and night-time noise during operation.

During the year of peak operation of the Power Station, approximately 80 residential properties are assessed as experiencing major adverse noise effects and 87 as experiencing moderate adverse noise effects.

- 3.3.86 The ES assessment and the Wylfa Newydd CoCP (Application Document Reference 8.6) sets out strategies to address noise effects from traffic. Noise insulation for residential properties affected by new or altered roads is a statutory duty as set out in national regulations. The Local Noise Mitigation Strategy has been developed which would offer secondary noise insulation to eligible properties. It is estimated that overall this would be offered to 174 residential properties across all areas in the opening year of the A5025 Off-line Highway Improvements 'without improvements' scenario, 87 in the opening year of the A5025 Off-line Highway Improvements 'with improvements' scenario, 94 in the 'peak construction' scenario and 70 in the 'peak operation' scenario. This insulation is intended to lower indoor noise levels in bedrooms and so minimise sleep disturbance; it would not mitigate outdoor noise levels.

### **Site-specific noise and vibration effects during construction**

- 3.3.87 The noise and vibration effects caused by construction and operation at the WNDA are assessed in the ES, volume D chapter 6 (Application Document Reference 6.4.6). This assesses that properties and other receptors closest to the WNDA will experience the largest noise and vibration impacts, which includes some receptors the Talybolion area. These effects will vary in magnitude and significance based on the receptor.
- 3.3.88 Noise effects during construction at the WNDA would result from a number of activities. Site Preparation and Clearance Works would occur first (and only in the daytime) and include vegetation clearance, building demolition and other activities. Site grading would involve topsoil clearance, construction of site routes and some blasting to remove rock outcrops. Other activities include deep excavation to form platforms for construction of the Units, rock processing, marine works including construction of the MOLF, construction of the Power Station Units, concrete production, site logistics and Site Campus construction. A full description of the works that the noise assessment has considered is given in the ES volume D chapter 6.
- 3.3.89 In terms of noise, the assessment finds a small number of residential properties (approximately 11 across all areas) will experience a major significant effect with a large magnitude of change. These mostly are residential properties on the A5025 between Cemaes and Tregele and residential properties in Tregele (and so are within the Lligwy and Twrcelyn area rather than the Talybolion area), but also includes some properties along Nanner Road.
- 3.3.90 A larger number of residential properties (approximately 310 across all areas) are assessed as likely to experience a major significant effect with a medium magnitude of change. These are mostly properties in and near Cemaes and

Tregele, but include some outlying properties near the WNDA with the Talybolion area.

- 3.3.91 In terms of community buildings, noise effects are assessed as likely to occur for some community buildings including schools, places of worship and community buildings; however, these buildings are in Tregele and Cemaes in the Twrcelyn part of the Lligwy and Twrcelyn area. The effects on these buildings are summarised in section 2. No community facilities and commercial buildings in the Talybolion area (such as schools or hotels in Llanfechell) are assessed as likely to experience significant noise impacts.
- 3.3.92 A number of embedded and good practice measures will be incorporated into construction phase design and activities. These include best practice construction measures set out in the Wylfa Newydd Project CoCP (Application Document Reference 8.6) and site-specific sub-CoCPs. A number of additional mitigation measures have been proposed within the ES to address identified potential impacts, including the formation of noise barriers in the form of bunds and working behind the outer faces of mounds.
- 3.3.93 A small number of properties near the WNDA are also assessed as likely to experience moderate adverse vibration effects with a small magnitude of change as a result of construction activity, including soil compactors. Additional mitigation measures are proposed to address these effects, including the use of vibration monitoring.
- 3.3.94 The ES, volume E chapter 6 (Application Document Reference 6.5.6) assesses potential noise and vibration effects expected to occur as a result of the Off-Site Power Station Facilities near Llanfaethlu. Five residential properties are expected to experience major adverse noise impacts and three are expected to experience moderate adverse noise impacts during construction, due to increased noise levels as a result of noise from plant and machinery during daytime periods only. Following additional mitigation, no significant noise impacts are assessed as likely to occur during operation or decommissioning and no significant vibration impacts are expected during construction or operation.
- 3.3.95 According to the ES, volume F chapter 6 (Application Document Reference 6.6.6), no significant noise or vibration effects during construction, operation and decommissioning are expected to occur as a result of the Park and Ride facility at Dalar Hir. This is because no sensitive receptors (residential and commercial properties) are predicted to experience a significant change in noise levels as a result of the development.
- 3.3.96 The **ES, Volume G Chapter 6** assesses potential noise and vibration effects expected to occur as a result of the A5025 Off-line Highway Improvements. Noise impacts would result from exposure to construction noise including earthworks and road surfacing. The period of time individual properties would be affected would vary depending on the location of the property, although any significant effects would not occur for the entirety of the A5025 Off-line Highway Improvements works programme (assumed to be 18 months).



- 3.3.97 During construction and following mitigation, nine residential properties in the Talybolion area are likely to experience a major adverse noise effects while 21 residential properties are likely to experience a moderate adverse noise effect. These effects would occur near to section 3: Llanfachraeth, section 5: Llanfaethlu and section 7: Cefn Coch.
- 3.3.98 Following mitigation two residential properties will experience major adverse noise effects and seven will experience moderate adverse noise effects as a result of section 3: Llanfachraeth. Six residential properties will experience major adverse noise effects and four will experience moderate adverse noise effects as a result of section 5: Llanfaethlu. One property will experience major adverse noise effects and 10 will experience moderate adverse noise effects as a result of section 7: Cefn Coch.
- 3.3.99 No residential properties are likely to experience significant noise or vibration effects as a result of the construction of the Power Station Access Road Junction. No properties or PRow are likely to experience significant vibration effects following mitigation.
- 3.3.100 Additional mitigation measures to reduce noise impacts during road construction would include acoustic screening, selection of quieter plant and alteration of working techniques to reduce noise from use of hydraulic breakers. To reduce vibration effects, vibration risk assessments would be undertaken to establish if safe working distances are available; if not, alternative methods will be adopted. Furthermore, community liaison will be undertaken to agree mutually convenient times with local residents or to arrange respite periods if necessary, as set out in the Wylfa Newydd Project CoCP (Application Document Reference 8.6) and the site-specific sub-CoCP (Application Document Reference 8.12).

### **Site-specific noise and vibration effects during operation**

- 3.3.101 During normal operation of the Power Station, no significant adverse noise effects are expected to occur. It is possible that some occasional noise effects may occur as a result of emergency testing and drills (for example the testing of emergency alarms), but these effects are not assessed as a significant impact.

### **Site-specific noise and vibration effects during decommissioning**

- 3.3.102 Some residential properties and other buildings are assessed as likely to be exposed to long-term noise levels as a result of decommissioning of the Power Station. While noise levels would be lower than during construction, these would also occur over a much longer period. However, given that decommissioning would occur some considerable time in the future, it is not possible to quantify the properties affected.

### Cumulative noise and vibration effects

- 3.3.103 Intra-project cumulative effects (those resulting from the combination of effects from different components of the Wylfa Newydd Project) are assessed in the ES, volume I chapter 4 (Application Document Reference 6.9.4). Potential cumulative noise effects may occur for some residential properties at Llanfaethlu as a result of noise impacts from project-wide traffic, the construction of the Off-Site Power Station Facilities and the A5025 Off-line Highway Improvements. This would vary based on the property and would result from the overlap of the different developments, prolonging the period of time in which potential noise effects may occur.
- 3.3.104 A moderate adverse effect may also occur for an outlying property to the south of the WNDA due to increased noise levels from traffic and from operational noise effects from routine testing of Emergency Diesel Generators. The overlap between these effects would produce a potential moderate adverse cumulative effect.
- 3.3.105 Cumulative effects as a result of both the Wylfa Newydd Project and other projects (including the A5025 On-line Highway Improvements) are assessed in the ES, volume I chapter 5 (Application Document Reference 6.9.5).
- 3.3.106 One outlying residential property south of the WNDA is assessed as potentially experiencing a cumulative noise effect as a result of the effects of increased traffic and noise from the Power Station Site as listed in combination with noise effects from the Existing Power Station decommissioning project; this would be a moderate adverse effect due to potential overlapping of projects.

### Air quality

- 3.3.107 Air quality effects as a result of the Wylfa Newydd Project are assessed as possible during construction phases as a result of project-wide traffic and from site-specific activities; no effects are expected during operational or decommissioning phases.

### Project-wide air quality effects

- 3.3.108 The potential project-wide air quality effects of traffic are assessed in the **ES, volume C chapter 4**. This states that at peak construction (the period with the highest potential impacts), most air quality effects are expected to occur on the A5025 between Valley and the site access south of Tregele. However, these are not considered to be significant.
- 3.3.109 The assessment calculates changes to air quality as a percentage change on Air Quality Objectives (AQOs), which are set by IACC and are used as a reference to describe relative change.
- 3.3.110 At peak construction, the closest receptors to the A5025 to the south of the proposed new Power Station Access Road Junction are predicted to experience an increase in annual mean NO<sub>2</sub> concentrations equivalent to +6%

of the AQO value or less. Given that concentration will still be below the AQO, this increase represents a maximum of a small adverse effect on air quality at these receptors.

- 3.3.111 At Llanfaethlu, at the receptor locations most affected by the improvements to the A5025 and Wylfa Newydd Project road traffic, the annual mean NO<sub>2</sub> concentration is predicted to increase by a value equivalent to +3% of the AQO value or less or to improve by a value equivalent to -8% of the AQO value (depending on location). This would represent a range of negligible adverse to small beneficial effects.
- 3.3.112 At Llanfachraeth, the annual mean NO<sub>2</sub> concentrations at properties facing onto the current alignment of the A5025 through Llanfachraeth are predicted to decrease from future baseline conditions by the equivalent of -10% of the AQO value, which is a medium beneficial effect. For properties closest to the new alignment, concentrations are predicted to increase from future baseline conditions by the equivalent of +3% of the AQO value or less which is a negligible adverse effect.
- 3.3.113 Other receptors along the A5025 route are not assessed as likely to experience significant effects, with some experiencing slight beneficial effects through road realignment. No likely significant effects have been assessed as likely to occur as a result of traffic for receptors near the Park and Ride Facility.

### Site-specific air quality effects

- 3.3.114 The potential air quality effects of the WNDA are assessed in the **ES, volume D chapter 5**.
- 3.3.115 The assessment calculates changes to air quality as a percentage change on AQOs, which are set by IACC and are used as a reference to describe relative change.
- 3.3.116 During construction, there will be a number of activities with the potential to cause air quality impacts for receptors such as residential properties to the south as well as other receptors such as Cemlyn Gardens. Potential impacts include dust emissions, odour emissions from excavation and the proposed package sewage treatment plant and emissions from plant, machinery and marine vessels.
- 3.3.117 A large number of good practice, embedded and additional mitigation measures have been proposed in the assessment for the construction period. Dust emissions will be controlled through water suppression to dampen stockpiles, sheeting of vehicles containing dusty materials and several other measures. Odour emissions will be controlled through monitoring, the use of spill kits and other measures. Air emissions will be controlled through restricting idling engines, using electric equipment where practicable and other measures. These strategies are specified within the dust and air quality management strategies in the CoCP.

- 3.3.118 As a result of the mitigation measures listed above no significant effects are assessed as likely to occur during construction for residential and other receptors.
- 3.3.119 No significant air quality effects are assessed as likely to occur during operation or decommissioning of the Power Station.
- 3.3.120 The potential air quality effects of the construction of the A5025 Off-line Highway Improvements have been assessed in the ES, volume G chapter 5 (Application Document Reference 6.7.5). Due to embedded and good practice mitigation, no significant adverse dust emissions or other air quality effects are assessed as likely to occur during construction. This includes effects on both human and ecological receptors.
- 3.3.121 The potential air quality effects of the Off-Site Power Station Facilities at Llanfaethlu have been assessed in the ES, volume F chapter 5 (Application Document Reference 6.6.5). Due to embedded and good practice mitigation, no significant adverse dust emissions or other air quality effects are assessed as likely to occur during the construction and operation phases. This includes effects on both human and ecological receptors. The potential for effects during decommissioning is assessed as likely to be lower than during construction and these effects are not envisaged as being significant.
- 3.3.122 The potential air quality effects of the Park and Ride facility at Dalar Hir have been assessed in the ES, volume F chapter 5 (Application Document Reference 6.6.5). Due to embedded and good practice mitigation, no significant adverse dust emissions or other air quality effects are assessed as likely to occur during the construction phase. This includes effects on both human and ecological receptors. The potential for effects during decommissioning is assessed as likely to be lower than during construction and these effects are not envisaged as significant.

### ***Landscape and visual***

- 3.3.123 The Talybolion area will experience a large number of landscape and visual impacts as a result of the Wylfa Newydd Project. This is because of the presence of both the WNDA and several Associated Development sites within the area. These will mean that landscape and visual impacts will occur throughout the Talybolion area. The communities most affected will be those in the north near to the WNDA, such as Llanfechell, and communities along the A5025 between Valley and Tregele.
- 3.3.124 Adverse impacts on the landscape will occur because of the removal of some landscape elements such as fields or rocky shorelines, the intrusive effect of construction activities such as earthworks or temporary buildings, and the introduction of new development into the landscape. Adverse visual impacts occur where a receptor (i.e. a person likely to view the activity, such as local residents, users of local roads and PROWs, visitors and local communities) would be able to view construction activities or new elements which would be intrusive and detrimental to existing views.

- 3.3.125 The landscape and visual impacts of the WNDA are assessed in the ES, volume D chapter 10 (Application Document Reference 6.4.10). This will have a number of impacts on local landscapes and visual receptors in the Talybolion area. This chapter also includes a number of figures including maps illustrating the theoretical visibility of the Power Station buildings.
- 3.3.126 A number of significant impacts would occur in relation to the Anglesey AONB and the non-designated wider landscape (which is land within the ES study area but which is not within the AONB or designated SLAs) as well as local landscape areas. This would occur as a result of Site Preparation and Clearance Works, Main Construction and operation. Effects would include clearance and fencing during Site Preparation and Clearance Works, groundworks and excavation, formation of storage mounds, movement of plant and machinery and loss of existing landscape elements.
- 3.3.127 The remnants of the Cestyll Kitchen Garden<sup>15</sup> would be removed to facilitate Main Construction. During Main Construction, the existing drumlin landform of the AONB within the WNDA would be permanently altered. The rocky shoreline of Porth-y-pistyll bay would be altered by the erection of engineered structures for the construction of the MOLF and CWS intake. The construction of the Power Station would also have significant landscape impacts including the erection of tall cranes.
- 3.3.128 The North Anglesey Heritage Coast would also be affected by construction activities. This would include in particular the construction of the MOLF, breakwaters and CWS intake structures which would impact on the bay at Porth-y-pistyll in the Talybolion area. LSCA will similarly be affected by construction activities on both land and sea.
- 3.3.129 Direct visual impacts as a result of Site Preparation and Clearance Works and Main Construction will affect some communities in the Talybolion area. Site Preparation and Clearance would mostly generate significant visual effects up to approximately 1km distance. The most significant visual impacts generated by Main Construction activities would be for up to approximately 3km distances. They would also vary over time as different construction activities occur throughout the site.
- 3.3.130 The Llanfair-yng-Nghornwy community would be affected during Main Construction due to views of construction activity including a number of tall cranes.
- 3.3.131 Views from the northern fringe of Llanfechell would be affected by Main Construction, particularly by the appearance of tall cranes. However, most views from within village would not be affected.

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<sup>15</sup> A garden near Cemlyn Bay with coastal views designed by the Hon. Violet Vivian, identified as a heritage asset in the EIA.

- 3.3.132 Other groups affected by visual impacts as a result of construction would include walkers on the WCP, users of PRowWs, cyclists using the Copper Trail/National Cycle Network (NCN) Route 566, road users and occasional visitors to Cestyll Garden<sup>16</sup>.
- 3.3.133 Users of the WCP and other PRowWs would be most affected at sections which give large open views towards the WNDA. The most significant effects for WCP users would occur in local views across Cemlyn Bay and Porth-y-pistyll bay. Users of PRowWs and other walkers would experience effects varying based on location.
- 3.3.134 Effects on views for cyclists along Copper Trail/NCN Route 566 would increase closer to the WNDA, with features such as earthworks and tall cranes most notable. Similar effects would be experienced by road users on local roads and sections of the A5025. Occasional visitors to Cestyll Garden would be affected by views of construction of the breakwater and temporary causeway as well as views of features such as tall cranes.
- 3.3.135 A number of landscape and visual impacts are also expected during operation of the Power Station. However, these would generally be lower than during construction. Mitigation and landscaping measures would address these impacts and would help to partially integrate the Power Station into the local landscape. These would also become more effective over time as planting and hedgerows mature.
- 3.3.136 There would be some permanent effects on the AONB including from the Power Station, breakwaters and the MOLF. The North Anglesey Heritage Coast, LSCAs, non-designated wider landscape and LLCAs would also be permanently affected in a similar fashion, depending on proximity.
- 3.3.137 Views from the communities of Llanfair-yng-Nghornwy and Llanfechell would be affected by the completion of the Power Station as this would represent a large-scale industrial building becoming visible. This will be of negligible significance for views from Llanfechell as only a part of the Power Station stacks will be visible. For Llanfair-yng-Nghornwy, the buildings would be more noticeable than the Existing Power Station and therefore of moderate adverse effect and significant in the long term. This would be partly mitigated as landscaping features and plantings mature, but it would remain visible.
- 3.3.138 Users of the WCP and local PRowWs would continue to be affected by visual impacts during operation. The Power Station buildings and structures would be visible from the WCP approaching from the west, with the significance of effects varying by location. Cyclists and others using the Copper Trail/NCN Route 566 would be affected in a similar manner as would local road users.

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<sup>16</sup> Access to the Cestyll Garden is granted by its current owner, the Nuclear Decommissioning Authority. It has previously been opened occasionally to the public, and the EIA has assessed effects that could occur for visitors if it were to be occasionally opened as in previous years.

Impacts would be partly mitigated over time as landscaping features and plantings mature.

- 3.3.139 Views from Cestyll Garden would be affected by the western breakwater as well as some glimpses of the Power Station.
- 3.3.140 A number of embedded and good practice mitigation features will be implemented during the construction and operation phases. For the construction phase this will include landscape design including optimised earthworks design, landscape mounding and planting to help soften views, and construction management as set out in the Wylfa Newydd CoCP (Application Document Reference 8.6) and site-specific sub-CoCPs. During operation, mitigation measures would include landscaping; woodland, hedgerow and scrub planting; and landscape restoration including the return of land to pasture. The Wylfa Newydd CoCP (Application Document Reference 8.6) also contains a landscape and visual strategy to manage and mitigate landscape and visual impacts during operation of the Power Station. A series of additional mitigation measures have also been set out in section 10.6 of the ES, volume D chapter 10 (Application Document Reference 6.4.10).
- 3.3.141 Also, to mitigate the loss of Cestyll Kitchen Garden, Horizon will work with the landowners and other interested parties to consider appropriate enhancement measures such as greater interpretation including on-site interpretation boards at the valley garden, including interpretation boards that are visible from the WCP, enhanced public access to the valley garden, including signage from the WCP, regular maintenance and restoration of the valley garden. This would be secured through the Section 106 agreement.
- 3.3.142 The landscape and visual impacts of the A5025 Off-line Highway Improvements are assessed in the ES, volume G chapter 10 (Application Document Reference 6.7.10). Each of the four new sections of the A5025 will result in some landscape impacts and visual impacts for local residents, users of paths and road users.
- 3.3.143 During construction, the A5025 Off-line Highway Improvements will have localised moderate adverse landscape impacts on the Mynydd Mechell and Surrounds SLA at section 3: Llanfachraeth; section 5: Llanfaethlu; and section 7: Cefn Coch. These sections will also have moderate adverse landscape impacts on surrounding LLCAs due to construction activity and sites impeding on local landscapes.
- 3.3.144 In terms of residential properties, major adverse visual impacts are assessed as likely during construction for a small number of properties near section 3: Llanfachraeth, section 5: Llanfaethlu, section 7: Cefn Coch and one property near the proposed new Power Station Access Road Junction. Moderate adverse impacts are assessed as likely for some other properties near these sections.
- 3.3.145 In terms of users of PRowWs, significant adverse visual impacts are assessed as likely to occur during construction for users of:



- two PRowWs near section 3: Llanfachraeth;
- two PRowWs near section 5: Llanfaethlu;
- users of three PRowWs near section 7: Cefn Coch; and
- users of two PRowWs near the new Power Station Access Road Junction.

3.3.146 Significant adverse visual impacts are expected to occur during construction for users of local roads as the existing A5025 near section 3: Llanfachraeth; users of local roads and the existing A5025 near section 5: Llanfaethlu; and a local road near section 7: Cefn Coch. Moderate adverse visual impacts are expected to occur during construction for users of a local road near section 3: Llanfachraeth; users of local roads near section 7: Cefn Coch; and users of a local road near the proposed new Power Station Access Road Junction.

3.3.147 Moderate adverse visual impacts are assessed as likely to occur during construction for the Llanfaethlu community as a result of section 5: Llanfaethlu.

3.3.148 During operation, moderate adverse landscape impacts will affect LLCAs around section 3: Llanfachraeth. Major adverse long-term visual impacts will be experienced by one residential property near section 7: Cefn Coch, which 15 years after opening will be a moderate and permanent effect. Long-term moderate adverse impacts will be experienced by some residential properties and the users of five PRowWs as well as local roads near section 3: Llanfachraeth; residential properties, the users of two PRowWs and a local road near section 5: Llanfaethlu; and one residential property and the users of local road T8 near section 7: Cefn Coch.

3.3.149 None of the sections are expected to impact upon the Anglesey AONB. No significant visual impacts are expected on NCN Route 566.

3.3.150 Embedded and good practice mitigation measures include alignment of sections to avoid ancient woodland and the AONB; protection of existing trees and shrubs; planting and seeding of trees, shrubs and hedgerows; slackening of earthwork slopes; and measures set out in the Wylfa Newydd CoCP (Application Document Reference 8.6) and sub-CoCPs. Additional mitigation is also proposed including long-term landscape management during operation. It is anticipated that mitigation measures will increase in effectiveness over time as plants and hedgerows mature.

3.3.151 The landscape and visual impacts of the Off-Site Power Station Facilities are assessed in the ES, volume E chapter 10 (Application Document Reference 6.5.10). This would have some significant impacts on surrounding visual receptors.

3.3.152 During construction, the Off-Site Power Station Facilities development is assessed as not likely to have significant effects on the Anglesey AONB, SLAs/Non-designated wider landscape or the local landscape character. The development would have moderate adverse (and thus significant) visual impacts on some receptors including the users of a nearby public footpath

(29/009/1) to the south of the site as well as users of footpaths (29/007/2 and 29/008/1) to the west of the site. It would also have moderate adverse visual effects on the nearby community off the A5025; however, the communities of Llanfaethlu (including users of St Maethlu's Church) and Llanrhuddlad would not experience significant effects due to partial visual screening and distance.

- 3.3.153 A number of embedded and good-practice mitigation measures are intended to reduce the landscape and visual impacts of the Off-Site Power Station Facilities development during all phases. These include construction management strategies set out in the Wylfa Newydd CoCP (Application Document Reference 8.6) and sub-CoCPs, and the planting of trees, shrubs and hedgerows. These measures are also anticipated to increase in effectiveness over time as trees and shrubs mature.
- 3.3.154 The landscape and visual impacts of the Park and Ride facility at Dalar Hir are assessed in the ES, volume F chapter 10 (Application Document Reference 6.6.10). This would have some significant impacts on surrounding landscape and visual receptors as the site lies in a rural area.
- 3.3.155 During construction, the Park and Ride facility would impact on the local landscape character, although this would be mitigated both by the undulating local landscape and local vegetation. In addition, the close proximity of the A5 and A55 already detract from rural landscape characteristics.
- 3.3.156 The construction of the Park and Ride facility would also have some local visual effects. Users of the Cartio Môn Go-Karting Centre would experience views of the construction site and activities and would experience moderate adverse (significant) effects. Some residential receptors would also be impacted. Some residents in the south of Bodedern would have views of the site from upper-floor windows, although this is assessed as a negligible (not significant) effect. No community or transient receptors (e.g. road users) are assessed as experiencing significant effects. No significant impacts are assessed as likely for long distance and night-time views.
- 3.3.157 During operation, the facility would have moderate adverse (significant) effects on the local landscape character. Users of the Cartio Môn Go-Karting Centre would experience moderate adverse (significant) effects due to open views of the site. No other visual receptors would experience significant effects during operation. Effects during decommissioning are likely to be no greater than during construction and will reduce as decommissioning progresses, with the site eventually returning to rural and agricultural land.
- 3.3.158 A number of embedded mitigation measures will be present during construction, operation and decommissioning of the Park and Ride facility. This includes good practice construction management as set out in the Wylfa Newydd CoCP (Application Document Reference 8.6) and the site-specific CoCP, retention of some existing hedges and landscape features, and planting of trees, shrubs and hedgerows. This mitigation is also expected to increase in effectiveness over time as trees and shrubs mature.

### Cumulative landscape and visual effects

- 3.3.159 Cumulative effects as a result of both the Wylfa Newydd Project and other projects are assessed in the ES, volume I chapter 5 (Application Document Reference 6.9.5). A number of other developments will have landscape and visual impacts leading to some cumulative impacts in combination with those of the Wylfa Newydd Project listed above.
- 3.3.160 In terms of the Anglesey AONB, there would be adverse cumulative landscape effects as a result of the combination of visual intrusions from the Wylfa Newydd Project and other projects including Existing Power Station decommissioning. However, these would be localised and range from major adverse locally to a minor adverse effect on the overall AONB/SLA. There would be similarly localised cumulative landscape effects on LLCAs, potentially of major adverse effect locally. The North Anglesey Heritage Coast would be locally affected by cumulative impacts from the Wylfa Newydd Project and other projects including the Existing Power Station decommissioning, with major adverse effects locally but minor adverse effects overall.
- 3.3.161 In terms of visual impacts, users of the WCP, local PRowWs, the Copper Trail/NCN Route 566, open access land and the local road network would experience changes in visual amenity and a cumulative visual effect as the result of both the Wylfa Newydd Project and other projects. Users would experience sequential, simultaneous and/or consecutive visibility at localised sections. This cumulative effect has been assessed as moderate adverse.
- 3.3.162 The community of Llanfechell would potentially experience moderate adverse cumulative visual impacts as a result of simultaneous and/or consecutive views of the Wylfa Newydd Project (principally the Power Station) along with the North Wales Connection Project and the Wylfa Newydd Potable Water Supply projects. Visitors to the standing stones north of Llanfechell would experience major adverse cumulative visual impacts as a result of these views, with the greatest impacts being during construction of the Power Station with residual impacts reducing as mitigation planting matures.
- 3.3.163 The community of Llanfair-yng-Nghornwy will potentially experience moderate adverse cumulative visual impacts as a result of simultaneous and/or consecutive views of the Wylfa Newydd Project (principally the Power Station) along with the North Wales Connection Project, Rhyd-y-Groes Re-power (the consented onshore windfarm) and the Wylfa Newydd Potable Water Supply projects. The impacts would be long term but greatest during the construction phase of the Power Station, reducing to minor adverse as planting matures.
- 3.3.164 Visitors to the William Thomas Monument at Mynydd y Garn would experience short-term moderate adverse cumulative visual effects as a result of simultaneous and/or consecutive views of the Wylfa Newydd Project (principally the Power Station but also the A5025 Off-line Improvements) as well as other projects including Existing Power Station decommissioning, the North Wales Connection Project, the Rhyd-y-Groes Repower and the Wylfa

Newydd Potable Water Supply. These would lessen over time as mitigation planting matures.

- 3.3.165 Residential receptors within 1km of the A5025 Off-line Highway Improvements would potentially experience cumulative effects as a result of simultaneous and/or consecutive visibility of elements of the Wylfa Newydd Project along with other projects including the North Wales Connection Project, the Rhyd-y-Groes Repower and the Wylfa Newydd Potable Water Supply. These would lessen over time as mitigation planting matures.

### ***Public access and recreation***

#### **Project-wide public access and recreation effects**

- 3.3.166 The Project-wide public access and recreation effects as a result of traffic are assessed in the ES, volume C chapter 3 (Application Document Reference 6.3.3). Because the use of PRoWs and other routes in the Talybolion area often relies on public roads for links between routes, there will be some impacts as a result of increased traffic flows during the Wylfa Newydd Project.
- 3.3.167 During construction at the WNDA there will be an increase in the number of HGVs and other vehicles using the A5025, which will impact walkers and cyclists. This will also impact walkers and cyclists using side roads or PRoWs crossing the A5025. The effects would be greatest during peak flows on weekdays.
- 3.3.168 Widening works as part of the A5025 On-line Highway Improvements would help to reduce the effect of traffic for cyclists. However, walkers and cyclists crossing the A5025 would experience some adverse effects due to increased traffic possibly amounting to severance or longer waiting times, although these effects would be localised and occur mainly at peak travel times.
- 3.3.169 There will also be significantly increased traffic flows on the section of road between Junction 4 of the A55 to the Park and Ride facility at Dalar Hir, particularly during early morning and late afternoon/early evening peaks. This would be sufficient to deter walkers and cyclists. However, the section of road affected will be relatively short and of relatively low value for recreational walkers and cyclists. In addition, these flows will be mainly confined to peak times in the morning and evening.
- 3.3.170 During operation of the Power Station there will also be increased levels of traffic over the baseline, but these flows will be significantly less than during construction.

#### **Site-specific public access and recreation effects**

- 3.3.171 The impacts of the WNDA on public access and recreation are summarised in the ES, volume D chapter 4 (Application Document Reference 6.4.4).
- 3.3.172 During construction, the erection of perimeter fencing will result in the permanent closure of 32 PRoWs within the WNDA. These are listed in full in

the ES. Some PRoWs outside but near the WNDA may be affected by impacts from construction such as noise, dust or visual amenity. These impacts would range from minor to moderate adverse depending on the section of PRoW.

- 3.3.173 Sections of the WCP would also be permanently closed following the erection of perimeter fencing. A temporary alternative route between Cemlyn Bay and Cemaes around the boundary of the perimeter fencing has been identified, although this would be a longer route than at present by approximately 4.7km. This route would also be affected by the change in the nature of the footpath due to the wire-mesh perimeter fencing, views of construction activity and the loss of sea views for this section leading to a loss in attractiveness. The WCP would furthermore be affected by loss of amenity due to Main Construction due to impacts from activities such as noise, dust and visual effects. It would also be affected by the construction of the Power Station Access Road Junction across a small part of the route; this would be a minor adverse impact, although it would lengthen the period of time in which the WCP would be affected with a potential cumulative effect in conjunction with the effects of the construction of the Power Station<sup>17</sup>.
- 3.3.174 A section of the Copper Trail/NCN Route 566 between Cemlyn Bay and Llanfechell (via Tregele) along Cemlyn Road would be permanently closed. The Copper Trail would be diverted along Nanner Road and would also have to use the A5025 to link between minor roads to Llanfechell. While Horizon has completed improvements to Nanner Road in anticipation of the closure of Cemlyn Road, it is nevertheless a narrower road and is likely to experience additional traffic, resulting in a reduction of amenity. In addition to improvements to Nanner Road, Horizon would provide a segregated cycle path along the A5025 for the section between Nanner Road and Llanfechell which will mitigate the impact of diversions at this section.
- 3.3.175 Access to the Cestyll Garden is granted by the Nuclear Decommissioning Authority and not Horizon. Should the Garden be occasionally opened to the public as it was in previous years there are no significant access effects assessed as likely for this amenity.
- 3.3.176 Access to Cemlyn Bay would not be impeded, although there will be some adverse effects to amenity as a result of the construction of the breakwater and MOLF and general construction activities as well as possible displacement of visitors from Porth Wylfa and Porth yr Ogof to Cemlyn Bay. Access to Porth-y-pistyll will be permanently restricted as a result of the construction of the temporary breakwater and MOLF.
- 3.3.177 In order to mitigate the effects of the construction of the Power Station on public access, Horizon will provide a contribution to IACC to fund improvements to the PRoW network near to the WNDA, the A5025 between Valley and Tregele or to sections of the WCP. In discussions with IACC,

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<sup>17</sup> See ES, Volume I Chapter 4 (Application Document Reference 6.9.4) for intra-project cumulative effects.

emphasis would be placed on improving PRowS that are in close proximity to the Wylfa Newydd Development Area or adjoin the A5025 between Valley and Treglele or on sections of the Wales Coast Path at any location on Anglesey. This would be secured through a Section 106 agreement. This mitigation would reduce the effect as result of the loss of PRowS within the WNDA to moderate adverse; however, this would depend on the sum of money and number of PRowS that could be improved. Horizon would also contribute a payment for Sustrans to update the Copper Trail leaflet to reflect permanent diversions and for IACC to update signage.

- 3.3.178 Once construction is complete, the WCP would be diverted again along a shorter route between Cemlyn Bay and Wylfa Head, with a replacement car park provided and the existing WCP resurfaced. This route has been designed to be as close to the sea as practicable and would be an improvement on the diverted route during construction, although it would still be about 1.5km longer than the original route and would represent a major adverse effect on the original.
- 3.3.179 New PRowS would be created within the WNDA during operation as well as a nature trail and the provision of picnic tables, a new car park and interpretation boards.
- 3.3.180 Cemlyn Bay would continue to experience an adverse effect in terms of visual amenity as a result of the physical presence of the breakwater, while access to Porth-y-pistyll would be restricted during the operation of the Power Station.
- 3.3.181 The public access and recreation effects of the A5025 Off-line Highway Improvements are assessed in the ES, volume G chapter 4 (Application Document Reference 6.7.4). Some PRowS would be closed for short periods of time during construction at: section 3: Llanfachraeth, section 5: Llanfaethlu and section 7: Cefn Coch; however, for most of these the effect would be short-term and not significant. One PRow at section 7: Cefn Coch would be permanently closed and an alternative route provided, while for one PRow at section 3: Llanfachraeth users will have to cross the A5025 during operation which is assessed as a moderate adverse impact. There will also be some beneficial effects for walkers and cyclists as a result of the improved road conditions of the A5025.
- 3.3.182 The Tour de Môn cycle race takes place on one day during August each year and makes use of the A5025. Should this coincide with the A5025 Off-line Highway Improvements this could represent a moderate adverse effect as sections of the A5025 would be subject to traffic management, leading to delays in the timed race. However, measures are proposed within the ES to manage construction works and minimise the impact on the race. If the race does not coincide with construction works on the A5025 then this impact would not occur. It is anticipated that the Tour will continue to take place at weekends when construction traffic would be reduced and goods vehicles would not be travelling to the WNDA; the Tour would also not coincide with peak travel times for most participants. As a result, no significant effect is assessed as likely as a result of traffic flows. A potential cumulative effect

may occur as a result of the combination of increased traffic flows and potential diversions as a result of road improvements, which would lengthen the time during which the Tour may be impacted<sup>18</sup>; however, as noted this would not occur if these diversions do not coincide with the Tour.

- 3.3.183 No significant public access and recreation effects have been assessed as likely to occur due to the Off-Site Power Station Facilities or the Park and Ride facility at Dalar Hir. However, as mentioned above there will be increased traffic flows on a short section of the A5 during the operation of the Park and Ride facility.
- 3.3.184 A number of embedded and good practice mitigation measures have been proposed to alleviate effects on public access and recreation. In terms of traffic-related effects these include the A5025 On-line Highway Improvements and the A5025 Off-line Highway Improvements, managing construction traffic through the Logistics Centre and the Park and Ride facility as well as phasing shift times for construction workers. The Wylfa Newydd CoCP (Application Document Reference 8.6) and sub-CoCPs set out how public access and recreation impacts and mitigation will be managed on all sites.

### **Cumulative public access and recreation effects**

- 3.3.185 Cumulative effects as a result of both the Wylfa Newydd Project and other projects (including the A5025 On-line Highway Improvements) are assessed in the ES, volume I chapter 5 (Application Document Reference 6.9.5).
- 3.3.186 Potential cumulative effects have been identified for two PROWs due to the combination of effects from the A5025 Off-line Highway Improvements and On-line Highway Improvements. These will experience minor adverse effects from the On-line Highway Improvements due to temporary closure and reduction in amenity. One will be closed as a result of the A5025 Off-line Highway Improvements while another will be diverted and experience a reduction in amenity. The cumulative effects would be to prolong the reduction in amenity for both, with a moderate adverse effect for one and a major adverse effect for the closed PROW.
- 3.3.187 Participants of the Tour de Môn will potentially experience a cumulative effect due to the combination of the potential reduction in amenity of the race as a result of the A5025 Off-line Highway Improvements as detailed above and potential effects from traffic management as a result of the A5025 On-line Highway Improvements. This has been assessed as potentially being a moderate adverse effect.

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<sup>18</sup> See ES, Volume I Chapter 4 (Application Document Reference 6.9.4) for intra-project cumulative effects.



### ***WNSA Cultural heritage***

3.3.188 It is recognised that the effects on the setting of cultural heritage assets is a key community concern. The ES, volume D chapter 11 (Application Document Reference 6.4.11) states that five historic buildings are likely to experience moderate adverse effects during construction, operation and decommissioning of the Power Station. These are:

- St Patrick's Church, Llanbadrig;
- Felin Gafnan Corn Mill, Porth y Felin;
- the Corn-drying house at Felin Gafnan;
- Mill house at Felin Gafnan, Cylch-y-Garn; and
- Cafnan House and Outbuildings.

A major adverse effect for Cestyll Garden is predicted during construction and operation, and a moderate adverse effect for Dame Sylvia Crowe's landscaping area. Construction activities would lead to noise and visual intrusion within the setting of these assets as well as altering the rural character of the setting; during operation the Power Station and other elements such as the breakwater would transform the rural setting of the assets and introduce permanent incongruous elements. However, embedded and good practice mitigation measures applying to noise and visual effects would also mitigate the impacts on these assets, while additional mitigation including surveys and monitoring would be implemented to address impacts on cultural heritage.

3.3.189 The cultural heritage effects of the A5025 Off-line Highway Improvements are assessed in the ES, volume G chapter 11 (Application Document Reference 6.7.11). During construction and operation (and following mitigation), moderate adverse impacts would affect two archaeological remains: the Capel Soar Standing Stone and two small orthostatic<sup>19</sup> stones south of Ty'n Felin. These would be affected by noise and visual intrusion in the setting of the monuments, detracting from the rural character of their setting. Shorter-term moderate adverse impacts during construction would affect three historic buildings: Siop Soar, the Black Lion Inn and the former site of Melin Ty'n y Felin at Cylch y Garn as a result of noise and visual intrusion into the setting of these assets. Effects during operation are not assessed as significant. Archaeological mitigation measures will include excavations, surveys and historic building recording in order to create a permanent record of all remains and assets.

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<sup>19</sup> Erect and free-standing

### **Cumulative cultural heritage effects**

- 3.3.190 Potential cumulative effects have been identified for some cultural heritage assets in the Talybolion area. The Cestyll Garden may experience effects from the combination of visual intrusion from the WNDA and intrusion due to activities associated with projects including Existing Power Station decommissioning, North Wales Connection Project, Utilities Diversions and Wylfa Newydd Potable Water Supply projects. This is assessed as a major adverse effect.
- 3.3.191 Two small orthostatic stones south of Ty'n y Felin would potentially be affected by intrusion due to Section 7 (Cefn Coch) of the A5025 Off-line Highway Improvements and a temporary impact on the setting of this receptor associated with construction and operation of the Temporary Construction Compound for the A5025 On-line Highway Improvements. This would be a temporary and moderate adverse impact.

## **3.4 Combined topic effects and summary**

### **Combined topic effects**

- 3.4.1 Some in-combination effects (those where a receptor is affected in more than one way) are assessed as likely to occur for communities in the Talybolion area. Potential significant combined effects are assessed in the ES, volume D chapter 16 (Application Document Reference 6.4.16) as likely to occur for residential receptors near Cemlyn Bay and for Properties situated between Porth-y-pistyll and Cemlyn Bay, and to the west of Tregele. This is as a result of the combination of effects identified above from the WNDA during construction and decommissioning, including noise, visual impacts, minor air quality and dust impacts and impacts on the setting of cultural heritage assets (i.e. at Felin Gafnan).
- 3.4.2 Some potential combined effects are assessed in the ES, volume E chapter 12 (Application Document Reference 6.5.12) as likely to occur as a result of the construction and decommissioning of the Off-Site Power Station Facilities for residential properties at Llanfaethlu and Llanrhuuddlad. This is due to the combination of noise impacts and minor impacts such as visual impacts and air quality impacts. Similar combined effects are assessed as potentially occurring due to combined minor effects for recreational receptors and Ysgol Rhyd y Llan in Llanfaethlu.
- 3.4.3 Some potential combined effects are assessed in the ES, volume F chapter 12 (Application Document Reference 6.6.12) as likely to occur as a result of the construction, operation and decommissioning of the Park and Ride facility at Dalar Hir. Gwyddfor Residential Home would experience a combination of minor and not significant effects including noise and visual impacts. Residential receptors in the Bodedern and Llanfihangel-yn-Nhywyn area would potentially also experience a similar combined effect.

- 3.4.4 Some potential combined effects are assessed in the ES, volume G chapter 12 (Application Document Reference 6.7.12) as likely to occur as a result of the construction of the A5025 Off-line Highway Improvements. Some residential receptors at Llanfachraeth, Llanfaethlu, and Cefn Coch would experience combined effects due to the combination of noise impacts and other impacts including visual impacts. It is possible that Ysgol Rhyd y Llan in Llanfaethlu may also experience a combined effect as a result of minor and not significant noise, visual and dust impacts.

### Summary

- 3.4.5 In summary, the Talybolion area is likely to experience a large number of effects as a result of the Wylfa Newydd Project. These would particularly impact communities in the north of the area nearest the WNDA such as Llanfechell. However, effects from Associated Developments will also be present in other areas of the Talybolion area, particularly along the A5025.
- 3.4.6 As well as direct impacts from construction and operation, there would be impacts as a result of workers seeking accommodation in the area. The WAMS will seek to match accommodation demand to supply, and monitor the effects. A Housing Fund will provide support for housing in the local area to mitigate localised impacts.
- 3.4.7 Beneficial effects are likely in the local economy and labour market, while potential effects on the Welsh language are identified from the additional workforce.
- 3.4.8 Road users, particularly on the A5025 would experience increased traffic in some locations, but traffic would be reduced in other locations as a result of Off-Line Highway Improvements.
- 3.4.9 Noise or vibration effects are identified for some areas as a result of construction activity on the WNDA, the construction of A5025 Off-line Highway Improvements, or traffic on the A5025 during the construction period.
- 3.4.10 There will be landscape and visual effects from construction and operation, affecting the WCP, Copper Trail and AONB, as well as occasional visitors to Cestyll Garden, the William Thomas monument at Mynydd y Garn, and the standing stones at Llanfechell. Landscape and visual impacts will also be experienced from properties and landscapes with views of the A5025 Off-line Highway Improvements, the Off-Site Power Station Facilities and the Park and Ride facility (Dalar Hir).
- 3.4.11 The communities of Llanfechell and Llanfair-yng-Nghornwy will experience a cumulative visual impact from the Project and others including Existing Power Station decommissioning.
- 3.4.12 A number of footpaths and other areas of access will be affected by temporary or permanent closures or diversions. Heritage assets would be affected by intrusion including Cestyll Garden, the Mill and other buildings at Felin Gafnan, and the Capel Soar standing stones.

### WNSA Off-Site Power Station Neighbourhood Support Scheme

- 3.4.13 A number of mitigation strategies and commitments have been proposed to address community impacts, some of which are shown in table 3-2 below.
- 3.4.14 Horizon has developed a Neighbourhood Support Scheme which includes a Property Price Support plan. The Property Price Support plan is a voluntary support plan for eligible residents living near the Power Station Site who wish to move but experience difficulties in achieving a reasonable market price for their property due to the Wylfa Newydd Project. The Property Price Support plan is intended to offer residents of eligible properties within the scheme area the difference between their property values with and without the Wylfa Newydd Project as well as a £5,000 sum towards the costs of moving and professional fees. This scheme came into effect in April 2015 and is expected to remain in place until construction of the Power Station is completed.

### Residual effects

- 3.4.15 Following mitigation, there will be some significant residual effects (including but not limited to cumulative and in-combination effects) across all topics. Table 3-2 below summarises residual effects in the Talybolion area.

Table 3-2 **Residual effects (after mitigation), Talybolion area**

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
<b>Socio-economics</b>				
Labour market on Anglesey.	Increase in employment as a result of construction and operation.	Construction/operation	-	Major beneficial
PRS accommodation in the KSA.	Increase in demand for bed spaces.	Construction	Workforce Accommodation Strategy measures.	Minor adverse
Tourism sector in Anglesey.	Damage to brand and attractiveness of Anglesey tourism.	Construction	Tourism fund.	Minor adverse
Local economy in north Wales.	Investment in local economy.	Construction and operation	-	Moderate beneficial
Local economy on Anglesey.	Investment in local economy.	Construction and operation	-	Moderate beneficial

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
Agricultural land at A5025 Off-line Highway Improvement sites.	Loss of agricultural land.	Construction	None.	Moderate/major adverse
Welsh language - moderate adverse as result of population change.	Drop in relative proportion of Welsh speakers due to in-migration of construction workers.	Construction	Measures in WLCMES and in Workforce Accommodation Strategy	Potential moderate adverse (to be monitored)
Welsh language - potential effects due to housing demand.	Increased cost of housing for local Welsh speakers.	Construction	Measures in WLCMES and in Workforce Accommodation Strategy including Housing Fund.	Potential moderate adverse (to be monitored)
Welsh language - potential effects due to school demand.	Potential increase in the number of non-Welsh speaking children in local schools, altering balance of Welsh speakers and non-speakers in schools.	Construction	Measures in WLCMES.	Potential moderate adverse (to be monitored)
Welsh - potential effects on traditions & culture.	In-migration of non-Welsh speakers from different background/culture .	Construction	Measures in WLCMES and in Workforce Accommodation Strategy including Housing Fund.	Potential moderate adverse (to be monitored)
Welsh - beneficial effects from	Economic benefits of Project creating jobs for local	Construction and operation	Enhancement measures in WLCMES.	Moderate beneficial

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
economic benefits, investment, employment.	people and reducing out-migration of Welsh-speaking young people.			
Cumulative effect - economic investment.	Local economic investment and spending as a result of WN Project and other projects.	Construction and operation	-	Moderate beneficial
Vulnerable groups identified in HIA living near WNDA/local road network.	Combined effects from traffic, air quality etc.	Construction	Measures in HIA.	Up to moderate adverse
<b>Transport</b>				
Motorised and public transport users.	Users would experience significant increases in traffic flow on the A5025 through Valley, Llanfachraeth, Llanfaethlu and Cefn Coch during the opening year of the A5025 Off-line Highway Improvements 'without bypasses' scenario.	Construction	None identified.	Moderate adverse
Motorised and public transport users.	Users would experience significant decreases in traffic flow on the existing A5025 at Llanfachraeth during the opening	Construction	None identified.	Moderate beneficial

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
	year of the A5025 Off-line Highway Improvements 'with bypasses' scenario.			
Motorised and public transport users.	Users would experience significant decreases in traffic flow on the existing A5025 at Cefn Coch during the opening year of the A5025 Off-line Highway Improvements 'with bypasses' scenario.	Construction	None identified.	Major beneficial
Motorised and public transport users.	Users would experience significant increases in traffic flows and/or traffic composition along the existing A5025 (sections 11, 14, 17, 20 and 21) during the Wylfa Newydd Project peak construction scenario.	Construction	None identified.	Moderate adverse
Motorised and public transport users.	Users would experience significant decreases in traffic flow on the existing A5025 at Llanfachraeth (section 12) during the Wylfa Newydd Project peak	Construction	None identified.	Moderate beneficial



Receptor	Description of effect	Phase	Additional mitigation	Residual effect
	construction scenario.			
Motorised and public transport users.	Users would experience significant decreases in traffic flow on the existing A5025 at Cefn Coch (section 18) during the Wylfa Newydd Project peak construction scenario.	Construction	None identified.	Major beneficial
Motorised and public transport users.	Drivers travelling in both directions along section 13 (Llanfachraeth) would experience decreases in driver stress in the afternoon/evening peak period in the Wylfa Newydd Project peak construction scenario.	Construction	None identified.	Moderate beneficial
Motorised and public transport users.	Users would experience significant decreases in traffic flow on the existing A5025 at Llanfachraeth (section 12) during the Wylfa Newydd Project peak operation scenario.	Operation	None identified.	Moderate beneficial

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
Motorised and public transport users.	Users would experience significant decreases in traffic flow on the existing A5025 at Cefn Coch (section 18) during the Wylfa Newydd Project peak operation scenario.	Operation	None identified.	Major beneficial
Drivers.	Drivers travelling along section 13 (Llanfachraeth) would experience decreases in driver stress in the afternoon/evening peak period in the Wylfa Newydd Project peak operation scenario.	Operation	None identified.	Moderate beneficial
<b>Noise and Vibration</b>				
Residential receptors near A5025, Section 3 (Llanfachraeth) to proposed Power Station Access Road (south of Tregele)	Increased noise levels from traffic on the A5025.	Opening year of the A5025 Off-line Highway Improvements (without improvements)	Offers of noise mitigation/insulation to occupants of eligible properties	Major adverse (50) Moderate adverse (225)
Residential receptors near A5025, Section 3 (Llanfachraeth) to proposed	Increased noise levels from traffic on the A5025 with A5025 Off-line Highway Improvements	Opening year of the A5025 Off-line Highway Improvements (with	As above	Major adverse (53) Moderate adverse (90)

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
Power Station Access Road (south of Tregele)	completed and operational.	improvements)		
Residential receptors near A5025, Section 3 (Llanfachraeth) to proposed Power Station Access Road (south of Tregele)	Increased noise levels from traffic on the A5025 with A5025 Off-line Highway Improvements completed and operational.	Peak Construction	As above	Major adverse (73) Moderate adverse (92)
Residential receptors near A5025, Section 3 (Llanfachraeth) to proposed Power Station Access Road (south of Tregele)	Increased noise levels from traffic on the A5025 with A5025 Off-line Highway Improvements completed and operational.	Peak Operation	As above	Major adverse (80) Moderate adverse (87)
Residential properties over 1,000m from WNDA.	Long-term exposure to construction noise at 310 properties (across all areas).	Construction	Noise barriers in the form of bunds and working behind outer faces of mounds; measures set out in CoCP and sub-CoCPs	Moderate to major adverse (dependent on location)

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
Residential properties and other buildings in close proximity to the WNDA.	Vibration as a result of construction activities.	Construction	Vibration control and monitoring measures set out in ES.	Moderate adverse
Residential properties within 150 of the Off-Site Power Station Facilities.	Increased noise levels due to noise from plant and machinery during daytime periods only.	Construction	3.6m hoarding to be constructed on site perimeter.	Major adverse at 5 properties, moderate adverse at 3 properties
Residential properties near to A5025 Off-line Highway Improvements.	Exposure to noise during construction of A5025 Off-line Highway Improvements.	Construction	Acoustic screening around hydraulic breaker/s, selection of quieter plant and/or alteration of working techniques; and schedule works at mutually convenient times.	Major adverse at 9 properties, moderate adverse at 21.
Cumulative - Outlying property south of WNDA.	Cumulative effect from overlap of noise from WNDA and traffic.	Construction	-	Moderate adverse
Cumulative - Outlying property south of WNDA.	Cumulative effect from overlap of noise from Project and Existing Power Station decommissioning.	Construction	-	Moderate adverse

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
<b>Landscape and Visual</b>				
North Anglesey Heritage Coast/LSCAs	Construction of MOLF breakwaters, CWS intake etc.	Construction	Protection of existing rocky shoreline and intertidal zone. Use of appropriate materials for MOLF and breakwaters. Other measures set out in ES.	Moderate to major adverse
Anglesey AONB.	Impacts including removal of landscape features, removal of field boundaries, etc in WNDA.	Construction	Protection of existing rocky shoreline and intertidal zone. Use of appropriate materials for MOLF and breakwaters. Other measures set out in ES.	Moderate adverse (Enabling Works), major adverse (main construction) [area directly affected]
Non-designated wider landscape.	Impacts including removal of landscape features, removal of field boundaries, etc in WNDA.	Construction	As above.	Moderate adverse (enabling), major adverse (main construction)
LLCAs.	Impacts including removal of landscape features, removal of field boundaries, etc in WNDA.	Construction	As above.	Minor to major adverse

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
Users of WCP, PRowS, Copper Trail/NCN Route 566, local road users.	Views of construction activities at WNDA, including cranes, earthworks etc.	Construction	As above.	Moderate to major adverse
Community of Llanfair-yng-Nghornwy.	Views of construction activities at WNDA, including cranes, earthworks etc.	Construction	As above.	Moderate adverse
Occasional visitors to Cestyll Garden.	Close-ranged views of construction activities.	Construction	As above	Major adverse
Visitors to William Thomas Monument at Mynydd y Garn.	Views of construction activities at WNDA, including cranes, earthworks etc.	Construction	As above.	Major adverse
Visitors to the standing stones north of Llanfechell.	Views of construction activities at WNDA, including cranes, earthworks etc.	Construction	As above.	Major adverse
Anglesey AONB.	Permanent effect as a result of the Power Station buildings, breakwaters and MOLF.	Operation	Implementation of a long-term landscape strategy; measures in ES.	Major adverse locally, minor adverse overall
Non-designated wider	Permanent effect as a result of the Power Station	Operation	As above.	Major adverse locally, minor

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
landscape – directly affected area only	buildings, breakwaters and MOLF.			adverse overall
Heritage Coast, LSCAs, LLCAs.	Permanent effect as a result of the Power Station buildings, breakwaters and MOLF.	Operation	As above.	Major adverse locally, minor adverse overall
Users of WCP, PRoWs, local road users.	Permanent effect as a result of the Power Station buildings.	Operation	As above.	Minor-moderate adverse
AONB.	Cumulative effect from multiple projects.	Construction/operation	As above.	Major adverse locally, minor adverse overall
Users of WCP, PRoWs, local road users.	Cumulative effect from multiple projects.	Construction/operation	As above.	Major adverse locally, minor adverse overall
Occasional visitors to Cestyll Garden.	Views of western breakwater and other Power Station buildings.	Operation	Use of appropriate materials for MOLF and breakwaters to help integrate into the existing seascape character. Implementation of long-term landscape strategy.	Major adverse
Visitors to the standing	Views of Power Station buildings.	Operation	Implementation of a long-term	Moderate adverse



Receptor	Description of effect	Phase	Additional mitigation	Residual effect
stones north of Llanfechell.			landscape strategy; measures in ES	
Non-designated wider landscape, LLCAs.	Adverse landscape impacts and visual intrusion as a result of the construction and operation of the A5025 Off-line Highway Improvements.	Construction/ Operation	As above	Moderate adverse
Residential and other properties with views of the A5025 Off-line Highway Improvements.	Adverse visual impacts and visual intrusion as a result of the construction and operation of the A5025 Off-line Highway Improvements.	Construction/ Operation	As above.	Moderate to major adverse
Users of PRoWs near the A5025 Off-line Highway Improvements.	Adverse visual impacts and visual intrusion as a result of the construction and operation of the A5025 Off-line Highway Improvements.	Construction/ Operation	As above.	Moderate to major adverse
Local road users with views of the A5025 Off-line Highway Improvements.	Adverse visual impacts and visual intrusion as a result of the construction and operation of the A5025 Off-line Highway Improvements.	Construction/ Operation	As above.	Moderate to major adverse

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
Users of PRowS and residential properties with views of the Off-Site Power Station Facilities.	Adverse visual impacts and visual intrusion as a result of the construction of the Off-Site Power Station Facilities.	Construction	Measures in ES	Moderate adverse
Local landscape character.	Adverse visual impacts and visual intrusion as a result of the construction, operation and decommissioning of the Park and Ride facility (Dalar Hir).	Construction / operation/ decommissioning.	Measures in ES	Moderate adverse (locally)
Cartio Môn Go-Karting Centre.	Adverse visual impacts and visual intrusion as a result of the construction, operation and decommissioning of the Park and Ride facility (Dalar Hir).	Construction / operation/ decommissioning.	Measures in ES including advance planting and design	Moderate adverse (locally)
Cumulative - AONB/SLA/ LLCAs.	Cumulative landscape impacts as a result of Project and others including Existing Power Station decommissioning.	-	-	Moderate to major adverse locally
Users of WCP, PRowS, local road users.	Cumulative visual impacts as a result of Project and others including Existing Power	-	-	Moderate adverse

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
	Station decommissioning.			
Community of Llanfechell.	Cumulative visual impacts as a result of Project and others including Existing Power Station decommissioning.	-	-	Moderate adverse
Community of Llanfair-yng-Nghornwy.	Cumulative visual impacts as a result of Project and others including Existing Power Station decommissioning.	-	-	Moderate adverse
Visitors to the William Thomas Monument at Mynydd y Garn.	Cumulative visual impacts as a result of Project and others including Existing Power Station decommissioning.	-	-	Moderate adverse
Residential receptors within 1km of the A5025 Off-line Highway Improvement s.	Cumulative visual impacts as a result of Project and others including Existing Power Station decommissioning.	-	-	Major adverse
<b>Public access and recreation</b>				
Walkers, cyclists and drivers travelling along the A5025 for recreational purposes during	Reduction in recreational amenity due to increased HGV movements along A5025.	Construction	None identified.	Moderate adverse

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
weekdays (not as part of a promoted route).				
Active travel cyclists and walkers on sections of the A5025.	Reduction in recreational amenity due to increased HGV movements along A5025.	Construction	None identified.	Moderate adverse
Walkers and cyclists using the A5 between Junction 4 of the A55 and the Park and Ride.	Reduction in recreational amenity associated with cars travelling to and from the Park and Ride during the early morning and early evening.	Operation (of Park and Ride)	None identified.	Moderate adverse
PRoWs in WNDA.	Permanent closure of 32 PRoWs in WNDA.	Construction	Payment to IACC for them to spend on improving other PRoW in the vicinity of the site as an overall improvement to the PRoW network beyond the Wylfa Newydd Development Area during construction.	Major to moderate adverse
PRoWs near WNDA.	Loss of amenity due to construction impacts.	Construction	None identified	Minor to moderate adverse
WCP	Permanent closure of sections; diversions leading to longer route;	Construction	None identified	Major adverse

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
	loss of amenity due to construction impacts.			
Cemlyn Bay	Increase in visitor numbers as a result of the closure of Fisherman's car park; increased noise and visual intrusion from construction of Power Station.	Construction/operation	None identified	Moderate adverse
Recreational visitors to the Anglesey AONB near Porth-y-pistyll.	Loss of access to this area of AONB due to the erection of the perimeter fencing and associated closure of PRoW.	Construction	None identified	Major adverse
WCP	Permanent increase in length of route and loss of sea views	Operation	None identified	Major adverse
Users of PRoWs	Creation of new PRoWs during operation including provision of routes suitable for wheelchair users, picnic areas, interpretation boards and a nature trail.	Operation	-	Moderate beneficial
WCP users	Cumulative effect from multiple projects, increasing length of time affected.	Construction/operation	None identified	Major adverse

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
PRoWs near A5025 Off-line Highway Improvements	Permanent closure of one PRoW; Introduction of new at-grade crossing due to the construction of the new road at one PRoW.	Construction	None identified.	Moderate adverse
Participants of the Tour de Môn cycle race.	Potential reduction in the amenity of the race route as a result in the change in alignment of the road and introduction of traffic management should the race coincide with A5025 Off-line Highway Improvements.	Construction	Construction management to minimise disruption.	Moderate adverse
Recreational and active travel users along the A5025.	Improvements to recreational amenity of this route as a result of the inclusion of footways/cycleways.	Operation	-	Moderate beneficial
Two PRoWs near the A5025.	Cumulative effect from combination of effects from A5025 Off-line and On-line Highway Improvements, prolonging reduction in amenity.	Construction	None identified.	Moderate adverse
Participants of the Tour	Potential cumulative effect from combination	Construction	None identified.	Moderate adverse

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
de Môn cycle race.	of potential delays from traffic management as a result of A5025 Off-line and On-line Highway Improvements.			
WCP users	Cumulative effect from multiple projects, increasing length of time affected.	Construction/operation	None identified.	Major adverse
<b>Cultural Heritage</b>				
Felin Gafnan Corn Mill	Noise and visual intrusion on the setting of this asset as a result of construction activities at the WNDA; intrusion into setting of asset as a result of the Power Station and breakwater during operation.	Construction/operation	Photographic survey to document current setting (construction).	Moderate adverse
Mill House at Felin Gafnan, Cylch-y-Garn	Noise and visual intrusion on the setting of this asset as a result of construction activities at the WNDA; intrusion into setting of asset as a result of the Power Station and breakwater during operation.	Construction/operation	Photographic survey to document current setting (construction).	Moderate adverse

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
Corn drying house at Felin Gafnan	Noise and visual intrusion on the setting of this asset as a result of construction activities at the WNDA; intrusion into setting of asset as a result of the Power Station and breakwater during operation.	Construction/operation	Photographic survey to document current setting (construction).	Moderate adverse
Cafnan House and Outbuildings	Noise and visual intrusion on the setting of this asset as a result of construction activities at the WNDA; intrusion into setting of asset as a result of the Power Station and surroundings during operation.	Construction/operation	Photographic survey to document current setting (construction).	Moderate adverse
Cestyll Garden	Removal of historic landscape elements including the kitchen garden and parts of its Essential Setting. (construction); Visual intrusion into the setting and Significant Views of the Registered Historic Park and Garden (construction and operation).	Construction/operation	Level 2 historic building recording. Level 2 historic landscape survey. Photographic survey.	Major adverse



Receptor	Description of effect	Phase	Additional mitigation	Residual effect
Capel Soar Standing Stone	Construction activities as a result of the A5025 Off-line Highway Improvements would result in noise and visual intrusion on the setting of this asset, detracting from its rural character. Operation of the road sections would continue to detract from the setting of this asset.	Construction/operation	None identified.	Moderate adverse
Two orthostatic stones south of Ty'n y Felin	Construction activities as a result of the A5025 Off-line Highway Improvements would result in noise and visual intrusion on the setting of this asset, detracting from its rural character. Operation of the road sections would continue to detract from the setting of this asset.	Construction/operation	None identified.	Moderate adverse
Siop Soar	Construction works would be intrusive to the setting of the asset, resulting in temporary noise and visual intrusion,	Construction	None identified.	Moderate adverse

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
	detracting from the semi-rural character of its setting.			
Black Lion Inn	Construction works would be intrusive to the setting of the asset, resulting in temporary noise and visual intrusion, detracting from the semi-rural character of its setting.	Construction	None identified.	Moderate adverse
Former site of Melin Ty'n y Felin at Cylch y Garn	Construction works would be intrusive to the setting of the asset, resulting in temporary noise and visual intrusion, detracting from the semi-rural character of its setting.	Construction	None identified.	Moderate adverse
Cestyll Garden	Cumulative effect from multiple projects, increasing length of time affected.	Construction/operation	None identified.	Major adverse
Two orthostatic stones south of Ty'n y Felin	Cumulative effect from combination of effects from A5025 Off-line and On-line Highway Improvements, increasing length of time affected.	Construction	None identified.	Moderate adverse

## 4 Canolbarth Môn and Llifon

### 4.1 Introduction

- 4.1.1 The Canolbarth Môn and Llifon study area consists of the Canolbarth Môn and Llifon wards in the centre and west of Anglesey. It includes the towns of Llangefni, Valley and Rhosneigr. This study area is comprised of the IACC wards of Llifon to the west and Canolbarth Môn to the east; the study area (including its name and extent) is taken from the 2017 Anglesey Well-being Assessment [RD1], in which it is used as one of six assessment areas within Anglesey.
- 4.1.2 This chapter summarises the main effects of the Wylfa Newydd Project in this area, and should be read alongside chapter 1 which sets the context.
- 4.1.3 This CIR has been developed in response to feedback, including from IACC. It has also been written with regard to key local concerns identified through the statutory consultation process. These are summarised in section 1.4 of this report.
- 4.1.4 This report looks at how these project-wide effects may be felt locally by the community, including looking at the expected distribution of workers in different areas. It also looks at the more specific local effects of individual parts of the Wylfa Newydd Project, whether it be the main development area, or Associated Development elsewhere, such as highways. Where relevant the cumulative effect of these different parts of the development together is also considered.
- 4.1.5 As part of the application, various mitigation measures are planned to lessen or avoid many of the potential impacts. Where relevant to local effects these are described in this CIR.
- 4.1.6 This chapter includes a context section describing the area and what development will affect it, and then summarises the effects under topic headings. Many of the local effects, including those arising from the construction workforce, are included in the section on socio-economics. Other topic sections are transport, noise/vibration, air quality, landscape/visual, and access/recreation.
- 4.1.7 This report is based on the assessments that make up the DCO application, including the ES, WLIA (Application Document Reference 8.21), HIA (Application Document Reference 8.19) and EqIA (Application Document Reference 8.22). Those other documents cover the full range of potential impacts, of which this document summarises only the ones which are significant for local communities. If after reading this chapter you want further information, see appendix 8-2 for details of other relevant documents.

## 4.2 Context

### *Project development in this area*

- 4.2.1 This area will experience a number of impacts related to the Wylfa Newydd Project which are summarised in table 4-1.

**Table 4-1 Canolbarth Môn and Llifon project components and impacts**

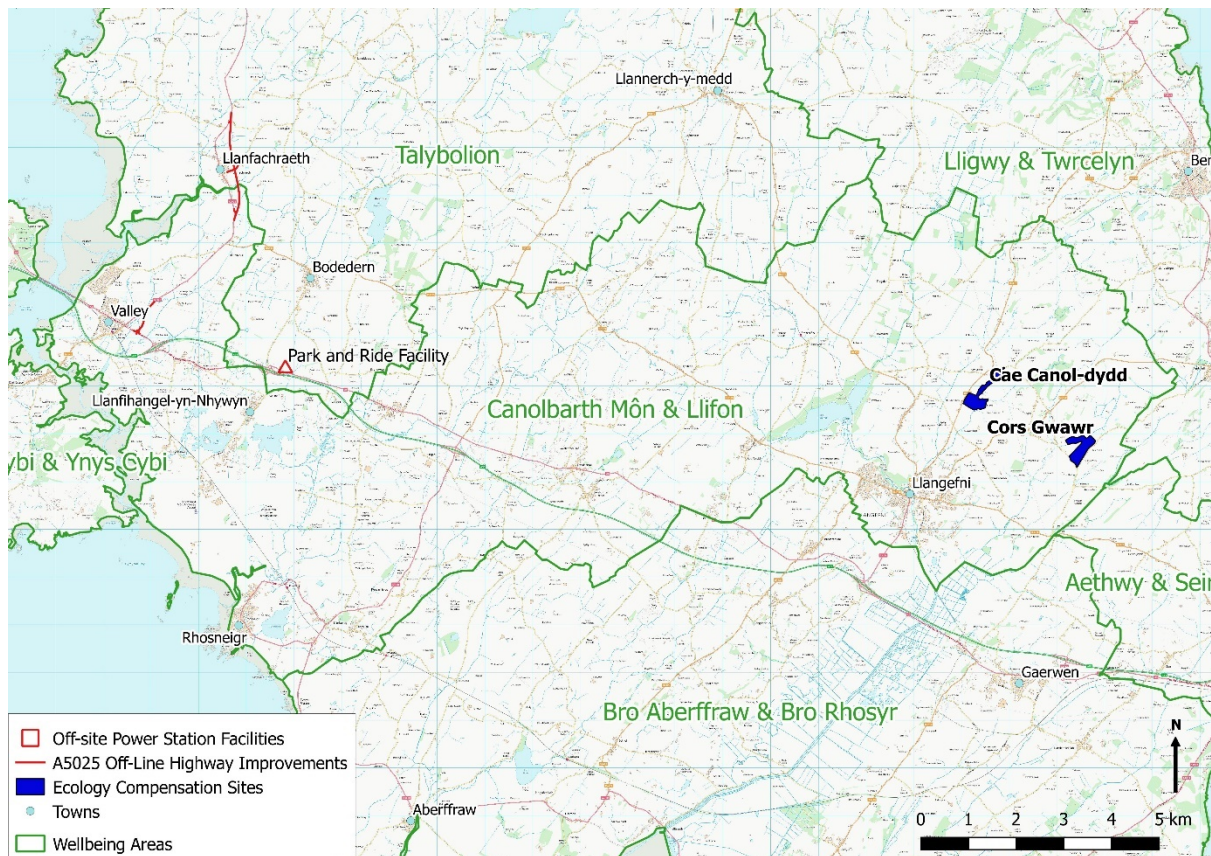
Project components	Impact topics
A5025 Off-line Highway Improvements (part) Ecology compensation sites – Cae Canol-dydd and Cors Gwawr	Population and socio-economics; transport; noise and vibration; air quality; landscape and visual impact; public access and recreation

- 4.2.2 Two sections of A5025 Off-line Highway Improvements associated with the Wylfa Newydd Project fall within the Llifon part of this study area. The southern section of a bypass of Llanfachraeth will be in this area. There will also be a bypass of Valley to the east of the village, between the A5 (south of Valley) and a new junction with the A5025 to the north of Valley. This is intended to increase the capacity of the A5025 and direct traffic away from Valley.
- 4.2.3 In order to compensate for impacts on the Tre'r Gof SSSI Horizon has committed to delivering a compensation package which would create new areas of rich-fen habitat and enhance areas of existing rich-fen habitat at three sites within Anglesey. Two of these ecology compensation sites are in the Canolbarth Môn and Llifon area. These sites are Cae Canol-dydd and Cors Gwawr, located in rural areas north/north-east of Llangefni (see figure 4.1 below) within the Canolbarth Môn part of this study area.
- 4.2.4 Proposed work at the Cae Canol-dydd site includes habitat creation through topsoil stripping and re-landscaping, drainage changes, fencing, seeding and planting of key species as well as enhancement of the existing Caeau Talwrn SSSI on part of the site through cutting. Work at Cors Gwawr would also include habitat creation through topsoil stripping and re-landscaping, fencing, scrub removal, drainage changes and seeding and planting. Both sites would be managed over the long-term through low intensity grazing.

### *Local area*

- 4.2.5 The Canolbarth Môn and Llifon study area consists of a variety of areas and land uses. In addition to agricultural land and several towns and villages, there are also two airfields at RAF Mona and RAF Valley (the latter also operating as Anglesey Airport).
- 4.2.6 There are also tourism-related activities and several caravan parks and campsites in the area, particularly along the coast and at Rhosneigr.

**Figure 4-1 Canolbarth Môn and Llifon area**



### ***Demographic baseline<sup>20</sup>***

- 4.2.7 The population of the Canolbarth Môn and Llifon area was estimated to be 15,000 in 2014. The area has a relatively high proportion of children, with 19% of the population aged under 16 compared to 17% in Anglesey and 18% in Wales. 21% of the population are aged over 65 compared to 24% in Anglesey and 20% in Wales.
- 4.2.8 The population rose by 800 or 6% between 2001 and 2011, according to Census data.<sup>21</sup>
- 4.2.9 There are approximately 6,920 homes in the area, of which 6,200 are permanently occupied. 10% of homes have no usual resident, the same proportion as the rest of Anglesey but higher than the rest of Wales (6%). 68%

<sup>20</sup> All data apart from housing data, employment data and population growth are taken from the Gwynedd and Anglesey Well-Being Assessment data tables (RD4).

<sup>21</sup> Census 2001 and 2011, using a best-fit of 2011 output areas to current wards where necessary; this data is used as the most reliable time series due to recent ward boundary changes (RD5).



of homes are owner-occupied, 17% are social rented and 13% are privately rented.<sup>22</sup>

- 4.2.10 24% of the population have no formal qualifications, the same proportion to Anglesey (24%) but slightly lower than Wales as a whole (26%). 25% hold Level 4 or higher qualifications, similar to rates in Anglesey as a whole (26%) and in Wales (25%).
- 4.2.11 A relatively high number of residents are proficient in Welsh. 54% of residents aged 3 and over can speak, read and write Welsh compared to 46% in Anglesey and 15% in Wales. 26% have no skills in Welsh, compared to 30% in Anglesey as a whole and 73% in Wales as a whole. The proportion of residents aged 3 and over who can speak Welsh declined by 4 percentage points between 2001 and 2011.
- 4.2.12 23% of residents work in lower-skilled sales, process and elementary occupations compared to 28% in Anglesey and 29% in Wales as a whole. 38% work in higher-skilled management, technical and professional occupations compared to 32% in Anglesey and 35% in Wales.
- 4.2.13 2.8% of residents aged between 16 and 64 claimed Jobseekers Allowance in May 2016, compared to 3% in Anglesey and 2.2% in Wales. 68% of the population aged 16 to 74 in 2011 were economically active, with 61% in employment and 5% economically active but unemployed.<sup>23</sup>
- 4.2.14 This demographic overview suggests that the Canolbarth Môn and Llifon area has similar demographic characteristics to Anglesey as a whole. It is also an area where the Welsh language is relatively strong. Many of the key community issues raised in reports including the 2017 Anglesey Well-being Assessment (RD1) such as the importance of housing, job opportunities and protecting and promoting the Welsh language are therefore relevant in this area.

## 4.3 Local impacts and mitigation

### *Population and socio-economics*

- 4.3.1 This section looks at effects assessed in the socio-economic chapter of the ES. This includes the expected local distribution of project-wide effects from the construction workforce. This section also includes information drawn from the WLIA (Application Document Reference 8.21), the HIA (Application Document Reference 8.19), and the EqlA (Application Document Reference 8.22).
- 4.3.2 The EIA has used a gravity model to provide an indication of the likely distribution of workers across the island and mainland during the peak

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<sup>22</sup> Housing data is from Census 2011, using a best-fit to current wards where necessary (RD5).

<sup>23</sup> Census 2011, using a best-fit to current wards where necessary (RD5).

construction phase of the Wylfa Newydd Project. This is based on information about the workforce, housing market, and travel distances. The information from the gravity model has been used in this report where possible to indicate the potential local distribution of project-wide effects relating to the workforce.

## **Project-wide socio-economic effects during construction**

### **Construction workforce**

- 4.3.3 The Wylfa Newydd Project will require a substantial construction workforce. The construction workforce is expected to be up to 8,500 workers at peak construction, although impacts from up to 9,000 have been assessed. This will represent a substantial increase and will have some population impacts. Potential impacts could relate to demand for accommodation or community facilities, as well as effects on the economy and traffic.
- 4.3.4 The vast majority of these workers will be employed at the WNDA with smaller numbers for the Associated Developments, as follows:
- A5025 Off-line Highway Improvements, up to 211 workers;
  - Park and Ride, up to 70 workers;
  - Logistics Centre, up to 50 workers; and
  - Off-Site Power Station Facilities, up to 85 workers.
- 4.3.5 Full information on the construction workforce requirements for the Wylfa Newydd Project is provided in the ES, volume C chapter 1 (Application Document Reference 6.3.1).
- 4.3.6 Of the peak workforce of up to 9,000, at least 2,000 are expected to be home-based and thus already resident within the DCCZ, which is based on a 90-minute commuting zone from the WNDA. Of these approximately 1,260 are expected to come from Anglesey. These estimates are based on a review of the skills available in the area and of travel expectations. These workers are expected to be permanent residents and do not represent temporary new residents.
- 4.3.7 The Jobs and Skills Strategy (Application Document Reference 8.4) is designed to meet the labour needs of the Wylfa Newydd Project and deliver jobs and economic opportunities locally while avoiding negative labour impacts in the local economy. It will seek to maximise the recruitment of locally-based workers and will seek to increase the number of home-based workers above 2,000 in order to minimise the effects caused by the arrival of construction workers. This will also seek to maximise the economic benefits for local residents that will result from the jobs created as a result of the Wylfa Newydd Project, in partnership with local stakeholders.
- 4.3.8 Measures to maximise local employment include developing a Skills Fund to support a range of education, training and employment initiatives relating to both the construction and operational phases of the Wylfa Newydd Project as well as a WNESS in partnership with Welsh Government, the Department for

Work and Pensions and other stakeholders. Its role will be to place people into sustainable employment created by the Wylfa Newydd Project. The WNESS will work with contractors and stakeholders to maximise opportunities for local residents, unemployed people, young people and groups that traditionally are under-represented in the construction workforce. It will provide a pathway for jobseekers into the project, in some cases via initial education or apprenticeship routes to prepare young people for work on the project. For older or unemployed workers, outreach or work readiness training will be facilitated. It will also provide a structure for 'backfilling' – allowing local employers to fill vacancies that happen when employees take up jobs on the Wylfa Newydd Project.

- 4.3.9 Of the peak workforce of up to 9,000, up to 4,000 will be accommodated at the Site Campus. Horizon has concluded that on balance, the environmental and social effects of the construction workforce on the existing community is best managed through locating a significant proportion of them in a single, temporary purpose-built campus as close as possible to the Power Station Site. This will be a temporary accommodation facility within the WNDA which will include independent living spaces for workers and a range of campus-style amenities and facilities.
- 4.3.10 Of the peak workforce of up to 9,000, 3,000 are expected to take up existing accommodation temporarily within the seven assessment areas covered by this report. This is based on an assessment of the availability of bed spaces across several tenures (including private rented, owner-occupied, hotels, caravans and spare room accommodation) in the study areas. For Anglesey and the Menai Mainland area as a whole, approximately 450 workers are estimated as taking up hotel accommodation, 650 workers as taking up caravan accommodation, 600 workers taking up owned accommodation (i.e. by purchasing a property) and 900 taking up private rented accommodation. Further information on the breakdown of accommodation across tenures and the expected distribution of workers is found in the ES, volume C chapter 1 (Application Document Reference 6.3.1).
- 4.3.11 It is anticipated that workers would take up accommodation throughout the area based on availability. As a result, it is anticipated that larger settlements such as Llangefni would host a significant proportion of these workers as a result of having more potential accommodation spaces. For example, approximately 60 workers are estimated by the gravity model to take up accommodation in Llangefni.
- 4.3.12 In addition to the provision of Temporary Workers' Accommodation for up to 4,000 workers in the WNDA, Horizon has set out two central means of mitigating the impact of non-home-based workers taking up accommodation in Anglesey.
- The WAMS will seek to match accommodation demand to supply in order to effectively distribute workers more widely and prevent excessive localised impacts. All workers will be required to register



with the WAMS. Horizon and IACC have agreed to establish a CWAMP as part of the WAMS to help workers to find suitable and appropriate accommodation. The WAMS will monitor data and work with stakeholders to ensure workers are able to find this accommodation.

- Horizon has also proposed a flexible Housing Fund to provide support for housing in the local area. This would be used to mitigate a range of effects and to boost the supply of housing, including increasing availability of existing stock and funding council officers' time relating to additional housing matters (such as enforcement or dealing with residents' housing needs).

- 4.3.13 Horizon will use a 'plan, monitor and manage' approach in order to minimise adverse community impacts and flexibly respond to localised impacts if and when they occur. Full details of Horizon's approach to accommodation and mitigation are set out in the Workforce Accommodation Strategy (application document reference 8.4).
- 4.3.14 Horizon will notify occupiers of nearby properties in advance of works taking place including the type and duration of the activity. This will ensure occupiers are notified of key construction activities that might result in increased noise or disturbance. Horizon will display the name and contact details of the person(s) accountable for construction works on the site boundary. Horizon will also display the head or regional office contact information on the site boundary. All notifications will be bilingual in Welsh and English, and accompanied with a contact name, telephone number and address to which enquiries should be directed
- 4.3.15 Horizon will establish a dedicated and free telephone hotline to be available for anyone with concerns about the construction programme or Wylfa Newydd Project. It will deal with enquiries or complaints from the public, the IACC or other key stakeholders. The system will be staffed by bilingual personnel, will be widely advertised by appropriate means and will ensure that appropriate action is taken in response to any non-compliance with approved plans or construction arrangements, or in the event of physical damage, in accordance with an enforcement protocol.
- 4.3.16 A complaints register will be maintained by Horizon. All calls will be logged and mapped, together with a record of the responses and action taken. Mapping will be used to record where key concerns are raised by individuals, local communities or other stakeholders. The complaints register will be made available to the IACC upon request.

### ***Business and tourism***

- 4.3.17 Tourism is a vital part of the economy of Anglesey, and the Wylfa Newydd Project may have some effects on the sector. Visitor behaviour may change in response to the construction of the Power Station. However, a survey of visitors to Anglesey in 2015 found almost 90% of respondents indicated that

the construction of the new Power Station would have no impact on their intention to return to Anglesey. Visitors noted concerns related to traffic and general construction impacts. Based on a detailed review of these responses and on Wylfa Newydd Project mitigation which would address potential tourist concerns, the ES (Application Document Reference 6.4.3) states that the actual number of tourism visits that may be lost during construction is likely to be small. This could nevertheless represent a change in revenue for some businesses. However, this could be countered by spending from workers throughout the island and any impact would be limited and would vary by the type and location of the business.

- 4.3.18 Tourist accommodation businesses would benefit from demand for accommodation from construction workers. Across Anglesey and the Menai Mainland area it is estimated that up to 450 tourism bed spaces could be occupied by workers within hotels and bed and breakfast accommodation, and a further 650 bed spaces within caravan and camping accommodation at registered sites. This is based on Horizon's estimates of capacity. This would provide revenue to tourist accommodation providers, particularly in the winter months. However, to prevent excess demand from workers 'crowding out' tourists or affecting the quality of accommodation, measures in the Workforce Accommodation Strategy (Application Document Reference 8.4) will seek to avoid adverse effects including through the WAMS.
- 4.3.19 Horizon has proposed a Tourism Fund (secured through planning obligations) to identify and help address any material effects on the local tourism sector in Anglesey as a result of the Wylfa Newydd DCO Project. Although the terms of reference and governance structure of this are subject to agreement, it would be administered via a Tourism Oversight Board attended by Horizon, IACC, Welsh Government and local sector representatives as appropriate.
- 4.3.20 Local businesses would also potentially experience beneficial supply chain effects. While it is not possible at present to estimate how much of the Wylfa Newydd Project value would be spent locally, according to the ES chapter C1 (Application Document Reference 6.3.1) if between 2% and 4% was spent locally (as at other nuclear project examples such as Sizewell B), this would be equal to an investment of between £200 million and £400 million within north Wales over the construction period, providing a range of opportunities for local businesses. Horizon's Supply Chain Charter and Action Plan set out its approach to procurement and would seek to support businesses to engage in the Wylfa Newydd Project and benefit directly.

### ***Community safety, health and well-being***

- 4.3.21 The main concentration of workers will be at the Site Campus, at the WNDA, not in the Canolbarth Môn and Llifon Area. Horizon will put in place a series of measures to manage worker behaviour, including a Workforce Management Strategy (Application Document Reference 8.5), Code of Conduct, background checks on staff, and community liaison with the police.

- 4.3.22 The potential health effects of the Wylfa Newydd Project have been assessed in the HIA (Application Document Reference 8.19). It also assesses the cumulative health effects from site-specific and combined impacts across all sites for local population groups around the WNDA and the Associated Development sites.
- 4.3.23 The HIA considers the Wylfa Newydd Project-wide health and well-being effects relating to:
- road safety, air quality and noise around the road network including the mitigating effects of highway improvements;
  - tourism and housing displacement pressure, including mitigation measures such as the WAMS;
  - demand for and journey times to access healthcare services, including mitigation such as the on-site campus health facilities;
  - safety, lifestyle and behaviour;
  - identity and culture;
  - employment, income and economic development;
  - education and training;
  - public understanding of risk; and
  - low carbon energy generation.
- 4.3.24 Minor beneficial effects on health and well-being are assessed, for the positive effect on employment, and the availability of reliable electricity supplies. Moderate beneficial effects are assessed for education and training. There will also be beneficial effects related to road improvements as well as the economic and employment opportunities created by the Wylfa Newydd Project since employment and economic investment are linked to physical and mental health.
- 4.3.25 For other health and well-being issues, the effects are assessed as being negligible. The HIA summarises effects for four population groups based on their sensitivity to potential changes attributable to the Wylfa Newydd Project (beneficial or adverse):
- children and young people;
  - older people;
  - people with existing poor health (physical and mental health); and
  - people living in deprivation, including those on low incomes.

For these groups, effects are assessed as up to moderate adverse for those near the WNDA and the local road network including the A5025 due to combined effects from traffic, air quality and other effects. However, these impacts are likely to be localised and site-specific in nature and unlikely to impact on most areas in the Canolbarth Môn and Llifon area. The HIA also

details a number of mitigation strategies and best practice to address any health impacts (many of which are secured in other documents and summarised in this document), including monitoring of construction effects such as noise or dust, community liaison, promoting road safety, workforce management and workforce accommodation mitigation.

- 4.3.26 Horizon will establish and chair an external stakeholder group (the Health and Well-being Monitoring Group) that will include members of the health and emergency services to monitor the implementation of the HIA mitigation strategy and provide advice on its delivery. Horizon would also appoint bilingual Community Involvement Officers; the scope for this role would also include developing and implementing some HIA mitigation measures.

### ***Equalities***

- 4.3.27 The EqIA (application reference number 8.22) assesses potential equalities effects the Wylfa Newydd Project could have. It assesses potential effects on people with 'protected characteristics' as defined by the Equality Act 2010 as:

- age;
- race;
- religion or belief;
- marriage and civil partnership;
- pregnancy and maternity;
- sex;
- sexual orientation;
- disability; and
- gender reassignment.

It also assesses potential effects on socio-economically deprived communities. It also considers the extent to which the Project would contribute towards the goals of 'a more equal Wales', and 'a Wales of cohesive communities' set out in the Future Generations and Well-being (Wales) Act 2015.

- 4.3.28 The EqIA has identified five categories of effects as potentially occurring for some of these groups (which reflect the main Wylfa Newydd Project impacts):

- noise;
- employment and skills;
- traffic, transport and access;
- community infrastructure and public services; and
- community cohesion.

- 4.3.29 Noise effects would occur mainly due to construction activities at the WNDA as well as construction of the A5025 Off-line Highway Improvements. In the Canolbarth Môn and Llifon area this would affect some residential buildings near the A5025 in Valley noise impacts on residential properties would disproportionately affect those people who spend more time in the home during the day, including older people, disabled people, and carers of new-born and small children. The noise and vibration section below summarises these noise impacts and mitigation measures.
- 4.3.30 Traffic impacts including potential increases in traffic on the A5025 before bypasses become operational (see the transport section below) would have differential adverse effects on those at greater risk of traffic accidents and their consequences, including older people, children, disabled people. Transport mitigation measures including traffic management would mitigate these.
- 4.3.31 A population rise as a result of construction workers temporarily moving to the local area may affect communities if they impact on health services, which would affect groups most reliant on these; however, as noted above mitigation measures are designed to prevent this. Community cohesion may be affected if the Wylfa Newydd Project and a disproportionate increase in the male population of the north-west part of the Isle of Anglesey gave rise to a heightened risk or perception of crime, which would potentially affect older people, women and BAME residents in particular. Changes in social mix could affect social networks in an area where many older people would feel part of a small, close-knit community, according to the Wylfa Newydd Project HIA Report Community Survey (Application Document Reference 8.19); however, it also indicates that younger people may view the impact on social networks of new residents positively. Furthermore, if prices rise locally for private rented sector housing this may adversely impact existing residents who experience housing deprivation. However, many of the measures which are designed to mitigate the general socio-economic effects of the construction workforce including the Site Campus, the Community Impact Fund and the Housing Fund would also mitigate these equality issues.
- 4.3.32 The Wylfa Newydd Project would also have beneficial equalities effects through providing short- and long-term employment opportunities and a legacy of a more skilled workforce. This would be beneficial in particular for young people and deprived communities.

### ***Community facilities***

- 4.3.33 The Site Campus will provide a range of facilities that will cater to the needs of workers who live there. Some of these will also be available to workers living off-site, thereby reducing demand from them for existing services. This includes health facilities which will represent the easiest way of registering for primary care services for the visiting workforce. UK based workers who are registered for primary and dental care services at their home location may not wish to register with a local provider (noting that there are existing NHS provisions for providing services for any person who cannot attend their own

registered practice through temporary registration arrangements). As a result of this on-site provision the HIA has found the changes in demand for local health services would not have a significant impact for local resident groups.

- 4.3.34 Where workers are non-home-based and they bring family and dependants to the area (who will not be living in the Site Campus), these family and dependants will be expected to register with local NHS services such as GP and dental provisions. This is assessed as not likely to have a significant adverse demand on these local health services. Further details are available in the HIA (Application Document Reference 8.19).
- 4.3.35 In terms of school places, IACC will monitor school enrolment. Should localised issues arise where applications are made for places in schools at capacity and IACC can demonstrate the nature of the resulting effect (e.g. temporary short-fall in funding, additional costs for appeals processes etc.) Horizon will provide funding to address this via the proposed Community Impact Fund.

#### ***Welsh language***

- 4.3.36 In terms of the Welsh language, the Canolbarth Môn and Llifon area is an area with a relatively high proportion of Welsh speakers. The WLIA states that the arrival of workers to Anglesey during the construction period will lead to a change in the relative proportion of Welsh speakers, since most of these workers will be non-Welsh speakers. The assessment indicates that this would be an overall moderate adverse effect. The temporary population increase in the Canolbarth Môn and Llifon area as described above can be expected to alter the balance of Welsh and non-Welsh speakers in this way. However, the relatively small increase in population (2%) and the fact that the area is less directly affected by development suggests that the Canolbarth Môn and Llifon area will not be as affected as other areas in Anglesey.
- 4.3.37 The assessment also considers the impact of the Wylfa Newydd Project on other topics relevant to the Welsh language including quality of life, economic factors, infrastructure supply and education and social and cultural aspects. Some project-wide effects would impact these factors. The assessment finds that without additional mitigation there would be:
- a potential moderate adverse effect on the language due to an increase in the proportion of non-Welsh speakers in the KSA;
  - a moderate adverse effect on the language due to potential increases in the cost of housing;
  - a moderate adverse effect on the language as a result of increased demand for schools from non-Welsh speakers; and
  - a potential moderate adverse effect on Welsh traditions and culture as a result of the in-migration of non-Welsh-speaking workers.
- 4.3.38 Several mitigation measures will be provided by Horizon which are set out in the WLCMES. These include providing language awareness raising to Wylfa

Newydd Project staff and appointing a WLCC to focus on the development and implementation of Welsh language and culture mitigation and enhancement measures during construction and operation of Wylfa Newydd.

- 4.3.39 However, the assessment also notes that mitigation measures for the Wylfa Newydd Project such as accommodating workers at the Site Campus to mitigate the impact of the arrival of workers will also serve to mitigate the impacts on the Welsh language. In addition, the population rise in the Canolbarth Môn and Llifon area as noted is expected to be relatively small compared to other areas.
- 4.3.40 In addition, the creation of job opportunities during construction and operation provides opportunities to aid the Welsh language through reducing the out-migration of Welsh-speaking young people from local communities. The assessment notes that there has been a continuous net out-flow and population decrease of young people from Anglesey in recent years, with a net out-flow of 220 among 15 to 29 year olds between 2014 and 2015. It notes that this may be partly due to a lack of job opportunities, with a reduction of 889 (5.4%) in the number of FTEs in employment between 2009 and 2014. The Wylfa Newydd Project will directly provide a large number of skilled jobs for local young people in Anglesey during construction and operation of the Power Station. It will also provide indirect benefits to local businesses through additional spending from workers, contracts for local supply chain businesses and revenue to tourism accommodation businesses for bed spaces occupied by workers. This will provide further job opportunities for local people in the Canolbarth Môn and Llifon area and result in a moderate beneficial effect in terms of the Welsh language.
- 4.3.41 Several strategies to maximise these opportunities for the Welsh language are also provided in the WLCMES<sup>24</sup>, such as advertising jobs through recruitment channels targeting Welsh speakers, distributing information on job opportunities at Wylfa Newydd to young people including through bilingual channels, and through apprenticeship opportunities. In view of this, on balance the effect of population change on the Welsh language is assessed as negligible adverse during construction and minor beneficial during operation.

#### ***Land and severance effects from Associated Development***

- 4.3.42 The A5025 Off-line Highway Improvements are assessed in the ES, volume G chapter 3 (application document reference 6.7.3) as having some potential significant socio-economic effects relating to land take and severance. Section 1: Valley will require land take from agricultural land and a part of an industrial freight yard. This may affect the viability of affected farms. The Gwalia Service Station would be partly located on a stopped-up road, which is assessed as a minor effect on future business viability. Section 3:

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<sup>24</sup> Appendix to WLIA



Llanfachraeth will also require some agricultural land take from the Canolbarth Môn and Llifon area.

- 4.3.43 However, these road improvements are also intended as a form of mitigation for the Wylfa Newydd Project to reduce the impact of traffic flows to the WNDA and improve journeys along the A5025. This will benefit Valley by diverting construction-related traffic away from the town.

### **Project-wide effects during operation and decommissioning**

- 4.3.44 During operation, the workforce for the Wylfa Newydd Power Station is expected to consist of around 850 staff. However, no spatial breakdown of where these workers will live within Anglesey is available and cannot be assessed at the level of the Canolbarth Môn and Llifon area. The Wylfa Newydd Project is expected to produce a number of local economic benefits through providing new jobs.
- 4.3.45 Potential socio-economic effects during decommissioning of the Main Power Station are described in the ES, volume C chapter 1 (Application Document Reference 6.3.1). While decommissioning would lead to the loss of jobs and other effects, due to uncertainties over such a long time scale these effects cannot be assessed at the Canolbarth Môn and Llifon area level.

### **Cumulative population and socio-economic effects**

- 4.3.46 Cumulative socio-economic effects as a result of both the Wylfa Newydd Project and other projects are assessed in the ES, volume I chapter 5 (Application Document Reference 6.9.5).
- 4.3.47 There will be cumulative economic benefits as a result of the combination of project-wide effects and the effects of other projects within Anglesey and elsewhere. Increased demand for the local construction sector and the local labour market from the Wylfa Newydd Project and other projects will create opportunities for local workers and businesses. Investment in the local economy would increase as a result of the cumulative effects of increased spending and investments across all projects.

### **Transport**

- 4.3.48 The Wylfa Newydd Project will result in a number of impacts on transport and traffic. This is primarily due to trips generated by workers and freight transport during the construction and operational phases. A full assessment of these impacts is given in the Transport Assessment (Application Document Reference 6.3.14).
- 4.3.49 An assessment of the project-wide traffic and transport impact of the Wylfa Newydd Project is also found in the ES, volume C chapter 2 (Application Document Reference 6.3.2). Section 2.5 of this document details the forecasted traffic level changes on individual sections of road throughout Anglesey and the Menai Mainland for the year the A5025 Off-line Highway

Improvements are completed, the year of peak construction, and the year of peak operation of the Power Station.

- 4.3.50 During the construction phases of the Wylfa Newydd Project, goods deliveries, HGVs and most commuting workers will use the A55 from the mainland or the Logistics Centre at Parc Cybi and transfer to the A5025 near Valley via the Off-line Highway Improvement section 1. This traffic would follow the A5025 to the main access road for the WNDA south of Treglele.
- 4.3.51 During peak construction, it is anticipated that this construction-related traffic will completely bypass Valley via the Off-line Highway Improvement section 1. Valley will therefore not experience significant traffic effects and will experience a reduction in traffic levels. However, the A5025 north of Treglele and a section of the A5 between the A55 and the A5025 will experience increased traffic levels including increased HGV trips which will represent a moderate adverse effect. However, A5025 On-line and Off-line Highway Improvements are intended to mitigate impacts arising from this.
- 4.3.52 Horizon has proposed a network of shuttle buses to transport workers to the WNDA. These would operate from major towns and cities like Holyhead, Bangor and Caernarfon together with settlements in the north and east of Anglesey, as needed. These services are also intended to be flexible, with routes refined to reflect the actual distribution of workers. This is intended to reduce the number of vehicles travelling on roads throughout Anglesey and to minimise traffic impacts during morning and evening peaks. Shuttle buses will also travel to and from the Park and Ride facility at Dalar Hir which is also intended to minimise traffic impacts due to commuting workers.
- 4.3.53 Users of the A5114 between Junction 6 of the A55 and Llangefni are assessed as likely to experience a moderate adverse effect in terms of increased journey times during the evening peak in the opening year of the A5025 Off-line Highway Improvements, which is assessed as a medium-term effect.
- 4.3.54 A Construction Traffic Management Strategy is included within the Wylfa Newydd CoCP (Application Document Reference 8.6) setting out measures to mitigate the impact of traffic; this will include measures and monitoring to ensure construction traffic uses approved routes while travelling. A Traffic Incident Management Strategy to manage incidents on the public highway network would also be provided within the Wylfa Newydd CoCP (Application Document Reference 8.6).
- 4.3.55 It is possible that workers travelling home from the Wylfa Newydd Project sites at the end of the working week may use alternative routes such as through the centre of the island via the B5111/B5112. This may potentially impact communities such as Llannerch-y-medd. However, this will be spread over several hours at the end of the working week in one direction only, and in the reverse direction on a Sunday evening. This effect therefore has been assessed as not significant.

### ***Noise and vibration***

### **Project-wide noise and vibration effects during construction**

- 4.3.56 The project-wide noise and vibration effects as a result of traffic are assessed in the ES, volume C chapter 5 (Application Document Reference 6.3.5). It indicates that a number of receptors including residential properties will experience noise impacts as a result of the increased traffic levels on certain parts of the road network as a result of the Wylfa Newydd Project.
- 4.3.57 These impacts will include both day- and night-time impacts. These impacts are primarily concentrated along the A5025. During peak construction, there are likely to be increases in noise levels as a result of traffic along the A5025. A small number of properties in the Canolbarth Môn and Llifon area will be affected, principally residential properties along the A5025 north of Valley and some properties at Llanynghenedl. A small number of properties will also be affected by a small increase in night-time noise levels. These are summarised in table 4-2.
- 4.3.58 Section 1: Valley of the A5025 Off-line Highway Improvements will bypass the A5025 crossroads at Valley. As a result, some nearby properties will experience decreases in day-time and night-time traffic noise at bypassed sections. This section is intended to minimise the number of vehicles using the current crossroads at Valley.

### **Project-wide noise and vibration effects during operation**

- 4.3.59 A small number of properties near the A5025 in and near Valley and Llanynghenedl are assessed as likely to be affected by small increases in noise levels as a result of traffic over the assessed baseline during operation of the Power Station. These are also summarised in table 4-2.

### **Site-specific noise and vibration effects**

- 4.3.60 The ES, volume G chapter 6 (Application Document Reference 6.7.6) assesses potential noise and vibration effects expected to occur as a result of the construction of the A5025 Off-line Highway Improvements. It states that no significant noise and vibration effects are assessed as likely due to occur for residential receptors during the construction of Section 1: Valley, with negligible magnitudes of change expected for properties studied.
- 4.3.61 A moderate adverse vibration effect is initially assessed as likely to occur for one PRow near Valley; however, with additional mitigation this is assessed as minor adverse and therefore not significant. Effects from the construction of Section 3: Llanfachraeth will mostly occur in the Talybolion area and are thus summarised in section 3
- 4.3.62 Additional mitigation measures to reduce noise impacts during road construction would include acoustic screening, selection of quieter plant and alteration of working techniques to reduce noise from use of hydraulic breakers. To reduce vibration effects, vibration risk assessments would be undertaken to establish if safe working distances are available; if not, alternative methods will be adopted. Furthermore, community liaison will be

undertaken to agree mutually convenient times with local residents or to arrange respite periods if necessary, as set out in the Wylfa Newydd Project CoCP (Application Document Reference 8.6) and the site-specific sub-CoCP (application document reference 8.12).

### ***Air quality***

- 4.3.63 The potential project-wide air quality effects of traffic are assessed in the ES, volume C chapter 4 (Application Document Reference 6.3.4). This states that at peak construction (the period with the highest potential impacts), most air quality effects are expected to occur on the A5025 north of Valley. This will be caused by the increase in traffic levels along this road. However, these are not assessed as significant adverse. A number of embedded mitigation measures are designed to decrease traffic-related effects including air quality effects such as shuttle bus services for commuting workers and controlling HGV journey volume through use of the Logistics Centre. Where sections of road have been bypassed as at Valley, some beneficial air quality effects will occur for local residents and other receptors. No significant effects are expected during operation.
- 4.3.64 The potential air quality effects of the construction of the A5025 Off-line Highway Improvements have been assessed in the ES, volume G chapter 5 (Application Document Reference 6.7.5). Due to embedded and good practice mitigation, no significant adverse dust emissions or other air quality effects are assessed as likely to occur during construction. This includes effects on both human and ecological receptors.

### ***Landscape and visual***

- 4.3.65 The landscape and visual impacts of the A5025 Off-line Highway Improvements are assessed in the ES, volume G chapter 10 (Application Document Reference 6.7.10). Each of the four new sections of the A5025 will result in some landscape impacts and visual impacts for local residents, users of paths and road users. This is because of the impact of construction activity, the impact of a new road in the landscape and in some cases views of the new road.
- 4.3.66 Adverse impacts on the landscape will occur because of the removal of some landscape elements such as field patterns, the intrusive effect of construction activities such as soil clearance, and the introduction of new development into the landscape. Adverse visual impacts occur where a receptor (i.e. a person likely to view the activity, such as local residents, users of local roads and PRoWs, visitors and local communities) would be able to view construction activities or new elements which would be intrusive and detrimental to existing views.
- 4.3.67 There will be some short-term moderate adverse landscape effects as a result of the construction of Section 1: Valley, which will temporarily impact on the non-designated wider landscape (the former Anglesey SLA) as well as local landscape character. There will also be some short-term moderate adverse

visual impacts as a result of construction which will impact some residential properties in Valley as well as some community areas in the east of Valley, the users of one PRow and road users on the A5 and A5025. There would be some short-term major adverse visual impacts for visitors to Valley Cemetery.

- 4.3.68 When construction of the A5025 Off-line Highway Improvements is complete, there would be no long-term landscape impacts as a result of Section 1: Valley. There would be some long-term moderate adverse visual impacts for some residential properties and for visitors to Valley Cemetery; however, as vegetation matures these will lessen and by year 15 of operation they will not be significant.
- 4.3.69 Embedded and good practice mitigation measures include alignment of sections to avoid ancient woodland and the AONB; protection of existing trees and shrubs; planting and seeding of trees, shrubs and hedgerows; and measures set out in the Wylfa Newydd CoCP (Application Document Reference 8.6) and sub-CoCPs. Additional mitigation is also proposed including long-term landscape management during operation. It is anticipated that mitigation measures will increase in effectiveness over time as plants and hedgerows mature.
- 4.3.70 Landscape and visual impacts as a result of Section 3: Llanfachraeth will mostly occur in the Talybolion area and are summarised in section 3.
- 4.3.71 Although the two ecology compensation sites at Cors Gwawr and Cae Canol-dydd are in rural and sparsely-populated areas, they would result in some visual impacts. This is because of views of works including topsoil and vegetation clearance, soil piles and machinery from local footpaths, local roads and in the case of Cae Canol-dydd from two properties at Merddynhafod to the west of the site. When these works are complete, impacts would remain due to continued views of cleared shrub and new landforms, although over time as vegetation develops the sites would integrate into the landscape.

### ***Public access and recreation***

- 4.3.72 The public access and recreation effects of the A5025 Off-line Highway Improvements are assessed in the ES, volume G chapter 4 (Application Document Reference 6.7.4).
- 4.3.73 One PRow would be temporarily closed due to the construction of Section 1: Valley while one other would be partly affected by construction impacts such as noise, dust and visual impacts. However, these will be short-term impacts and thus are not assessed as significant with the proposed closure lasting no more than three months.
- 4.3.74 Cyclists and walkers using the A5 and the A5025 would experience some short-term effects due to construction of Section 1: Valley due to some temporary diversions. However, these are not considered significant in magnitude.



- 4.3.75 No significant effects on public access and recreation are expected during operation of Section 1: Valley.
- 4.3.76 Public access and recreation impacts as a result of Section 3: Llanfachraeth will mostly occur in the Talybolion area and are thus summarised in section 3.
- 4.3.77 The Tour de Môn cycle race takes place on one day during August each year and makes use of the A5025. Should this coincide with the A5025 Off-line Highway Improvements this could represent a moderate adverse effect as sections of the A5025 would be subject to traffic management, leading to delays in the timed race. However, measures are proposed within the ES to manage construction works and minimise the impact on the race. If the race does not coincide with construction works on the A5025 then this impact would not occur. It is anticipated that the Tour will continue to take place at weekends when construction traffic would be reduced and goods vehicles would not be travelling to the WNDA; the Tour would also not coincide with peak travel times for most participants. As a result, no significant effect is assessed as likely as a result of traffic flows. A potential cumulative effect may occur as a result of the combination of increased traffic flows and potential diversions as a result of road improvements, which would lengthen the time during which the Tour may be impacted<sup>25</sup>; however, as noted this would not occur if these diversions do not coincide with the Tour.

### **Cumulative public access and recreation effects**

- 4.3.78 Cumulative effects as a result of both the Wylfa Newydd Project and other projects (including the A5025 On-line Highway Improvements) are assessed in the ES, volume I chapter 5 (Application Document Reference 6.9.5).
- 4.3.79 Participants of the Tour de Môn will potentially experience a cumulative effect due to the combination of the potential delays from traffic management as a result of the A5025 Off-line Highway Improvements as detailed above and potential effects from traffic management as a result of the A5025 On-line Highway Improvements. This has been assessed as potentially being a moderate adverse effect.

## **4.4 Combined topic effects and summary**

### **Combined topic effects**

- 4.4.1 Some in-combination effects (those where a receptor is affected in more than one way) are assessed in the ES, volume G chapter 12 (Application Document Reference 6.7.12) as likely to occur as a result of the construction of the A5025 Off-line Highway Improvements. Some residential properties at Valley may

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<sup>25</sup> See ES, Volume I Chapter 4 (Application Document Reference 6.9.4) for intra-project cumulative effects.

experience a significant combined effect as a result of the combination of adverse visual effects with minor effects from noise, vibration and dust.

- 4.4.2 Some combined topic effects are assessed in the ES Appendix D1-2 (Application Reference Number: 6.4.18) as likely to occur for residents near to the Ecology Compensation Sites at Cae Canol-dydd and Cors Gwawr.
- 4.4.3 Some combined effects on residents in the vicinity of Cors Gwawr may occur during construction due to adverse effects resulting from an increase in noise levels and vibration, in combination with changes in visual amenity and perceived changes in dust deposition rates. It is possible that the people affected may perceive these combined effects to be significant during construction.
- 4.4.4 Some combined effects on residents in the vicinity of Cae Canol-dydd may occur during construction due to adverse effects resulting from an increase in noise levels and vibration, in combination with changes in visual amenity and perceived changes in dust deposition rates. It is possible that the people affected may perceive these combined effects to be significant during construction.

#### **Summary**

- 4.4.5 In summary, some impacts are expected to affect the Canolbarth Môn and Llifon area. These are mainly related to the socio-economic effects of workers, traffic-related effects and effects of the construction of the A5025 Off-line Highway Improvements.
- 4.4.6 Of the non-home-based workers, modelling estimates that 60 may live in Llangefni. The WAMS will seek to match accommodation demand to supply, and monitor the effects.
- 4.4.7 Beneficial effects are likely in the local economy and labour market, while potential effects on the Welsh language are identified from the additional workforce.
- 4.4.8 During construction some sections of the A5, A5025 and A5114 will experience additional traffic. There will be increased noise in some areas from traffic or from construction of the A5025 Off-line Highway Improvements, but on completion of these some areas will experience reduced traffic noise.
- 4.4.9 The A5025 Off-line Highway Improvements will also create some visual intrusion during construction/operation from some parts of Valley.

#### **Residual effects**

- 4.4.10 Following mitigation, there will be some significant residual effects (including but not limited to cumulative and in-combination effects) across all topics. table 4-2 summarises residual impacts in the Canolbarth Môn and Llifon area.

**Table 4-2 Residual effects (after mitigation), Canolbarth Môn and Llifon area**

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
<b>Socio-economics</b>				
Labour market on Anglesey.	Increase in employment as a result of construction and operation.	Construction/operation	-	Major beneficial
PRS accommodation in the KSA.	Increase in demand for bed spaces.	Construction	Workforce Accommodation Strategy measures.	Minor adverse
Local economy in north Wales.	Investment in local economy.	Construction and operation	-	Moderate beneficial
Local economy on Anglesey.	Investment in local economy.	Construction and operation	-	Moderate beneficial
Agricultural land at A5025 Off-line Highway Improvement site (Valley).	Loss of agricultural land.	Construction	None identified.	Moderate/major adverse
Welsh language - moderate adverse as result of population change.	Drop in relative proportion of Welsh speakers due to in-migration of construction workers.	Construction	Measures in WLCMES and in Workforce Accommodation Strategy.	Potential moderate adverse (to be monitored)
Welsh language - potential effects due to housing demand.	Increased cost of housing for local Welsh speakers.	Construction	Measures in WLCMES and in Workforce Accommodation Strategy including Housing Fund.	Potential moderate adverse (to be monitored)
Welsh language - potential effects due to school demand.	Potential increase in the number of non-Welsh speaking children in local schools, altering balance	Construction	Measures in WLCMES.	Potential moderate adverse (to be monitored)



Receptor	Description of effect	Phase	Additional mitigation	Residual effect
	of Welsh speakers and non-speakers in schools.			
Welsh - potential effects on traditions and culture.	In-migration of non-Welsh speakers from different background/culture.	Construction	Measures in WLCMES and in Workforce Accommodation Strategy including Housing Fund	Potential moderate adverse (to be monitored)
Welsh - beneficial effects from economic benefits, investment, employment.	Economic benefits of Wylfa Newydd Project creating jobs for local people and reducing out-migration of Welsh-speaking young people.	Construction and operation	Enhancement measures in WLCMES.	Moderate beneficial
Cumulative effect - economic investment.	Local economic investment and spending as a result of the Wylfa Newydd Project and other projects.	Construction and operation	-	Moderate beneficial
Vulnerable groups identified in HIA living near local road network.	Combined effects from traffic, air quality etc.	Construction	Measures in HIA.	Up to moderate adverse
<b>Transport</b>				
Motorised and public transport users.	Users would potentially experience significant increases in traffic flow on the A5025 through Valley during the	Construction	None identified.	Moderate adverse

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
	opening year of the A5025 Off-line Highway Improvements 'without bypasses' scenario [i.e. without planned A5025 Off-line Highway Improvements].			
Motorised and public transport users.	Motorised and public transport users would experience significant decreases in traffic flow on the existing A5025 at Valley during the opening year of the A5025 Off-line Highway Improvements 'with bypasses' scenario.	Construction	None identified.	Minor beneficial
Motorised and public transport users.	Motorised and public transport users would experience increases in journey times northbound along Section 32 (A55 J6 to A5114 Llangefni) during the afternoon/evening peak period of the opening year of the A5025 Off-line Highway Improvements	Construction	None identified.	Moderate adverse

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
	'with bypasses' scenario.			
Motorised and public transport users.	Motorised and public transport users would experience significant increases in traffic flows and/or traffic composition along the existing A5025 during the year of peak construction scenario.	Construction	None identified.	Moderate adverse
<b>Noise and Vibration</b>				
Residential receptors near A5025 Section 1: Valley	Increased noise levels from traffic on the A5025	Opening year of the A5025 Off-line Highway Improvements - without improvements	Offers of noise mitigation/insulation to occupants of eligible properties, and measures set out in the ES	Moderate adverse (22 properties)
Residential receptors near A5025 Section 2: Llanynghenedl	Increased noise levels from traffic on the A5025	Opening year of the A5025 Off-line Highway Improvements - without improvements	Offers of noise mitigation/insulation to occupants of eligible properties, and measures set out in the ES	Moderate adverse (27)
Residential receptors near A5025 Section 1: Valley	Increased noise levels from traffic on the A5025 with A5025 Off-line Highway Improvements	Opening year of the A5025 Off-line Highway Improvements - with	As above.	Moderate adverse (16)

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
	completed and operational.	improvements		
Residential receptors near A5025 Section 1: Valley	Decreased noise levels from traffic on the A5025 with A5025 Off-line Highway Improvements completed and operational.	Opening year of the A5025 Off-line Highway Improvements - with improvements	As above.	Moderate beneficial (2)
Residential receptors near A5025 Section 2: Llanynghenedl	Increased noise levels from traffic on the A5025 with A5025 Off-line Highway Improvements completed and operational.	Opening year of the A5025 Off-line Highway Improvements - with improvements	As above.	Moderate adverse (25)
Residential receptors near A5025 Section 1: Valley	Decreased noise levels from traffic on the A5025 with A5025 Off-line Highway Improvements completed and operational.	Peak construction	As above.	Moderate beneficial (2)
Residential receptors near A5025 Section 1: Valley	Increased noise levels from traffic on the A5025 with A5025 Off-line Highway Improvements completed and operational.	Peak construction	As above.	Moderate adverse (19)
Residential receptors near A5025 Section 2: Llanynghenedl	Increased noise levels from traffic on the A5025 with A5025 Off-line Highway Improvements	Peak construction	As above.	Major adverse (5); moderate adverse (22)

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
	completed and operational.			
Residential receptors near A5025 Section 1: Valley	Decreased noise levels from traffic on the A5025 with A5025 Off-line Highway Improvements completed and operational.	Peak operation	As above.	Moderate beneficial (1)
Residential receptors near A5025 Section 1: Valley	Increased noise levels from traffic on the A5025 with A5025 Off-line Highway Improvements completed and operational.	Peak operation	As above.	Moderate adverse (5)
Residential receptors near A5025 Section 2: Llanynghenedl	Increased noise levels from traffic on the A5025 with A5025 Off-line Highway Improvements completed and operational.	Peak operation	As above.	Major adverse (3); moderate adverse (7)
<b>Landscape and visual</b>				
Anglesey SLA, LLCAs.	Adverse landscape impacts and visual intrusion as a result of the construction and operation of the A5025 Off-line Highway Improvements at Valley.	Construction/operation	Measures in ES, including implementation of long-term landscape strategy.	Moderate adverse

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
Residential and other properties with views of the A5025 Off-line Highway Improvements at Valley.	Adverse visual impacts and visual intrusion as a result of the construction and operation of the A5025 Off-line Highway Improvements.	Construction/ operation	As above.	Moderate to major adverse
Community of Valley.	There would be direct, local views east and oblique views north towards construction works for section 1 in a previously undeveloped field; temporary change in night-time views when construction lighting is used in a relatively dark area; visual impacts during operation	Construction/ operation	As above.	Moderate adverse
Valley Cemetery.	Visual impacts as a result of direct views of construction and operation of the A5025 Off-line Highways Improvements at Valley.	Construction/ operation	Measures in ES. Implementation of long-term landscape strategy.	Major adverse (construction) , moderate adverse (operation)
Users of local PRowS and local roads with views of ecology compensation sites	Visual impacts as a result of views of clearance works and machinery at Cors Gwawr and	Construction/ operation	None proposed	Moderate adverse, reducing over time

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
	Cae Canol-dydd sites			
Two residential properties with views of Cae Canol -dydd Ecology Compensation Site	Visual impacts as a result of views of clearance works and machinery at Cors Gwawr and Cae Canol-dydd sites	Construction/operation	None proposed	Moderate adverse, reducing over time
<b>Public access and recreation</b>				
Participants of the Tour de Môn cycle race.	Potential reduction in the amenity of the race route as a result in the change in alignment of the road and introduction of traffic management at Valley should the race coincide with A5025 Off-line Highway Improvements.	Construction	Construction management to minimise disruption.	Moderate adverse
Participants of the Tour de Môn cycle race.	Potential cumulative effect from combination of potential delays from traffic management as a result of A5025 Off-line and On-line Highway Improvements.	Construction	None.	Moderate adverse

## 5 Caergybi and Ynys Cybi

### 5.1 Introduction

- 5.1.1 The Caergybi and Ynys Cybi area consists of the Caergybi ward and Ynys Cybi ward and comprises the whole of Holy Island. It includes all of Holyhead as well as some smaller settlements including Trearddur Bay.
- 5.1.2 This chapter summarises the main effects of the Wylfa Newydd Project in this area, and should be read alongside chapter 1 which sets the context.
- 5.1.3 This CIR has been developed in response to feedback, including from IACC. It has also been written with regard to key local concerns identified through the statutory consultation process. These are summarised in section 1.4 of this report.
- 5.1.4 This report looks at how these project-wide effects may be felt locally by the community, including looking at the expected distribution of workers in different areas. It also looks at the more specific local effects of individual parts of the Wylfa Newydd Project, whether it be the main development area, or Associated Development elsewhere, such as highways. Where relevant the cumulative effect of these different parts of the development together is also considered.
- 5.1.5 As part of the application, various mitigation measures are planned to lessen or avoid many of the potential impacts. Where relevant to local effects these are described in this CIR.
- 5.1.6 This chapter includes a context section describing the area and what development will affect it, and then summarises the effects under topic headings. Many of the local effects, including those arising from the construction workforce, are included in the section on socio-economics. Other topic sections are transport, noise/vibration, air quality, landscape/visual, and access/recreation.
- 5.1.7 This report is based on the assessments that make up the DCO application, including the ES, WLIA (Application Document Reference 8.21), HIA (Application Document Reference 8.19) and EqlA (Application Document Reference 8.22). Those other documents cover the full range of potential impacts, of which this document summarises only the ones which are significant for local communities. If after reading this chapter you want further information, see appendix 8-2 for details of other relevant documents.

### 5.2 Context

#### *Project development in this area*

- 5.2.1 The Caergybi and Ynys Cybi area will experience a number of impacts related to the Wylfa Newydd Project which are summarised in table 5-1.



**Table 5-1 Caergybi and Ynys Cybi project components and impacts**

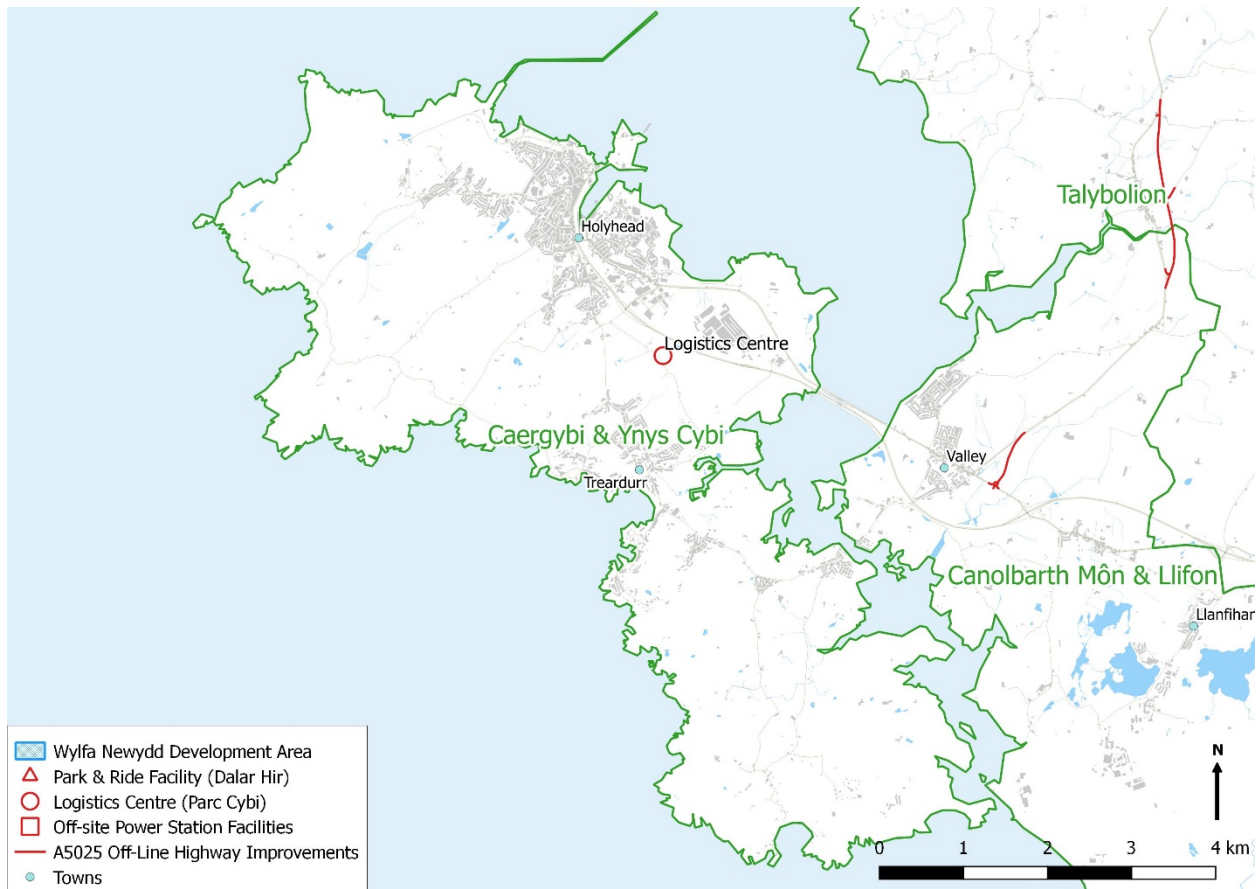
Project components	Impact topics
Logistics Centre (Parc Cybi)	Population and socio-economics; transport; noise and vibration; air quality; landscape and visual impact; public access and recreation; cultural heritage.

- 5.2.2 The Logistics Centre will be located south-east of Holyhead at Parc Cybi, in an area allocated for employment uses in local planning policy. This will be a temporary facility for managing deliveries to the WNDA. This is intended to mitigate the impact of construction traffic to the WNDA and avoid bottlenecks and queuing.
- 5.2.1 It is anticipated that construction of the Logistics Centre would commence in the first year following grant of development consent and last for approximately 15 months. It is also anticipated that the Logistics Centre would be operational for a period of approximately 10 years, covering the period for the construction phase of the Power Station Site.
- 5.2.2 The Logistics Centre would be expected to have an operational workforce of approximately 14 staff, and be operational up to 24 hours a day, seven days a week, in order to support the shift pattern on the construction of the Power Station Site. When the construction of the Power Station is complete, the Logistics Centre would be decommissioned and removed. Following construction of the Power Station, the site would be available for another use subject to necessary consents being secured.

### **Local area**

- 5.2.3 The Caergybi and Ynys Cybi area covers Holy Island. The town and port of Holyhead are the major settlement and land uses in the area as well as the largest settlement in Anglesey. The main transport infrastructure in Anglesey (the A55 and the mainline railway) terminate at Holyhead. There are also some tourism-related uses and attractions on the island including several campsites, caravan parks, golf courses, beaches and coastal walks.

**Figure 5-1 Caergybi and Ynys Cybi area**



### ***Demographic baseline<sup>26</sup>***

- 5.2.4 The population of the Caergybi and Ynys Cybi area was estimated to be around 13,700 in 2014. The area has a relatively high proportion of children, with 19% of the population aged under 16 compared to 17% in Anglesey and 18% in Wales. 21% of the population are aged over 65 compared to 24% in Anglesey and 20% in Wales.
- 5.2.5 The population grew by 9% or 1,121 between 2001 and 2011, according to Census data.<sup>27</sup>

<sup>26</sup> All data apart from housing data, employment data and population growth are taken from the Gwynedd and Anglesey Well-Being Assessment data tables (RD4).

<sup>27</sup> Census 2001 and 2011, using a best-fit of 2011 output areas to current wards where necessary; this data is used as the most reliable time series due to recent ward boundary changes (RD5).

- 5.2.6 There are over 6,900 homes in the area, of which 6,200 are permanently occupied. 10% of homes have no usual resident. 59% of homes are owner-occupied, 22% are social rented and 16% are privately rented.<sup>28</sup>
- 5.2.7 A high proportion (30%) of the population aged 16 and over have no formal qualifications, compared to 24% in Anglesey and 26% in Wales. 17% hold Level 4 or higher qualifications, compared to 26% in Anglesey and 25% in Wales.
- 5.2.8 The proportion of residents who are proficient in Welsh is lower than in the rest of Anglesey (although higher than in Wales as a whole). 27% of residents aged three and over can speak, read and write Welsh compared to 46% in Anglesey and 15% in Wales (based on 2011 data). 37% of residents have no skills in Welsh compared to 30% in Anglesey and 73% in Wales. The proportion of residents aged three and over who can speak Welsh declined by 3% between 2001 and 2011.
- 5.2.9 A relatively high proportion of residents aged 16 and over have no formal qualifications – 30% compared to 24% in Anglesey and 26% in Wales. 17% of residents have Level 4 or higher qualifications compared to 26% in Anglesey and 25% in Wales.
- 5.2.10 36% of residents in the area work in lower-skilled sales, process and elementary occupations compared to 28% in Anglesey and 29% in Wales as a whole. 27% of residents work in higher-skilled management, technical and professional occupations compared to 33% in Anglesey and 35% in Wales.
- 5.2.11 5.2% of residents aged between 16 and 64 claimed Jobseekers Allowance in May 2016, a higher rate than in Anglesey (3%) and Wales (2.2%). 63% of the population aged 16 to 74 in 2011 were economically active, with 53% in employment and 8% unemployed. By contrast, 5% in Anglesey as a whole and 4% in Wales as a whole were economically active but unemployed.<sup>29</sup>
- 5.2.12 A higher proportion of residents in this area travel less than 10km to work (50%) than in the rest of Anglesey (40%).
- 5.2.13 This overview of the demographic characteristics of this area indicates that the Caergybi and Ynys Cybi area has relatively high rates of unemployment and relatively low rates of degree-level qualifications. According to the 2014 Welsh Index of Multiple Deprivation (RD6), areas in and around Holyhead town were among the most deprived in Anglesey and Wales, with the former Morawelon ward ranking as the most deprived in Anglesey. It is also an area where the Welsh language has declined recently, with the proportion of people who can speak Welsh falling by 10% between 1981 and 2011. Social and economic opportunities and the Welsh language are therefore particular issues in this area.

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<sup>28</sup> Housing data is from Census 2011, using a best-fit to current wards where necessary (RD5).

<sup>29</sup> Census 2011, using a best-fit to current wards where necessary (RD5).

## 5.3 Local impacts and mitigation

### *Population and socio-economics*

- 5.3.1 This section looks at effects assessed in the socio-economic chapter of the ES. This includes the expected local distribution of project-wide effects from the construction workforce. This section also includes information drawn from the WLIA (Application Document Reference 8.21), the HIA (Application Document Reference 8.19), and the EqIA (Application Document Reference 8.22).
- 5.3.2 The EIA has used a 'gravity model' to provide an indication of the likely distribution of workers across the island and mainland during the peak construction phase of the Wylfa Newydd Project. This is based on information about the workforce, housing market, and travel distances. The information from the gravity model has been used in this report where possible to indicate the potential local distribution of project-wide effects relating to the workforce.

### **Project-wide socio-economic effects during construction**

#### ***Construction workforce***

- 5.3.3 The Wylfa Newydd Project will require a substantial construction workforce. The construction workforce is expected to be up to 8,500 workers at peak construction, although impacts from up to 9,000 have been assessed. This will represent a large increase and will have some population impacts. Potential impacts could relate to demand for accommodation or community facilities, as well as effects on the economy and traffic.
- 5.3.4 The vast majority of these workers will be employed at the WNDA. with smaller numbers for the Associated Developments, as follows:
- A5025 Off-line Highway Improvements, up to 211 workers;
  - Park and Ride, up to 70 workers;
  - Logistics Centre, up to 50 workers; and
  - Off-Site Power Station Facilities, up to 85 workers.
- 5.3.5 Full information on the construction workforce requirements for the Wylfa Newydd Project is provided in the ES, volume C chapter 1 (Application Document Reference 6.3.1).
- 5.3.6 Of the peak workforce of up to 9,000, at least 2,000 are expected to be home-based and thus already resident within the DCCZ, which is based on a 90-minute commuting zone from the WNDA. Of these approximately 1,260 are expected to come from Anglesey. These estimates are based on a review of the skills available in the area and of travel expectations. These workers are expected to be permanently resident and do not represent temporary new residents.

- 5.3.7 The Jobs and Skills Strategy (Application Document Reference 8.4) is designed to meet the labour needs of the Wylfa Newydd Project and deliver jobs and economic opportunities locally while avoiding negative labour impacts in the local economy. It will seek to maximise the recruitment of locally-based workers and will seek to increase the number of home-based workers above 2,000 in order to minimise the effects caused by the arrival of construction workers. This will also seek to maximise the economic benefits for local residents that will result from the jobs created as a result of the Wylfa Newydd Project, in partnership with local stakeholders.
- 5.3.8 Measures to maximise local employment include developing a Skills Fund to support a range of education, training and employment initiatives relating to both the construction and operational phases of the Wylfa Newydd Project as well as a WNESS in partnership with Welsh Government, the Department for Work and Pensions and other stakeholders. Its role will be to place people into sustainable employment created by the Wylfa Newydd Project. The WNESS will work with contractors and stakeholders to maximise opportunities for local residents, unemployed people, young people and groups that traditionally are under-represented in the construction workforce. It will provide a pathway for jobseekers into the project, in some cases via initial education or apprenticeship routes to prepare young people for work on the project. For older or unemployed workers, outreach or work readiness training will be facilitated. It will also provide a structure for 'backfilling' – allowing local employers to fill vacancies that happen when employees take up jobs on the Wylfa Newydd Project.
- 5.3.9 Of the peak workforce of up to 9,000, up to 4,000 will be accommodated at the Site Campus. Horizon has concluded that on balance, the environmental and social effects of the construction workforce on the existing community is best managed through locating a significant proportion of them in a single, temporary purpose-built campus as close as possible to the Power Station Site. This will be a temporary accommodation facility within the WNDA (and within the Lligwy and Twrcelyn area) which will include independent living spaces for workers and a range of campus-style amenities and facilities.
- 5.3.10 Of the peak workforce of up to 9,000, 3,000 are expected to take up existing accommodation temporarily within the seven assessment areas covered by this report. This is based on an assessment of the availability of bed spaces across several tenures (including private rented, owner-occupied, hotels, caravans and spare room accommodation) in the study areas. For Anglesey and the Menai Mainland area as a whole, approximately 450 workers are estimated as taking up hotel accommodation, 650 workers as taking up caravan accommodation, 600 workers taking up owned accommodation (i.e. by purchasing a property) and 900 taking up private rented accommodation. Further information on the breakdown of accommodation across tenures and the expected distribution of workers is found in the ES, volume C chapter 1 (Application Document Reference 6.3.1).

- 5.3.11 It is anticipated that workers would take up accommodation throughout the Caergybi and Ynys Cybi area based on availability. As a result, it is anticipated that larger settlements such as Holyhead would host a significant proportion of these workers as a result of having more potential accommodation spaces. For example, approximately 314 workers are estimated by the gravity model to take up accommodation in Holyhead.
- 5.3.12 In addition to the provision of Temporary Workers' Accommodation for up to 4,000 workers in the WNDA, Horizon has set out two central means of mitigating the impact of non-home-based workers taking up accommodation in Anglesey.
- The WAMS will seek to match accommodation demand to supply in order to effectively distribute workers more widely and prevent excessive localised impacts. All workers will be required to register with the WAMS. Horizon and IACC have agreed to establish a CWAMP as part of the WAMS to help workers to find suitable and appropriate accommodation. The WAMS will monitor data and work with stakeholders to ensure workers are able to find this accommodation.
  - Horizon has also proposed a flexible Housing Fund to provide support for housing in the local area. This would be used to mitigate a range of effects and to boost the supply of housing, including increasing availability of existing stock and funding council officers' time relating to additional housing matters (such as enforcement or dealing with residents' housing needs).
- 5.3.13 Horizon will use a 'plan, monitor and manage' approach in order to minimise adverse community impacts and flexibly respond to localised impacts if and when they occur. Full details of Horizon's approach to accommodation and mitigation are set out in the Workforce Accommodation Strategy (Application Document Reference 8.4).
- 5.3.14 Horizon will notify occupiers of nearby properties in advance of works taking place including the type and duration of the activity. This will ensure occupiers are notified of key construction activities that might result in increased noise or disturbance. Horizon will display the name and contact details of the person(s) accountable for construction works on the site boundary. Horizon will also display the head or regional office contact information on the site boundary. All notifications will be bilingual in Welsh and English, and accompanied with a contact name, telephone number and address to which enquiries should be directed
- 5.3.15 Horizon will establish a dedicated and free telephone hotline to be available for anyone with concerns about the construction programme or Wylfa Newydd Project. It will deal with enquiries or complaints from the public, the IACC or other key stakeholders. The system will be staffed by bilingual personnel, will be widely advertised by appropriate means and will ensure that appropriate

action is taken in response to any non-compliance with approved plans or construction arrangements, or in the event of physical damage, in accordance with an enforcement protocol.

- 5.3.16 A complaints register will be maintained by Horizon. All calls will be logged and mapped, together with a record of the responses and action taken. Mapping will be used to record where key concerns are raised by individuals, local communities or other stakeholders. The complaints register will be made available to the IACC upon request.

### ***Business and tourism***

- 5.3.17 Tourism is a vital part of the economy of Anglesey and the Wylfa Newydd Project may have some effects on the sector. Visitor behaviour may change in response to the construction of the Power Station. However, a survey of visitors to Anglesey in 2015 found almost 90% of respondents indicated that the construction of the new Power Station would have no impact on their intention to return to Anglesey. Visitors noted concerns related to traffic and general construction impacts. Based on a detailed review of these responses and on Project mitigation which would address potential tourist concerns, the ES (Application Document Reference 6.4.3) states that the actual number of tourism visits that may be lost during construction is likely to be small. This could nevertheless represent a change in revenue for some businesses. However, this could be countered by spending from workers throughout the island and any impact would be limited and would vary by the type and location of the business.
- 5.3.18 Tourist accommodation businesses would benefit from demand for accommodation from construction workers. Across Anglesey and the Menai Mainland area it is estimated that up to 450 tourism bed spaces could be occupied by workers within hotels and bed and breakfast accommodation, and a further 650 bed spaces within caravan and camping accommodation at registered sites. This is based on Horizon's estimates of capacity. This would provide revenue to tourist accommodation providers, particularly in the winter months. However, to prevent excess demand from workers 'crowding out' tourists or affecting the quality of accommodation, measures in the Workforce Accommodation Strategy (application document reference 8.4) will seek to avoid adverse effects including through the WAMS.
- 5.3.19 Local businesses would also potentially experience beneficial supply chain effects. While it is not possible at present to estimate how much of the Wylfa Newydd Project value would be spent locally, according to the ES chapter C1 (Application Document Reference 6.3.1) if between 2% and 4% was spent locally (as at other nuclear project examples such as Sizewell B), this would be equal to an investment of between £200 million and £400 million within north Wales over the construction period, providing a range of opportunities for local businesses. Horizon's Supply Chain Charter and Action Plan set out its approach to procurement and would seek to support businesses to engage in the Wylfa Newydd Project and benefit directly.

***Community safety, health and well-being***

- 5.3.20 The main concentration of workers will be at the Site Campus, at the WNDA, not in the Caergybi and Ynys Cybi area. Horizon will put in place a series of measures to manage worker behaviour, including a Workforce Management Strategy (Application Document Reference 8.5), Code of Conduct, background checks on staff, and community liaison with the police.
- 5.3.21 The potential health effects of the Wylfa Newydd Project have been assessed in the HIA (Application Document Reference 8.19). It also assesses the cumulative health effects from site-specific and combined impacts across all sites for local population groups around the WNDA and the Associated Development sites.
- 5.3.22 The HIA considers the Project-wide health and well-being effects relating to:
- road safety, air quality and noise around the road network including the mitigating effects of highway improvements;
  - tourism and housing displacement pressure, including mitigation measures such as the WAMS;
  - demand for and journey times to access healthcare services, including mitigation such as the on-site campus health facilities;
  - safety, lifestyle and behaviour;
  - identity and culture;
  - employment, income and economic development;
  - education and training;
  - public understanding of risk; and
  - low carbon energy generation.
- 5.3.23 Minor beneficial effects on health and well-being are assessed, for the positive effect on employment, and the availability of reliable electricity supplies. Moderate beneficial effects are assessed for education and training. There will also be beneficial effects related to the economic and employment opportunities created by the Wylfa Newydd Project since employment and economic investment are linked to physical and mental health.
- 5.3.24 The HIA summarises effects for four population groups based on their sensitivity to potential changes attributable to the Wylfa Newydd Project (beneficial or adverse):
- children and young people;
  - older people;
  - people with existing poor health (physical and mental health); and
  - people living in deprivation, including those on low incomes.



For these groups, effects are assessed as up to moderate adverse for those near the WNDA and the local road network including the A5025 due to combined effects from traffic, air quality and other effects. However, these impacts are unlikely to affect the Caergybi and Ynys Cybi area.

- 5.3.25 For other health and well-being issues, the effects are assessed as being negligible; no significant effects are expected as a result of the Logistics Centre. The HIA also details a number of mitigation strategies and best practice to address health impacts. Horizon will establish and chair an external stakeholder group (the Health and Well-being Monitoring Group) that will include members of the health and emergency services to monitor the implementation of the HIA mitigation strategy and provide advice on its delivery.

### ***Equalities***

- 5.3.26 The EqIA (Application Document Reference 8.22) assesses potential equalities effects the Wylfa Newydd Project. It assesses potential effects on people with 'protected characteristics' as defined by the Equality Act 2010 as:

- age;
- race;
- religion or belief;
- marriage and civil partnership;
- pregnancy and maternity;
- sex;
- sexual orientation;
- disability; and
- gender reassignment.

It also assesses potential effects on socio-economically deprived communities. It also considers the extent to which the Wylfa Newydd Project would contribute towards the goals of 'a more equal Wales', and 'a Wales of cohesive communities' set out in the Future Generations and Well-being (Wales) Act 2015.

- 5.3.27 The EqIA has identified five categories of effects as potentially occurring for some of these groups (which reflect the main Wylfa Newydd Project impacts):

- noise;
- employment and skills;
- traffic, transport and access;
- community infrastructure and public services; and

- community cohesion.
- 5.3.28 A population rise as a result of construction workers temporarily moving to the local area may affect communities if they impact on health services, which would affect groups most reliant on these; however, as noted above mitigation measures are designed to prevent this. Community cohesion may be affected if the Wylfa Newydd Project and a disproportionate increase in the male population of the north-west part of the Isle of Anglesey gave rise to a heightened risk or perception of crime, which would potentially affect older people, women and BAME residents in particular. Changes in social mix could affect social networks in an area where many older people would feel part of a small, close-knit community, according to the Wylfa Newydd Project HIA Report Community Survey (Application Document Reference 8.19); however, it also indicates that younger people may view the impact on social networks of new residents positively. Furthermore, if prices rise locally for private rented sector housing this may adversely impact existing residents who experience housing deprivation. However, many of the measures which are designed to mitigate the general socio-economic effects of the construction workforce including the Site Campus, the Community Impact Fund and the Housing Fund would also mitigate these equality issues.
- 5.3.29 The Project would also have beneficial equalities effects through providing short- and long-term employment opportunities and a legacy of a more skilled workforce. This would be beneficial in particular for young people and deprived communities.

### ***Community facilities***

- 5.3.30 The Site Campus will provide a range of facilities that will cater to the needs of workers who live there. Some of these will also be available to workers living off-site, thereby reducing demand from them for existing services. This includes health facilities which will represent the easiest way of registering for primary care services for the visiting workforce. UK based workers who are registered for primary and dental care services at their home location may not wish to register with a local provider (noting that there are existing NHS provisions for providing services for any person who cannot attend their own registered practice through temporary registration arrangements). As a result of this on-site provision the HIA (Application Document Reference 8.19) has found the changes in demand for local health services would not have a significant impact for local resident groups.
- 5.3.31 Where workers are non-home-based and they bring family and dependants to the area (who will not be living in the Site Campus), these family and dependants will be expected to register with local NHS services such as GP and dental provisions. This is assessed as not likely to have a significant adverse demand on these local health services. Further details are available in the HIA (Application Document Reference 8.19).
- 5.3.32 Specific arrangements are not proposed for dental care. It is expected that the majority of UK based workers will remain registered with their dental

services provider. It is expected that NHS services would be used for emergency dental services.

- 5.3.33 In terms of school places, IACC will monitor school enrolment. Should localised issues arise where applications are made for places in schools at capacity and IACC can demonstrate the nature of the resulting effect (e.g. temporary short-fall in funding, additional costs for appeals processes etc.) Horizon will provide funding to address this via the proposed Community Impact Fund.

### ***Welsh language***

- 5.3.34 The WLIA (Application Document Reference 8.21) states that the arrival of workers to Anglesey during the construction period will lead to a change in the relative proportion of Welsh speakers, since most of these workers will be non-Welsh speakers. The assessment indicates that this would be an overall moderate adverse effect. The temporary population increase in the Caergybi and Ynys Cybi area as described above can be expected to alter the balance of Welsh and non-Welsh speakers in this way.
- 5.3.35 The assessment considers the effects of population changes on the Welsh language at some local area levels. Holyhead is the largest town in Anglesey and is expected to accommodate over 400 non-home-based construction workers. Holyhead also has a relatively low Welsh-speaking proportion of the population. IACC's current Welsh language strategy also focuses in particular on Holyhead as a key area for promoting the Welsh language. As a result, it is recognised that potential impacts on the Welsh language as a result of population changes are of particular concern for the Caergybi and Ynys Cybi area.
- 5.3.36 The assessment also considers the impact of the Wylfa Newydd Project on other topics relevant to the Welsh Language including quality of life, economic factors, infrastructure supply and education and social and cultural aspects. Some project-wide effects would impact these factors. The assessment finds that without additional mitigation there would be:
- a potential moderate adverse effect on the language due to an increase in the proportion of non-Welsh speakers in the KSA;
  - a moderate adverse effect on the language due to potential increases in the cost of housing;
  - a moderate adverse effect on the language as a result of increased demand for schools from non-Welsh speakers; and
  - a potential moderate adverse effect on Welsh traditions and culture as a result of the in-migration of non-Welsh-speaking workers.
- 5.3.37 Several mitigation measures will be provided by Horizon which are set out in the WLCMES. These include providing language awareness raising to Wylfa Newydd Project staff and appointing a WLCC to focus on the development

and implementation of Welsh language and culture mitigation and enhancement measures during construction and operation of Wylfa Newydd.

- 5.3.38 However, the assessment also notes that mitigation measures developed for the Wylfa Newydd Project as a whole, such as accommodating workers at the Site Campus, will also serve to mitigate the impacts on the Welsh language.
- 5.3.39 In addition, the creation of job opportunities during construction and operation provides opportunities to aid the Welsh language through reducing the out-migration of Welsh-speaking young people from local communities. The assessment notes that there has been a continuous net out-flow and population decrease of young people from Anglesey in recent years, with a net out-flow of 220 among 15 to 29 year olds between 2014 and 2015. It notes that this may be partly due to a lack of job opportunities, with a reduction of 889 (5.4%) in the number of FTEs in employment between 2009 and 2014. The Wylfa Newydd Project will directly provide a large number of skilled jobs for local young people in Anglesey during construction and operation of the Power Station. It will also provide indirect benefits to local businesses through additional spending from workers, contracts for local supply chain businesses and revenue to tourism accommodation businesses for bed spaces occupied by workers. This will provide further job opportunities for local people in the Caergybi and Ynys Cybi area (which currently has a higher proportion of residents claiming Jobseekers Allowance than other areas) and result in a moderate beneficial effect in terms of the Welsh language.
- 5.3.40 In addition, the creation of job opportunities during construction and operation provides opportunities to aid the Welsh language through reducing the out-migration of Welsh-speaking young people from local communities. This will provide a moderate beneficial effect in terms of the Welsh language. Several strategies to maximise these opportunities are also provided in the WLCMES. In view of this, on balance the effect of population change on the Welsh language is assessed as not significant and net neutral.
- 5.3.41 No significant effects on the Welsh language are expected to occur as a result of the Logistics Centre.

### **Project-wide effects during operation and decommissioning**

- 5.3.42 During operation, the workforce for the Wylfa Newydd Power Station is expected to consist of around 850 staff. However, no spatial breakdown of where these workers will live within Anglesey is available and cannot be assessed at the level of the Caergybi and Ynys Cybi area. The Project is expected to produce a number of local economic benefits through providing new jobs.
- 5.3.43 Potential socio-economic effects during decommissioning of the Main Power Station are described in the ES, volume C chapter 1 (Application Document Reference 6.3.1). While decommissioning would lead to the loss of jobs and other effects, due to uncertainties over such a long time scale these effects cannot be assessed at the Caergybi and Ynys Cybi area level.

### **Cumulative socio-economic effects**

- 5.3.44 Cumulative socio-economic effects as a result of both the Wylfa Newydd Project and other projects are assessed in the ES, volume I chapter 5 (Application Document Reference 6.9.5).
- 5.3.45 There will be cumulative economic benefits as a result of the combination of project-wide effects and the effects of other projects within Anglesey and elsewhere. Increased demand for the local construction sector and the local labour market from the Wylfa Newydd Project and other projects will create opportunities for local workers and businesses. Investment in the local economy would increase as a result of the cumulative effects of increased spending and investments across all projects.

### **Transport**

- 5.3.46 The Wylfa Newydd Project will result in a number of impacts on transport and traffic. This is primarily due to trips generated by workers and freight transport during the construction and operational phases. A full assessment of these impacts is given in the Transport Assessment (Application Document Reference 6.3.14).
- 5.3.47 An assessment of the traffic and transport impact of the Wylfa Newydd Project is also found in the ES, volume C chapter 2. Section 2.5 of this document details the forecasted traffic level changes on individual sections of road throughout Anglesey and the Menai Mainland for the year the A5025 Off-line Highway Improvements are completed, the year of peak construction, and the year of peak operation of the Power Station.
- 5.3.48 During construction phases, all HGVs will be required to register at the Logistics Centre at Parc Cybi which will have space for up to 100 HGVs. This facility is intended to manage the flow of HGVs to the WNDA and prevent bottlenecks, thus reducing potential traffic impacts on other road users. However, this will entail these HGVs using approaches to the Logistics Centre in the Caergybi and Ynys Cybi area.
- 5.3.49 The Logistics Centre is located next to Junction 2 of the A55; HGVs using the Logistics Centre will use the A55 apart from a short section of road connecting to the A55; there are no residential properties on this stretch of road.
- 5.3.50 Modelling presented in the ES, volume C chapter 2 (Application Document Reference 6.3.2) shows that at peak construction a 4% increase in traffic flows is expected on the A55 between Junction 2 (Parc Cybi) and Junction 3 (where construction-related traffic will alight for the A5025). This has not been assessed as a significant effect.
- 5.3.51 Horizon has proposed a network of shuttle buses to transport workers to the WNDA. These would operate from major towns and cities like Holyhead, Bangor and Caernarfon together with settlements in the north and east of Anglesey, as needed. These services are also intended to be flexible, with routes refined to reflect the actual distribution of workers. This is intended to

reduce the number of vehicles travelling on roads throughout Anglesey and to minimise traffic impacts during morning and evening peaks. Shuttle buses will also travel to and from the Park and Ride facility at Dalar Hir which is also intended to minimise traffic impacts due to commuting workers.

- 5.3.52 A Construction Traffic Management Strategy is included within the Wylfa Newydd CoCP (Application Document Reference 8.6) setting out measures to mitigate the impact of traffic; this will include measures and monitoring to ensure construction traffic uses approved routes while travelling. A Traffic Incident Management Strategy to manage incidents on the public highway network would also be provided within the Wylfa Newydd CoCP (Application Document Reference 8.6).

## ***Noise and vibration***

### **Project-wide noise and vibration effects**

- 5.3.53 The project-wide noise and vibration effects as a result of traffic are assessed in the ES, volume C chapter 5 (Application Document Reference 6.3.5). This assessment includes traffic using the Logistics Centre at Parc Cybi. A small number of residential properties in Kingsland (approximately two) are assessed as likely to experience a moderate adverse impact during peak construction of the Power Station as a result in increased noise from traffic due to the Wylfa Newydd Project. Eligible homes affected will be offered noise insulation as a means of reducing day-time and night-time noise, as set out in the Wylfa Newydd CoCP (Application Document Reference 8.6).

### **Site-specific noise and vibration effects**

- 5.3.54 The noise and vibration effects caused by construction, operation and decommissioning at the Logistics Centre at Parc Cybi are assessed in the ES, volume H chapter 6 (Application Document Reference 6.8.6). This states that no significant noise or vibration during the construction, operation and decommissioning phases. This is as a result of a number of embedded and good practice mitigation measures as well as the location of the Logistics Centre relatively far away from any residential communities and other receptors. Any effects are expected to be minor and not significant.
- 5.3.55 A potential cumulative effect may occur for a small number of properties at Kingsland as a result of the overlap of noise due to traffic and due to the construction, operation and decommissioning of the Logistics Centre. This has been assessed in the ES, volume I chapter 4 (Application Document Reference 6.9.4) as potentially moderate adverse.
- 5.3.56 Additional mitigation in the form of noise insulation for eligible residential properties experiencing noise effects will be offered. This will provide respite for affected residents.

### ***Air quality***

- 5.3.57 The air quality effects caused by construction, operation and decommissioning at the Logistics Centre at Dalar Hir are assessed in the ES, volume H chapter 5 (Application Document Reference 6.8.5). It states that no significant adverse air quality effects are expected as a result of this development.
- 5.3.58 Project-wide air quality effects as a result of traffic are assessed in the ES, volume C chapter 4 (Application Document Reference 6.3.4) which indicates that no significant adverse impacts are expected within the Caergybi and Ynys Cybi area.

### ***Landscape and visual***

- 5.3.59 The landscape and visual impacts of the Logistics Centre at Parc Cybi are summarised in the ES, volume H chapter 4 (Application Document Reference 6.8.4).
- 5.3.60 Adverse impacts on the landscape occur because of the removal of some landscape elements such as field patterns, the intrusive effect of construction activities such as soil clearance, or the introduction of new development into the landscape.
- 5.3.61 In terms of landscape, the construction and operation of the Logistics Centre would impact on the Anglesey AONB through a change in land use, the loss of characteristic features and localised impacts on the topography of the area with a moderate adverse impact on this localised section. However, the section of AONB affected would be small and it would have negligible effect on the rest of the AONB. It would also impact on local landscape character in the same way with a moderate adverse effect, although the presence of nearby detracting features in the landscape partly reduce the impact.
- 5.3.62 Adverse visual impacts occur where a receptor (i.e. a person likely to view the activity, such as local residents, users of local roads and PRowS, visitors and local communities) would be able to view construction activities or new elements which would be intrusive and detrimental to existing views.
- 5.3.63 Some visual effects would impact local receptors during construction. Walkers on the PRow along the A5153 would have open elevated views of construction activities, with a moderate adverse effect. Cyclists on the Parc Cybi service road and along a section of the Lôn Trefnath cycle path would have close-range as well, with a major adverse effect. Community receptors including the south-east edge of the settlement of Kingsland, a cluster of properties along the A4545 and detached houses and bungalows along the north and north-east side of Penrhyn Geiriol and Hunters Chase, Trearddur would have some partial views of construction with a moderate adverse effect. Users of nearby roads would also have views of construction, including users of the A5153 and B4545 and the Parc Cybi service road, resulting in moderate adverse effects in close-ranging and middle-distance views, ranging to negligible.



- 5.3.64 Visitors to the Trefignath Burial Chamber would have close-range and open uninterrupted views of the construction activities, with a major adverse effect. Visitors to the Ty Mawr Standing Stone would experience close-range views south-eastwards across local fields (albeit filtered by intervening features), with a moderate adverse effect.
- 5.3.65 During the five years of operation of the Logistics Centre, there would continue to be a moderate adverse effect on local landscape character and the small directly affected section of the AONB, although this would decrease over time as vegetative screen and hedgerows mature.
- 5.3.66 There would continue to be moderate adverse visual effects for users of the PRoW on the A5153. Cyclists on the Parc Cybi service road and along a section of the Lôn Trefignath cycle path would also continue to experience major adverse visual effects at close range due to the busy operations at the Centre. Community receptors from the south-east edge of Kingsland, the cluster of properties along the A4545 and the detached houses and bungalows along the north and north-eastern side of Penrhyn Geiriol and Hunters Chase, Trearddur would continue to experience a moderate adverse effect. Users of the B4545 and users of the Parc Cybi service road would experience a major adverse effect in close-range open views ranging to moderate adverse in middle distance views, to negligible for more long-distance views. Visitors to the Trefignath Burial Chamber would continue to experience close range views and major adverse visual effects, while visitors to the Ty Mawr Standing Stone would continue to experience moderate adverse visual effects.
- 5.3.67 No significant effects are assessed as likely during decommissioning of the Logistics Centre. A number of embedded and good practice mitigation will be present during the construction and operation of the Logistics Centre including retention of existing hedgerows and stone walls where possible, designing the layout to retain the visual link between the Ty Mawr Standing Stone and the Trefignath Burial Chamber Scheduled Monuments across the southern corner of the site, new hedgerow and scrub planting during decommissioning and the use of the management strategies set out in the Wylfa Newydd CoCP (Application Document Reference 8.6) and the Logistics Centre sub-CoCP (Application Document Reference 8.11). In addition, these measures are likely to increase in effectiveness over time as vegetation matures.

### Cumulative effects

- 5.3.68 Cumulative effects as a result of both the Wylfa Newydd Project and other projects are assessed in the ES, volume I chapter 5 (Application Document Reference 6.9.5). A number of other developments will have landscape and visual impacts leading to some cumulative impacts in combination with those of the Wylfa Newydd Project listed above.
- 5.3.69 In terms of the Anglesey AONB, there would be adverse cumulative landscape effects as a result of the combination of visual intrusions from the Wylfa Newydd Project and other projects. However, these would be localised and



range from moderate adverse locally to a minor adverse effect on the overall AONB. There would be similarly localised cumulative landscape effects on local landscape, potentially of moderate adverse effect locally. These effects would reduce over time as landscaping matures. Effects as a result of the Logistics Centre would cease after decommissioning of the Centre.

- 5.3.70 There may be some adverse cumulative visual effects for users of local PRoWs, open access land and the local road network as a result of sequential, simultaneous and/or consecutive visibility of the construction, operation or decommissioning of the Logistics Centre in combination with other projects including the Anglesey Eco Park, Penrhos Coastal Park and Parc Cybi Stage Two. However, this cumulative effect has been assessed as minor adverse and not significant. Users of the A55, the B4545 and the A5153 may experience moderate adverse visual impacts as a result of sequential, simultaneous and/or consecutive visibility of the Logistics Centre and other projects; however, these effects would be short term, reducing to not significant during operation and following the establishment of landscaping and mitigation features.
- 5.3.71 Cyclists on the shared cycleway/footway on Parc Cybi access road and cyclists on the Lôn Trefignath cycle path would potentially experience major adverse visual impacts as a result of sequential, simultaneous and/or consecutive visibility of the Logistics Centre along with the Penrhos Coastal Park and Parc Cybi Stage Two. These effects would be greatest during construction and would reduce following the establishment of landscaping and mitigation features.
- 5.3.72 Visitors to Trefignath Burial Chamber would potentially experience major adverse visual impacts as a result of simultaneous and/or consecutive visibility of the Logistics Centre along with the construction of the Penrhos Coastal Park and Parc Cybi Stage Two. These effects would be greatest during construction and would reduce following the establishment of landscaping and mitigation features.
- 5.3.73 Some residential receptors at Kingsland, Penrhyn Geiriol and Hunters Chase, Trearddur would potentially experience moderate adverse cumulative visual impacts as a result of simultaneous and/or consecutive visibility of the construction of the Logistics Centre along with the construction of the Penrhos Coastal Park project. These impacts would be short term, reducing to not significant during operation and following the establishment of landscaping and mitigation features.

### ***Public access and recreation***

- 5.3.74 The public access and recreation effects of traffic as a result of the Wylfa Newydd Project are assessed in the ES, volume C chapter 3 (Application Document Reference 6.3.3). Traffic along the section of road from Junction 2 of the A55 to the Logistics Centre including HGVs would have to cross the Lôn Trefignath shared footpath/cycle path to access the Logistics Centre at Parc Cybi. This would impact on the amenity of users of this path; however,

mitigation including bilingual signage to warn pedestrians, cyclists and drivers of the zebra crossing means that the residual impact has not been assessed as significant.

- 5.3.75 The effects of the Logistics Centre at Parc Cybi on public access and recreation are assessed in the ES, volume H chapter 4 (Application Document Reference 6.8.4). No significant adverse effects are expected as a result of this development.

### **Cumulative public access and recreation effects**

- 5.3.76 Intra-project cumulative effects (those resulting from the combination of effects from different components of the Wylfa Newydd Project) are assessed in the ES, volume I chapter 4 (Application Document Reference 6.9.4). Recreational and active travel users of the Lôn Trefignath may potentially experience a cumulative effect as the result of reduced amenity from project-wide traffic and from the construction of the Logistics Centre. This would result of the extended time over which users would experience a reduction of amenity; this cumulative effect has been assessed as moderate adverse.
- 5.3.77 Cumulative effects as a result of both the Wylfa Newydd Project and other projects are assessed in the ES, volume I chapter 5.
- 5.3.78 In addition to effects on recreational and active travel users of the Lôn Trefignath and the dual use cycleway/footway on Parc Cybi spine road as a result of construction of the Logistics Centre and increased traffic during main construction, a potential cumulative effect may occur due to the building out of the Parc Cybi Business Park which could result in additional crossing points across the routes as well as additional traffic. This is assessed as a potential moderate adverse cumulative effect.

### **Cultural heritage**

- 5.3.79 It is recognised that the effects on the setting of cultural heritage assets such as Trefignath Burial Chamber and Ty Mawr Standing Stone is a key community concern. The ES, volume H chapter 11 (Application Document Reference 6.8.11) states that no significant effects are expected to occur in relation to cultural heritage as a result of the construction of the Logistics Centre, although as noted above visitors to these assets are likely to experience some adverse visual effects.

## **5.4 Combined topic effects and summary**

### **Combined topic effects**

- 5.4.1 The sections above have considered the effects on the local community by topic. In addition, the ES, volume H chapter 12 (Application Document Reference 6.8.12) also considers the impact of these effects combined. During the construction, operation and decommissioning stages of the Parc Cybi Logistics Centre, the combination of noise and views may affect homes

in Kingsland and Trearddur to the extent that some residents would consider the combined effects to be significant and adverse.

### Summary

- 5.4.2 In summary, the Caergybi and Ynys Cybi area will experience some direct impacts related to the Logistics Centre at Parc Cybi and to construction workers seeking accommodation in the area.
- 5.4.3 Of the non-home-based workers, modelling estimates that 314 may live in Holyhead. The WAMS will seek to match accommodation demand to supply, and monitor the effects.
- 5.4.4 Beneficial effects are likely in the local economy and labour market, while potential effects on the Welsh language are identified from the additional workforce.
- 5.4.5 During construction/operation/decommissioning of the Logistics Centre at Parc Cybi, some residences in Kingsland may experience cumulative/combined effects of traffic/construction noise and impacts on views.
- 5.4.6 The construction and operation of the Logistics Centre may also have landscape, amenity, access or combined effects, including in the AONB, at the Trefignath burial chamber and Ty Mawr standing stone, and from some roads, footpaths and the Lôn Trefignath cycle path.

### Residual effects

- 5.4.7 Following mitigation, there will be some significant residual effects (including but not limited to cumulative and in-combination effects) across all topics. These are shown in the table below.

**Table 5-2 Residual effects (after mitigation), Caergybi and Ynys Cybi area**

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
<b>Socio-economics</b>				
Labour market on Anglesey.	Increase in employment as a result of construction and operation.	Construction/operation	-	Major beneficial
PRS accommodation in the KSA.	Increase in demand for bed spaces.	Construction	Workforce Accommodation Strategy measures.	Minor adverse

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
Local economy in north Wales.	Investment in local economy.	Construction and operation	-	Moderate beneficial
Local economy on Anglesey.	Investment in local economy.	Construction and operation	-	Moderate beneficial
Welsh language - moderate adverse as result of population change.	Drop in relative proportion of Welsh speakers due to in-migration of construction workers.	Construction	Measures in WLCMES and in Workforce Accommodation Strategy.	Potential moderate adverse (to be monitored)
Welsh language - potential effects due to housing demand.	Increased cost of housing for local Welsh speakers.	Construction	Measures in WLCMES and in Workforce Accommodation Strategy including Housing Fund.	Potential moderate adverse (to be monitored)
Welsh language - potential effects due to school demand.	Potential increase in the number of non-Welsh speaking children in local schools, altering balance of Welsh speakers and non-speakers in schools.	Construction	Measures in WLCMES.	Potential moderate adverse (to be monitored)

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
Welsh - potential effects on traditions & culture.	In-migration of non-Welsh speakers from different background/ culture.	Construction	Measures in WLCMES and in Workforce Accommodation Strategy including Housing Fund.	Potential moderate adverse (to be monitored)
Welsh - beneficial effects from economic benefits, investment, employment.	Economic benefits of Project creating jobs for local people and reducing out-migration of Welsh-speaking young people.	Construction and operation	Enhancement measures in WLCMES.	Moderate beneficial
Cumulative effect - economic investment.	Local economic investment and spending as a result of Wylfa Newydd Project and other projects.	Construction and operation	-	Moderate beneficial
Vulnerable groups identified in HIA living near local road network.	Combined effects from traffic, air quality etc.	Construction	Measures in HIA.	Up to moderate adverse
<b>Noise and Vibration</b>				

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
Residential receptors at Kingsland.	Increased noise from traffic as a result of the Wylfa Newydd Project.	Construction	Offers of noise mitigation/insulation to occupants of eligible properties, and measures set out in the ES, CoCP and sub-CoCPs	Moderate adverse (2 properties)
Residential receptors at Kingsland.	Potential cumulative effect from the overlap of noise due to traffic and noise due to the construction, operation and decommissioning of the Logistics Centre at Parc Cybi.	Construction, operation, decommissioning	Offers of noise mitigation/insulation to occupants of eligible properties, and measures set out in the ES, CoCP and sub-CoCPs	Moderate adverse
<b>Landscape and visual</b>				
Anglesey AONB.	Change in land use, erosion of landscape character resulting from direct changes to the AONB as a result of the construction	Construction, operation	Restriction of cabin height to two storeys and architectural treatment of proposed buildings and structures to integrate with surroundings	Moderate adverse for the directly affected area (negligible on overall AONB)

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
	and operation of the Logistics Centre at Parc Cybi.			
LLCAs	Change in land use, erosion of landscape character resulting from direct changes to the AONB as a result of the construction and operation of the Logistics Centre at Parc Cybi.	Construction, operation	Restriction of cabin height to two storeys and architectural treatment of proposed buildings and structures to integrate with surroundings	Moderate adverse
PRoWs	Visual impacts as a result of views of construction and operation of the Logistics Centre at Parc Cybi.	Construction, operation	Restriction of cabin height to two storeys and architectural treatment of proposed buildings and structures to integrate with surroundings	Moderate adverse in close-range views ranging to minor adverse and negligible
Users of the Lôn Trefnath cycle path and Parc Cybi service road shared use	Visual impacts as a result of views of construction and operation of the Logistics	Construction, operation	Restriction of cabin height to two storeys and architectural treatment of proposed buildings and structures to	Major adverse in close-range views, ranging to negligible

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
cycleway/footway.	Centre at Parc Cybi.		integrate with surroundings	
Community views and residential properties in and near Kingsland and in and near Trearddur	Visual impacts as a result of views of construction and operation of the Logistics Centre at Parc Cybi.	Construction, operation	Restriction of cabin height to two storeys and architectural treatment of proposed buildings and structures to integrate with surroundings	Moderate adverse in close-range views, ranging to negligible
Local road users.	Visual impacts as a result of views of construction and operation of the Logistics Centre at Parc Cybi.	Construction, operation	Restriction of cabin height to two storeys and architectural treatment of proposed buildings and structures to integrate with surroundings	Moderate adverse in close-range views, ranging to negligible (construction); Major adverse in close-range open views ranging to moderate adverse in middle distance views, to negligible for more long-distance views (operation)



Receptor	Description of effect	Phase	Additional mitigation	Residual effect
Visitors to the Trefignath Burial chamber and the Ty Mawr Standing Stone	Visual impacts as a result of views of construction and operation of the Logistics Centre at Parc Cybi.	Construction, operation	Restriction of cabin height to two storeys and architectural treatment of proposed buildings and structures to integrate with surroundings	Major adverse in close-range open views ranging to moderate adverse in middle-distance views
Anglesey AONB.	Potential cumulative effect as a result of the combination of visual intrusions from the Wylfa Newydd Project and other projects.	Construction, operation	None identified.	Moderate adverse for the directly affected area (negligible on overall AONB)
Users of local PRoWs, open access land and the local road network.	Potential cumulative effect as a result of sequential, simultaneous and/or consecutive visibility of the construction, operation or decommissioning of the Logistics Centre in combination	Construction, operation	None identified.	Moderate adverse

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
	with other projects.			
Cyclists on Lôn Trefnath cycle path and Parc Cybi service road shared use cycleway/footway.	Potential cumulative effect as a result of sequential, simultaneous and/or consecutive visibility of the construction, operation or decommissioning of the Logistics Centre in combination with other projects.	Construction, operation	None identified.	Moderate adverse
Visitors to Trefnath Burial Chamber.	Potential cumulative effect as a result of sequential, simultaneous and/or consecutive visibility of the construction, operation or decommissioning of the Logistics Centre in combination with other projects.	Construction, operation	None identified.	Moderate to major adverse

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
Residential receptors at Kingsland, Penrhyn Geiriol and Hunters Chase, Trearddur.	Potential cumulative effect as a result of sequential, simultaneous and/or consecutive visibility of the construction, operation or decommissioning of the Logistics Centre in combination with other projects.	Construction	None identified.	Moderate adverse
<b>Public access and recreation</b>				
Recreational and active travel users of the Lôn Trefignath cycle path.	Potential cumulative effect as the result of reduced amenity from project-wide traffic and from the construction of the Logistics Centre, resulting in prolonged time in which effects occur.	Construction	None identified.	Moderate adverse
Active travel users of the Lôn Trefignath cycle path	Potential cumulative effect as the result of impacts as a	N/A	None identified.	Moderate adverse

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
and Parc Cybi service road shared use cycleway/footway.	result of the Wylfa Newydd Project and the building out of the Parc Cybi Business Park (including additional crossing points across the routes and additional traffic).			

## 6 Bro Aberffraw and Bro Rhosyr

### 6.1 Introduction

- 6.1.1 The Bro Aberffraw and Bro Rhosyr area consists of the Bro Aberffraw and Bro Rhosyr wards in the south of Anglesey. It includes a number of villages including Gaerwen, Dwyran, Brynsiencyn and Aberffraw.
- 6.1.2 This chapter summarises the main effects of the Wylfa Newydd Project in this area, and should be read alongside chapter 1 which sets the context.
- 6.1.3 This CIR has been developed in response to feedback, including from IACC. It has also been written with regard to key local concerns identified through the statutory consultation process. These are summarised in section 1.4 of this report.
- 6.1.4 This report looks at how these 'project-wide' effects may be felt locally by the community, including looking at the expected distribution of workers in different areas. It also looks at the more specific local effects of individual parts of the Wylfa Newydd Project, whether it be the main development area, or Associated Development elsewhere, such as highways. Where relevant the cumulative effect of these different parts of the development together is also considered.
- 6.1.5 As part of the application, various mitigation measures are planned to lessen or avoid many of the potential impacts. Where relevant to local effects these are described in this CIR.
- 6.1.6 This chapter includes a context section describing the area and what development will affect it, and then summarises the effects under topic headings. Many of the local effects, including those arising from the construction workforce, are included in the section on socio-economics. Other topic sections are transport, noise/vibration, air quality, landscape/visual, and access/recreation.
- 6.1.7 This report is based on the assessments that make up the DCO application, including the ES, WLIA (Application Document Reference 8.21), HIA (Application Document Reference 8.19) and EqlA (Application Document Reference 8.22). Those other documents cover the full range of potential impacts, of which this document summarises only the ones which are significant for local communities. If after reading this chapter you want further information, see appendix 8-2 for details of other relevant documents.

### 6.2 Context

#### *Project development in this area*

- 6.2.1 While there will be no development associated with the Wylfa Newydd Project within this area, impacts related to the Wylfa Newydd Project are summarised in table 6-1

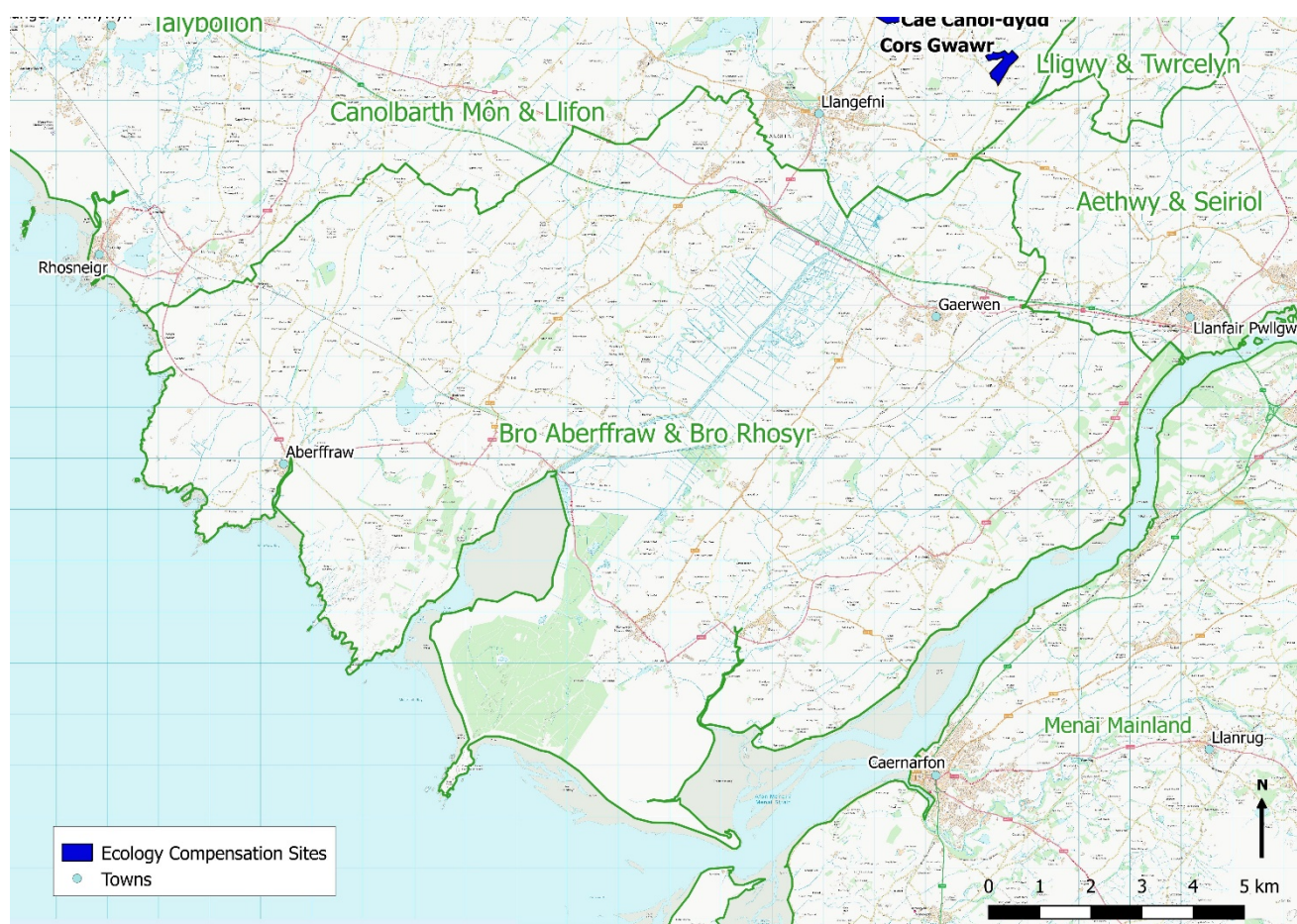
**Table 6-1 Bro Aberffraw and Bro Rhosyr project components and impacts**

Project components	impact topics
N/A	Population and socio-economics; transport

### **Local area**

- 6.2.2 The Bro Aberffraw and Bro Rhosyr area is a largely rural and coastal area in south Anglesey, with a number of villages and scattered settlements. The area includes a wide variety of rural land uses including agriculture and areas of woodland, marshland and nature reserve. There are also a number of tourism and leisure uses including campsites, caravan parks and the Anglesey Circuit racing track. The A55 and the A5 pass through the north of the area, with the A5 passing through Gaerwen.

**Figure 6-1 Bro Aberffraw and Bro Rhosyr area**





### ***Demographic baseline<sup>30</sup>***

- 6.2.3 The population of the Bro Aberffraw and Bro Rhosyr area was estimated to be 8,660 people in 2014. 16% of residents are aged under 16, 60% are aged between 16 and 64 and 23.4% are aged over 65 (broadly in line with Anglesey as a whole).
- 6.2.4 The population grew by approximately 5% or 441 between 2001 and 2011, according to Census data.<sup>31</sup>
- 6.2.5 There are approximately 4,080 homes in the area of which 3,690 are permanently occupied. 400 or 10% of homes have no usual resident, the same proportion as Anglesey as a whole but higher than the Welsh average (6%).
- 6.2.6 70% of homes in the area are owner-occupied, 12% are social rented and 15% are privately rented.
- 6.2.7 25% of residents hold a Level 4 or higher qualification, compared to 26% in Anglesey and 25% in Wales. 24% hold no formal qualifications, a lower proportion than Anglesey (24%) and Wales (26%).
- 6.2.8 A relatively high proportion of residents aged three and over are proficient in Welsh. 56% of residents can speak, read and write Welsh compared to 46% in Anglesey as a whole and 15% in Wales as a whole. 24% of residents have no skills in Welsh, compared to 30% in Anglesey as a whole and 73% in Wales as a whole. The proportion of residents aged three and over who can speak Welsh declined by 3% between 2001 and 2011.
- 6.2.9 32% of residents work in lower-skilled sales, process and elementary occupations compared to 28% in Anglesey as a whole and 29% in Wales as a whole. 28% of residents work in higher-skilled management, technical and professional occupations compared to 33% in Anglesey as a whole and 35% in Wales as a whole.
- 6.2.10 1.7% of residents aged between 16 and 64 claimed Jobseekers Allowance in May 2016, a lower proportion than Anglesey as a whole (3%) and Wales (2.2%). 67% of the population aged 16 and 74 in 2011 were economically active, with 61% in employment and 3% economically active but unemployed. This is lower than in Anglesey as a whole (5%) and Wales as a whole (4%).<sup>32</sup>
- 6.2.11 This overview of the area demographics shows that the Bro Aberffraw and Bro Rhosyr area has a relatively small population with an age structure broadly in line with Anglesey as a whole. Unemployment is low, although residents are

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<sup>30</sup> All data apart from housing data, employment data and population growth are taken from the Gwynedd and Anglesey Well-Being Assessment data tables (RD4)

<sup>31</sup> Census 2001 and 2011, using a best-fit of 2011 output areas to current wards where necessary; this data is used as the most reliable time series due to recent ward boundary changes (RD5).

<sup>32</sup> Census 2011, using a best-fit to current wards where necessary (RD5).

slightly more likely to work in relatively lower-skilled jobs. The Welsh language is also relatively strong in this area, although the proportion of residents aged 3 and over who can speak Welsh declined from 70% to 67% between 2001 and 2011. This suggests that many issues identified in the 2017 Anglesey Well-being Assessment (RD1) as relevant to Anglesey as a whole are relevant to this area, such as protecting and promoting the Welsh language.

## 6.3 Local impacts and mitigation

### *Population and socio-economics*

- 6.3.1 This section looks at effects assessed in the socio-economic chapter of the ES. This includes the expected local distribution of project-wide effects from the construction workforce. This section also includes information drawn from the WLIA (Application Document Reference 8.21), the HIA (Application Document Reference 8.19), and the EqlA (Application Document Reference 8.22).
- 6.3.2 The EIA has used a 'gravity model' to provide an indication of the likely distribution of workers across the island and mainland during the peak construction phase of the Wylfa Newydd Project. This is based on information about the workforce, housing market, and travel distances. The information from the gravity model has been used in this report where possible to indicate the potential local distribution of project-wide effects relating to the workforce.

### **Project-wide socio-economic effects during construction**

#### **Construction workforce**

- 6.3.3 The Wylfa Newydd Project will require a substantial construction workforce. The construction workforce is expected to be up to 8,500 workers at peak construction, although impacts from up to 9,000 have been assessed. This will represent a substantial increase and will have some population impacts. Potential impacts could relate to demand for accommodation or community facilities, as well as effects on the economy and traffic.
- 6.3.4 The vast majority of these workers will be employed at the WNDA, with smaller numbers for the Associated Developments, as follows:
- A5025 Off-line Highway Improvements, up to 211 workers;
  - Park and Ride, up to 70 workers;
  - Logistics Centre, up to 50 workers; and
  - Off-Site Power Station Facilities, up to 85 workers.
- 6.3.5 Full information on the construction workforce requirements for the Wylfa Newydd Project is provided in the ES, volume C chapter 1 (Application Document Reference 6.3.1).
- 6.3.6 Of the peak workforce of up to 9,000, at least 2,000 are expected to be home-based and already resident within the DCCZ, which is based on a 90-minute



commuting zone from the WNDA. Of these approximately 1,260 are expected to come from Anglesey. These estimates are based on a review of the skills available in the area and of travel expectations. These workers are expected to be permanently resident and do not represent temporary new residents.

- 6.3.7 The Jobs and Skills Strategy (Application Document Reference 8.4) is designed to meet the labour needs of the Wylfa Newydd Project and deliver jobs and economic opportunities locally while avoiding negative labour impacts in the local economy. It will seek to maximise the recruitment of locally-based workers and will seek to increase the number of home-based workers above 2,000 in order to minimise the effects caused by the arrival of construction workers. This will also seek to maximise the economic benefits for local residents that will result from the jobs created as a result of the Wylfa Newydd Project, in partnership with local stakeholders.
- 6.3.8 Measures to maximise local employment include developing a Skills Fund to support a range of education, training and employment initiatives relating to both the construction and operational phases of the Wylfa Newydd Project as well as a WNESS in partnership with Welsh Government, the Department for Work and Pensions and other stakeholders. Its role will be to place people into sustainable employment created by the Wylfa Newydd Project. The WNESS will work with contractors and stakeholders to maximise opportunities for local residents, unemployed people, young people and groups that traditionally are under-represented in the construction workforce. It will provide a pathway for jobseekers into the project, in some cases via initial education or apprenticeship routes to prepare young people for work on the project. For older or unemployed workers, outreach or work readiness training will be facilitated. It will also provide a structure for 'backfilling' – allowing local employers to fill vacancies that happen when employees take up jobs on the Wylfa Newydd Project.
- 6.3.9 Of the peak workforce of up to 9,000, up to 4,000 will be accommodated at the Site Campus. Horizon has concluded that on balance, the environmental and social effects of the construction workforce on the existing community is best managed through locating a significant proportion of them in a single, temporary purpose-built campus as close as possible to the Power Station Site. This will be a temporary accommodation facility within the WNDA which will include independent living spaces for workers and a range of campus-style amenities and facilities. This is intended as embedded mitigation to significantly reduce the impact of the construction workforce for the Wylfa Newydd Project on local communities.
- 6.3.10 Of the peak workforce of up to 9,000, 3,000 are expected to take up existing accommodation temporarily within the seven assessment areas covered by this report. This is based on an assessment of the availability of bed spaces across several tenures (including private rented, owner-occupied, hotels, caravans and spare room accommodation) in the study areas. For Anglesey and the Menai Mainland area as a whole, approximately 450 workers are estimated as taking up hotel accommodation, 650 workers as taking up

caravan accommodation, 600 workers taking up owned accommodation (i.e. by purchasing a property) and 900 taking up private rented accommodation. Further information on the breakdown of accommodation across tenures and the expected distribution of workers is found in the ES, volume C chapter 1 (Application Document Reference 6.3.1).

- 6.3.11 It is anticipated that workers would take up accommodation throughout Anglesey based on availability. As a result, it is anticipated that larger settlements would host a significant proportion of these workers as a result of having more potential accommodation spaces. As the Bro Aberffraw and Bro Rhosyr area has a relatively small population and housing stock with few large settlements, it may host a relatively small number of workers.
- 6.3.12 In addition to the provision of Temporary Workers' Accommodation for up to 4,000 workers in the WNDA, Horizon has set out two central means of mitigating the impact of non-home-based workers taking up accommodation in Anglesey.
- The WAMS will seek to match accommodation demand to supply in order to effectively distribute workers more widely and prevent excessive localised impacts. Horizon and IACC have agreed to establish a CWAMP as part of the WAMS to help workers to find suitable and appropriate accommodation. The WAMS will monitor data and work with stakeholders to ensure workers are able to find this accommodation.
  - Horizon has also proposed a flexible Housing Fund to provide support for housing in the local area. This would be used to mitigate a range of effects and to boost the supply of housing, including increasing availability of existing stock and funding council officers' time relating to additional housing matters (such as enforcement or dealing with residents' housing needs).
- 6.3.13 Horizon will use a 'plan, monitor and manage' approach in order to minimise adverse community impacts and flexibly respond to localised impacts if and when they occur. Full details of Horizon's approach to accommodation and mitigation are set out in the Workforce Accommodation Strategy (Application Document Reference 8.4).

### ***Business and tourism***

- 6.3.14 Tourism is a vital part of the economy of Anglesey and the Wylfa Newydd Project may have some effects on the sector. Visitor behaviour may change in response to the construction of the Power Station. However, a survey of visitors to Anglesey in 2015 found almost 90% of respondents indicated that the construction of the new Power Station would have no impact on their intention to return to Anglesey. Visitors noted concerns related to traffic and general construction impacts. Based on a detailed review of these responses and on Wylfa Newydd Project mitigation which would address potential tourist

concerns, the ES (Application Document Reference 6.4.3) states that the actual number of tourism visits that may be lost during construction is likely to be small. This could nevertheless represent a change in revenue for some businesses. However, this could be countered by spending from workers (including some spending on accommodation) throughout the island and any impact would be limited and would vary by the type and location of the business. Furthermore, businesses affected would be more likely to be in the north of Anglesey rather than in the Bro Aberffraw and Bro Rhosyr area.

- 6.3.15 Local businesses would also potentially experience beneficial supply chain effects. While it is not possible at present to estimate how much of the Wylfa Newydd Project value would be spent locally, according to the ES chapter C1 (Application Document Reference 6.3.1) if between 2% and 4% was spent locally (as at other nuclear project examples such as Sizewell B), this would be equal to an investment of between £200 million and £400 million within north Wales over the construction period, providing a range of opportunities for local businesses. Horizon's Supply Chain Charter and Action Plan set out its approach to procurement and would seek to support businesses to engage in the Wylfa Newydd Project and benefit directly.

***Community safety, health and well-being***

- 6.3.16 The main concentration of workers will be at the Site Campus, at the WNDA, not in the Bro Aberffraw and Bro Rhosyr area. Horizon will put in place a series of measures to manage worker behaviour, including a Workforce Management Strategy (Application Document Reference 8.5), Code of Conduct, background checks on staff, and community liaison with the police.
- 6.3.17 The potential health effects of the Wylfa Newydd Project have been assessed in the HIA (Application Document Reference 8.19). It also assesses the cumulative health effects from site-specific and combined impacts across all sites for local population groups around the WNDA and the Associated Development sites.
- 6.3.18 The HIA considers the project-wide health and well-being effects relating to:
- road safety, air quality and noise around the road network including the mitigating effects of highway improvements;
  - tourism and housing displacement pressure, including mitigation measures such as the WAMS;
  - demand for and journey times to access healthcare services, including mitigation such as the on-site campus health facilities;
  - safety, lifestyle and behaviour;
  - identity and culture;
  - employment, income and economic development;
  - education and training;
  - public understanding of risk; and

- low carbon energy generation.

- 6.3.19 Minor beneficial effects on health and well-being are assessed, for the positive effect on employment, and the availability of reliable electricity supplies. Moderate beneficial effects are assessed for education and training.
- 6.3.20 The HIA summarises effects for four population groups based on their sensitivity to potential changes attributable to the Wylfa Newydd Project (beneficial or adverse): children and young people; older people; people with existing poor health (physical and mental health); and people living in deprivation, including those on low incomes. For these groups, any effects are only assessed as likely near areas of development; no developments will occur within the Bro Aberffraw and Bro Rhosyr.
- 6.3.21 For other health and well-being issues, the effects are assessed as being negligible. The HIA also details a number of mitigation strategies and best practice to address health impacts. Horizon will establish and chair an external stakeholder group (the Health and Well-being Monitoring Group) that will include members of the health and emergency services to monitor the implementation of the HIA mitigation strategy and provide advice on its delivery.

### ***Community facilities***

- 6.3.22 The Site Campus will provide a range of facilities that will cater to the needs of workers who live there. Some of these will also be available to workers living off-site, thereby reducing demand from them for existing services. This includes health facilities which will represent the easiest way of registering for primary care services for the visiting workforce. UK based workers who are registered for primary and dental care services at their home location may not wish to register with a local provider (noting that there are existing NHS provisions for providing services for any person who cannot attend their own registered practice through temporary registration arrangements). As a result of this on-site provision the HIA (Application Document Reference 8.19) has found the changes in demand for local health services would not have a significant impact for local resident groups.
- 6.3.23 Where workers are non-home-based and they bring family and dependants to the area (who will not be living in the Site Campus), these family and dependants will be expected to register with local NHS services such as GP and dental provisions. This is assessed as not likely to have a significant adverse demand on these local health services. Further details are available in the HIA (Application Document Reference 8.19).
- 6.3.24 Specific arrangements are not proposed for dental care. It is expected that the majority of UK based workers will remain registered with their dental services provider. It is expected that NHS services would be used for emergency dental services.
- 6.3.25 In terms of school places, IACC will monitor school enrolment. Should localised issues arise where applications are made for places in schools at

capacity and IACC can demonstrate the nature of the resulting effect (e.g. temporary short-fall in funding, additional costs for appeals processes etc.) Horizon will provide funding to address this via the proposed Community Impact Fund.

### ***Equalities***

6.3.26 The EqlA (Application Document Reference 8.22) assesses potential equalities effects the Wylfa Newydd Project could have. It assesses potential effects on people with 'protected characteristics' as defined by the Equality Act 2010 as:

- age;
- race;
- religion or belief;
- marriage and civil partnership;
- pregnancy and maternity;
- sex;
- sexual orientation;
- disability; and
- gender reassignment.

It also assesses potential effects on socio-economically deprived communities. It also considers the extent to which the Wylfa Newydd Project would contribute towards the goals of 'a more equal Wales', and 'a Wales of cohesive communities' set out in the Future Generations and Well-being (Wales) Act 2015.

6.3.27 The EqlA has identified five categories of effects as potentially occurring for some of these groups (which reflect the main Wylfa Newydd Project impacts):

- noise;
- employment and skills;
- traffic, transport and access;
- community infrastructure and public services; and
- community cohesion.

6.3.28 Of these, noise and transport effects are not assessed as occurring in the Bro Aberffraw and Bro Rhosyr area. A population rise as a result of construction workers temporarily moving to the local area may affect communities if they impact on health services, which would affect groups most reliant on these; however, as noted above mitigation measures are designed to prevent this. Community cohesion may be affected if the Wylfa Newydd Project gave rise

to a heightened risk or perception of crime, which would potentially affect older people, women and BAME residents in particular. Changes in social mix could affect social networks in an area where many older people would feel part of a small, close-knit community, according to the Wylfa Newydd Project HIA Report Community Survey (application Reference Number 8.19); however, it also indicates that younger people may view the impact on social networks of new residents positively. Furthermore, if prices rise locally for private rented sector housing this may adversely impact existing residents who experience housing deprivation. However, many of the measures which are designed to mitigate the general socio-economic effects of the construction workforce including the Site Campus, the Community Impact Fund and the Housing Fund would also mitigate these equality issues.

- 6.3.29 The Project would also have beneficial equalities effects through providing short- and long-term employment opportunities and a legacy of a more skilled workforce. This would be beneficial in particular for young people and deprived communities.

### ***Welsh language***

- 6.3.30 In terms of the Welsh language, the Bro Aberffraw and Bro Rhosyr area is an area with a relatively high proportion of Welsh speakers. The WLIA (Application Document Reference 8.21) states that the arrival of workers to Anglesey during the construction period will lead to a change in the relative proportion of Welsh speakers, since most of these workers will be non-Welsh speakers. The assessment indicates that this would be an overall moderate adverse effect. However, the temporary population increase in the Bro Aberffraw and Bro Rhosyr area of 1% as described above is low by comparison to other areas and so this area is likely to be less affected.
- 6.3.31 The assessment also considers the impact of the Wylfa Newydd Project on other topics relevant to the Welsh Language including quality of life, economic factors, infrastructure supply and education and social and cultural aspects. Some project-wide effects would impact these factors. The assessment finds that without additional mitigation there would be:
- a potential moderate adverse effect on the language due to an increase in the proportion of non-Welsh speakers in the KSA;
  - a moderate adverse effect on the language due to potential increases in the cost of housing;
  - a moderate adverse effect on the language as a result of increased demand for schools from non-Welsh speakers; and
  - a potential moderate adverse effect on Welsh traditions and culture as a result of the in-migration of non-Welsh-speaking workers.
- 6.3.32 As these relate to the presence of new residents, it can be expected that the Bro Aberffraw and Bro Rhosyr area will be less likely to experience these impacts than some other areas.

- 6.3.33 Several mitigation measures will be provided by Horizon which are set out in the WLCMES. These include providing language awareness raising to Wylfa Newydd Project staff and appointing a WLCC to focus on the development and implementation of Welsh language and culture mitigation and enhancement measures during construction and operation of Wylfa Newydd.
- 6.3.34 However, the assessment also notes that mitigation measures for the Wylfa Newydd Project such as the WAMS, Housing Fund and accommodating workers at the Site Campus to mitigate the impact of the arrival of workers will also serve to mitigate the impacts on the Welsh language.
- 6.3.35 In addition, the creation of job opportunities during construction and operation provides opportunities to aid the Welsh language through reducing the out-migration of Welsh-speaking young people from local communities. The assessment notes that there has been a continuous net out-flow and population decrease of young people from Anglesey in recent years, with a net out-flow of 220 among 15 to 29 year olds between 2014 and 2015. It notes that this may be partly due to a lack of job opportunities, with a reduction of 889 (5.4%) in the number of FTEs in employment between 2009 and 2014. The Wylfa Newydd Project will directly provide a large number of skilled jobs for local young people in Anglesey during construction and operation of the Power Station. It will also provide indirect benefits to local businesses through additional spending from workers, contracts for local supply chain businesses and revenue to tourism accommodation businesses for bed spaces occupied by workers. This will provide further job opportunities for local people in the Bro Aberffraw and Bro Rhosyr area and result in a moderate beneficial effect in terms of the Welsh language.
- 6.3.36 Several strategies to maximise these opportunities for the Welsh language are also provided in the WLCMES, such as advertising jobs through recruitment channels targeting Welsh speakers, distributing information on job opportunities at Wylfa Newydd to young people including through bilingual channels, and through apprenticeship opportunities. In view of this, on balance the effect of population change on the Welsh language is assessed as negligible adverse during construction and minor beneficial during operation.

### **Project-wide effects during operation and decommissioning**

- 6.3.37 During operation, the workforce for the Wylfa Newydd Power Station is expected to consist of around 850 staff. However, no spatial breakdown of where these workers will live within Anglesey is available and cannot be assessed at the level of the Bro Aberffraw and Bro Rhosyr area. The Project is expected to produce a number of local economic benefits through providing new jobs.
- 6.3.38 Potential socio-economic effects during decommissioning of the Main Power Station are described in the ES, volume C chapter 1 (Application Document Reference 6.3.1). While decommissioning would lead to the loss of jobs and

other effects, due to uncertainties over such a long time scale these effects cannot be assessed at the Bro Aberffraw and Bro Rhosyr area level.

### **Cumulative population and socio-economic effects**

- 6.3.39 Cumulative socio-economic effects as a result of both the Wylfa Newydd Project and other projects are assessed in the ES, volume I chapter 5 (Application Document Reference 6.9.5).
- 6.3.40 There will be cumulative economic benefits as a result of the combination of project-wide effects and the effects of other projects within Anglesey and elsewhere. Increased demand for the local construction sector and the local labour market from the Wylfa Newydd Project and other projects will create opportunities for local workers and businesses. Investment in the local economy would increase as a result of the cumulative effects of increased spending and investments across all projects.

### **Transport**

- 6.3.41 The Wylfa Newydd Project will result in a number of impacts on transport and traffic. This is primarily due to trips generated by workers and freight transport during the construction and operational phases. A full assessment of these impacts is given in the Transport Assessment (Application Document Reference 6.3.14).
- 6.3.42 An assessment of the traffic and transport impact of the Wylfa Newydd Project is also found in the ES, volume C chapter 2 (Application Document Reference 6.3.2). Section 2.5 of this document details the forecasted traffic level changes on sections of road throughout Anglesey and the Menai Mainland for the year the A5025 Off-line Highway Improvements are completed, the year of peak construction, and the year of peak operation of the Power Station.
- 6.3.43 The section of road network within the Bro Aberffraw and Bro Rhosyr area most likely to be affected is the A55 which will be the main route for construction-related traffic and for construction workers travelling to the Wylfa Newydd Development area or the Park and Ride facility at Dalar Hir. At peak construction, traffic flows on the A55 between Britannia Bridge and Junction 6 are forecast to increase by 4% over the baseline scenario, and by 6% between Junction 6 and Junction 3 (where traffic for the WNDA will alight for the A5025). However, because of the high capacity of the A55 this is not assessed as a significant adverse effect.
- 6.3.44 Users of the A5114 between Junction 6 of the A55 and Llangefni are assessed as likely to experience a moderate adverse effect in terms of increased journey times during the evening peak in the opening year of the A5025 Off-line Highway Improvements, which is assessed as a medium-term effect. Other parts of the local transport network are not assessed as likely to experience significant direct effects.
- 6.3.45 A Construction Traffic Management Strategy is included within the Wylfa Newydd CoCP (Application Document Reference 8.6) setting out measures to



mitigate the impact of traffic; this will include measures and monitoring to ensure construction traffic uses approved routes while travelling. A Traffic Incident Management Strategy to manage incidents on the public highway network would also be provided within the Wylfa Newydd CoCP (Application Document Reference 8.6).

### ***Noise and vibration***

6.3.46 No direct significant impacts are expected in this area.

### ***Air quality***

6.3.47 Project-wide air quality effects as a result of traffic are assessed in the ES, volume C chapter 4 (Application Document Reference 6.3.4) which indicates that no significant adverse impacts are expected within the Bro Aberffraw and Bro Rhosyr area.

### ***Landscape and visual***

6.3.48 No direct impacts are expected in this area.

### ***Public access and recreation***

6.3.49 No direct impacts are expected in this area.

## **6.4 Summary**

- 6.4.1 The Bro Aberffraw and Bro Rhosyr area is unlikely to experience a significant number of impacts, with no development occurring within the area. Those impacts that will occur mainly relate to transport and to the socio-economic effects of workers seeking accommodation in the area.
- 6.4.2 The WAMS will seek to match accommodation demand to supply, and monitor the effects.
- 6.4.3 Beneficial effects are likely in the local economy and labour market, while potential effects on the Welsh language are identified from the additional workforce.
- 6.4.4 Users of the A5114 may experience additional traffic during the construction period.
- 6.4.5 Following mitigation, there will be some significant residual effects (including but not limited to cumulative and in-combination effects) across all topics. Table 6-2 below summarises residual effects in the Bro Aberffraw and Bro Rhosyr area.

**Table 6-2 Residual effects (after mitigation), Bro Aberffraw and Bro Rhosyr area**

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
<b>Socio-economics</b>				
Labour market on Anglesey.	Increase in employment as a result of construction and operation.	Construction/operation	-	Major beneficial
PRS accommodation in the KSA.	Increase in demand for bed spaces.	Construction	Workforce Accommodation Strategy measures.	Minor adverse
Local economy in north Wales.	Investment in local economy.	Construction and operation	-	Moderate beneficial
Local economy on Anglesey.	Investment in local economy.	Construction and operation	-	Moderate beneficial
Welsh language - moderate adverse as result of population change.	Drop in relative proportion of Welsh speakers due to in-migration of construction workers.	Construction	Measures in WLCMES and in Workforce Accommodation Strategy.	Potential moderate adverse (to be monitored)
Welsh language - potential effects due to housing demand.	Increased cost of housing for local Welsh speakers.	Construction	Measures in WLCMES and in Workforce Accommodation Strategy including Housing Fund.	Potential moderate adverse (to be monitored)

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
Welsh language - potential effects due to school demand.	Potential increase in the number of non-Welsh speaking children in local schools, altering balance of Welsh speakers and non-speakers in schools.	Construction	Measures in WLCMES.	Potential moderate adverse (to be monitored)
Welsh - potential effects on traditions & culture.	In-migration of non-Welsh speakers from different background/ culture.	Construction	Measures in WLCMES and in Workforce Accommodation Strategy including Housing Fund.	Potential moderate adverse (to be monitored)
Welsh - beneficial effects from economic benefits, investment, employment.	Economic benefits of Project creating jobs for local people and reducing out-migration of Welsh-speaking young people.	Construction and operation	Enhancement measures in WLCMES.	Moderate beneficial
Cumulative effect - economic investment.	Local economic investment and spending as a result of	Construction and operation	-	Moderate beneficial

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
	Wylfa Newydd Project and other projects.			
<b>Transport</b>				
Motorised and public transport users.	Motorised and public transport users would experience increases in journey times northbound along section of road from A55 J6 to A5114 Llangefni during the afternoon/evening peak period of the opening year of the A5025 Off-line Highway Improvements 'with bypasses' scenario.	Construction (opening year of the A5025 Off-line Highway Improvements)	None identified.	Moderate adverse

## 7 Aethwy and Seiriol

### 7.1 Introduction

- 7.1.1 The Aethwy and Seiriol area consists of the Aethwy and Seiriol wards in the east of Anglesey. It includes several towns and villages including Llanfairpwllgwyngyll, Menai Bridge, Llandegfan and Beaumaris.
- 7.1.2 This chapter summarises the main effects of the Wylfa Newydd Project in this area, and should be read alongside chapter 1 which sets the context.
- 7.1.3 This CIR has been developed in response to feedback, including from IACC. It has also been written with regard to key local concerns identified through the statutory consultation process. These are summarised in section 1.4 of this report.
- 7.1.4 This report looks at how these ‘project-wide’ effects may be felt locally by the community, including looking at the expected distribution of workers in different areas. It also looks at the more specific local effects of individual parts of the Wylfa Newydd Project, whether it be the main development area, or Associated Development elsewhere, such as highways. Where relevant the cumulative effect of these different parts of the development together is also considered.
- 7.1.5 As part of the application, various mitigation measures are planned to lessen or avoid many of the potential impacts. Where relevant to local effects these are described in this CIR.
- 7.1.6 This chapter includes a context section describing the area and what development will affect it, and then summarises the effects under topic headings. Many of the local effects, including those arising from the construction workforce, are included in the section on socio-economics. Other topic sections are transport, noise/vibration, air quality, landscape/visual, and access/recreation.
- 7.1.7 This report is based on the assessments that make up the DCO application, including the ES, WLIA (Application Document Reference 8.21), HIA (Application Document Reference 8.19) and EqlA (Application Document Reference 8.22). Those other documents cover the full range of potential impacts, of which this document summarises only the ones which are significant for local communities. If after reading this chapter you want further information, see appendix 8-2 for details of other relevant documents.

### 7.2 Context

#### *Project development in this area*

- 7.2.1 While there will be no development associated with the Wylfa Newydd Project within this area, there may be some impacts on this area as summarised in table 7-1.

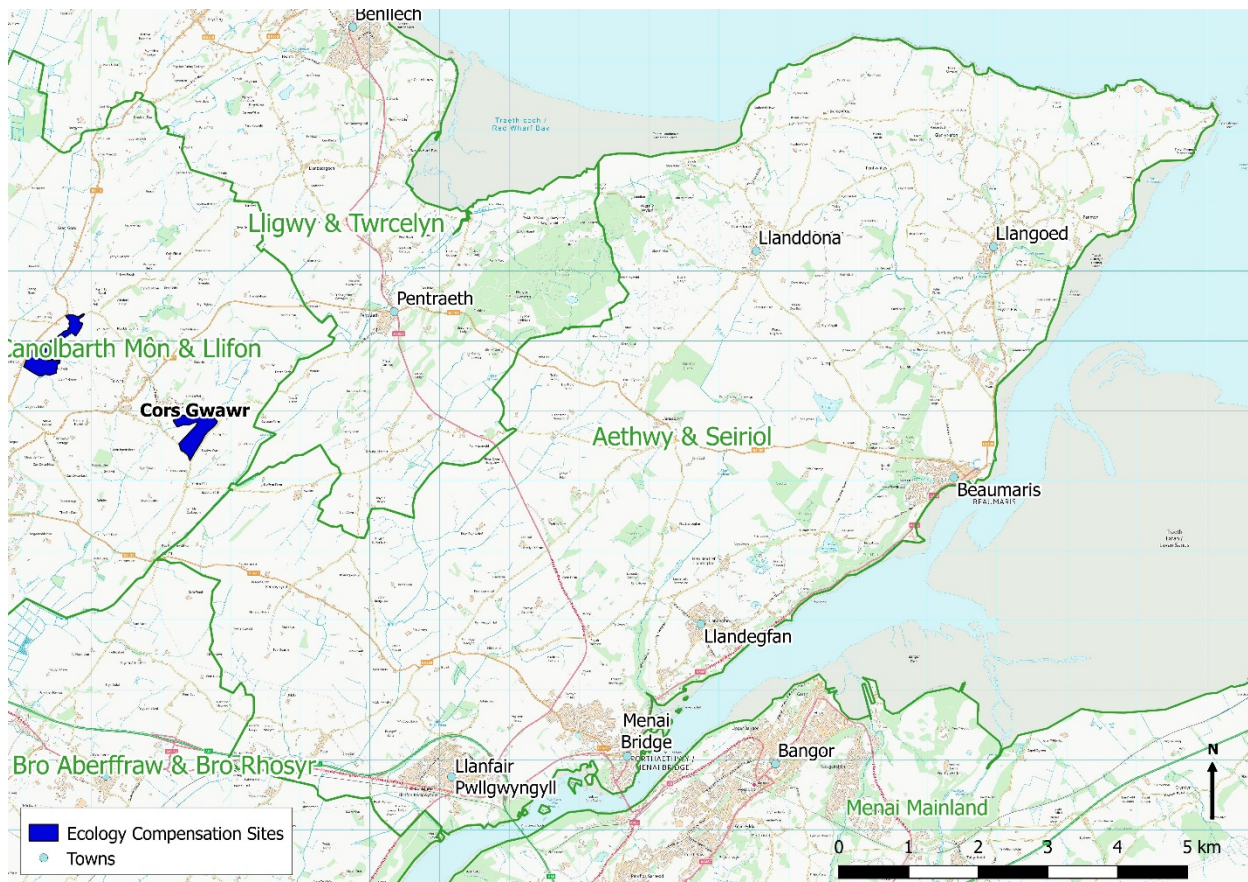
**Table 7-1 Aethwy and Seiriol project components and impacts**

Project components	Impact topics
N/A	Population and socio-economics; transport

### **Local area**

- 7.2.2 The Aethwy and Seiriol area consists of several towns and villages and rural and coastal areas. There are several settlements in particular along the Menai Strait from Beaumaris to Llanfairpwllgwyngyll. As well as rural and urban land uses, there are also some important tourism, leisure and heritage sites such as Beaumaris Castle and a number of scenic coastal and natural sites of interest. The area also has important transport infrastructure including the A55 and two bridges on the Menai Strait.

**Figure 7-1 Aethwy and Seiriol area**





### ***Demographic baseline<sup>33</sup>***

- 7.2.3 The population of the Aethwy and Seiriol area was estimated to be 12,800 in 2014. The area has a relatively elderly population structure; 15% of the population are aged under 16 (compared to 17% in Anglesey and 18% in Wales), 58% are aged between 16 and 64 and 27% are aged over 65. By contrast, 24% of residents in Anglesey and 20% in Wales area are aged over 65.
- 7.2.4 The population rose by 1.6% or 210 between 2001 and 2011, according to Census data.<sup>34</sup>
- 7.2.5 There are approximately 6,360 homes in the area of which approximately 5,770 are permanently occupied. 586 or 9% of homes have no usual residents. 73% of homes are owner-occupied, 10% are social rented and 15% are private rented.<sup>35</sup>
- 7.2.6 The population of the area is relatively well-educated. 38% of residents hold a Level 4 or higher qualification, compared to 26% in Anglesey and 25% in Wales. 18% hold no formal qualifications, a lower proportion than Anglesey (24%) and Wales (26%).
- 7.2.7 The proportion of residents aged three and over who are proficient in Welsh is similar to the rest of Anglesey. 45% of residents can speak, read and write Welsh compared to 46% in Anglesey and 15% in Wales. 30% of residents have no skills in Welsh, the same proportion as Anglesey and lower than the Welsh average (73%). The proportion of residents who can speak Welsh declined by 3 percentage points between 2001 and 2011.
- 7.2.8 26% of residents work in lower-skilled sales, process and elementary occupations compared to 28% in Anglesey and 29% in Wales as a whole. 34% of residents work in higher-skilled management, technical and professional occupations compared to 33% in Anglesey and 35% in Wales.
- 7.2.9 1.7% of residents aged between 16 and 64 claimed Jobseekers Allowance in May 2016, a lower proportion than Anglesey as a whole (3%) and Wales (2.2%). 67% of the population aged 16 and 74 in 2011 were economically active, with 61% in employment and 3% economically active but unemployed. By comparison, 65% in Anglesey as a whole and 66% in Wales were classed as economically active.
- 7.2.10 This overview of the demographic characteristics of the area indicates that the Aethwy and Seiriol area has a relatively high-skilled population with relatively high levels of degree-level qualifications as well as low unemployment. It also

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<sup>33</sup> All data apart from housing data, employment data and population growth are taken from the Gwynedd and Anglesey Well-Being Assessment data tables (RD4).

<sup>34</sup> Census 2001 and 2011, using a best-fit of 2011 output areas to current wards where necessary; this data is used as the most reliable time series due to recent ward boundary changes (RD5).

<sup>35</sup> Housing data is from Census 2011, using a best-fit to current wards where necessary (RD5).

has a relatively high proportion of elderly residents. The Welsh language is relatively strong in this area (as it is in Anglesey as a whole), although as with Anglesey as a whole the proportion of residents who can speak Welsh declined by three percentage points between 2001 and 2011. Some of these key features reflect key issues raised by policy and assessment; for example, an aging population and protecting and enhancing the Welsh language are identified by the 2017 Anglesey Well-being Assessment (RD1) as key well-being issues in Anglesey going forward.

## **7.3 Local impacts and mitigation**

### ***Population and socio-economics***

- 7.3.1 This section looks at effects assessed in the socio-economic chapter of the ES. This includes the expected local distribution of project-wide effects from the construction workforce. This section also includes information drawn from the WLIA (Application Document Reference 8.21), the HIA (Application Document Reference 8.19), and the EqlA (Application Document Reference 8.22).
- 7.3.2 The EIA has used a gravity model to provide an indication of the likely distribution of workers across the island and mainland during the peak construction phase of the Wylfa Newydd Project. This is based on information about the workforce, housing market, and travel distances. The information from the gravity model has been used where possible in this report to indicate the potential local distribution of project-wide effects relating to the workforce.

### **Project-wide socio-economic effects during construction**

#### ***Construction workforce***

- 7.3.3 The Wylfa Newydd Project will require a substantial construction workforce. The construction workforce is expected to be up to 8,500 workers at peak construction, although impacts from up to 9,000 have been assessed. This will represent a substantial increase and will have some population impacts. Potential impacts could relate to demand for accommodation or community facilities, as well as effects on the economy and traffic.
- 7.3.4 The vast majority of these workers will be employed at the WNDA, with smaller numbers for the Associated Developments, as follows:
- A5025 Off-line Highway Improvements, up to 211 workers;
  - Park and Ride, up to 70 workers;
  - Logistics Centre, up to 50 workers; and
  - Off-Site Power Station Facilities, up to 85 workers.
- 7.3.5 Full information on the construction workforce requirements for the Wylfa Newydd Project is provided in the ES, volume C chapter 1 (Application Document Reference 6.3.1).



- 7.3.6 Of the peak workforce of up to 9,000, at least 2,000 are expected to be home-based and thus already resident within the DCCZ, which is based on a 90-minute commuting zone from the WNDA. Of these approximately 1,260 are expected to come from Anglesey. These estimates are based on a review of the skills available in the area and of travel expectations. These workers are expected to be permanently resident and do not represent temporary new residents.
- 7.3.7 The Jobs and Skills Strategy (Application Document Reference 8.4) is designed to meet the labour needs of the Wylfa Newydd Project and deliver jobs and economic opportunities locally while avoiding negative labour impacts in the local economy. It will seek to maximise the recruitment of locally-based workers and will seek to increase the number of home-based workers above 2,000 in order to minimise the effects caused by the arrival of construction workers. This will also seek to maximise the economic benefits for local residents that will result from the jobs created as a result of the Wylfa Newydd Project, in partnership with local stakeholders.
- 7.3.8 Measures to maximise local employment include developing a Skills Fund to support a range of education, training and employment initiatives relating to both the construction and operational phases of the Wylfa Newydd Project as well as a WNESS in partnership with Welsh Government, the Department for Work and Pensions and other stakeholders. Its role will be to place people into sustainable employment created by the Wylfa Newydd Project. The WNESS will work with contractors and stakeholders to maximise opportunities for local residents, unemployed people, young people and groups that traditionally are under-represented in the construction workforce. It will provide a pathway for jobseekers into the project, in some cases via initial education or apprenticeship routes to prepare young people for work on the project. For older or unemployed workers outreach or work readiness training will be facilitated. It will also provide a structure for 'backfilling' – allowing local employers to fill vacancies that happen when employees take up jobs on the Wylfa Newydd Project.
- 7.3.9 Of the peak workforce of up to 9,000, 3,000 are expected to take up existing accommodation temporarily within the seven assessment areas covered by this report. This is based on an assessment of the availability of bed spaces across several tenures (including private rented, owner-occupied, hotels, caravans and spare room accommodation) in the study areas. For Anglesey and the Menai Mainland area as a whole, approximately 450 workers are estimated as taking up hotel accommodation, 650 workers as taking up caravan accommodation, 600 workers taking up owned accommodation (i.e. by purchasing a property) and 900 taking up private rented accommodation. Further information on the breakdown of accommodation across tenures and the expected distribution of workers is found in the ES, volume C chapter 1 (Application Document Reference 6.3.1).
- 7.3.10 It is anticipated that workers would take up accommodation in the Aethwy and Seiriol area based on availability. It is anticipated that larger settlements such

as Beaumaris, Menai Bridge and Llanfairpwllgwyngyll would host a proportion of these workers as a result of having more potential accommodation spaces. For example, approximately 34 workers are estimated by the gravity model to take up accommodation in Beaumaris and approximately 96 workers in Menai Bridge and Llanfairpwllgwyngyll.

7.3.11 In addition to the provision of Temporary Workers' Accommodation for up to 4,000 workers in the WNDA, Horizon has set out two central means of mitigating the impact of non-home-based workers taking up accommodation in the KSA.

- The WAMS will seek to match accommodation demand to supply in order to effectively distribute workers more widely and prevent excessive localised impacts. All workers will be required to register with the WAMS. Horizon and IACC have agreed to establish a CWAMP as part of the WAMS to help workers to find suitable and appropriate accommodation. The WAMS will monitor data and work with stakeholders to ensure workers are able to find this accommodation.
- Horizon has also proposed a flexible Housing Fund to provide support for housing in the local area. This would be used to mitigate a range of effects and to boost the supply of housing, including increasing availability of existing stock and funding council officers' time relating to additional housing matters (such as enforcement or dealing with residents' housing needs).

7.3.12 Horizon will use a 'plan, monitor and manage' approach in order to minimise adverse community impacts and flexibly respond to localised impacts if and when they occur. Full details of Horizon's approach to accommodation and mitigation are set out in the Workforce Accommodation Strategy (Application Document Reference 8.4).

7.3.13 Of the peak workforce of up to 9,000, up to 4,000 will be accommodated at the Site Campus. This will be a temporary accommodation facility within the WNDA which will include independent living spaces for workers and a range of campus-style amenities and facilities. This is intended as embedded mitigation to significantly reduce the impact of the construction workforce for the Wylfa Newydd Project on local communities.

### ***Business and tourism***

7.3.14 Tourism is a vital part of the economy of Anglesey and the Wylfa Newydd Project may have some effects on the sector. Visitor behaviour may change in response to the construction of the Power Station. However, a survey of visitors to Anglesey in 2015 found almost 90% of respondents indicated that the construction of the new Power Station would have no impact on their intention to return to Anglesey. Visitors noted concerns related to traffic and general construction impacts. Based on a detailed review of these responses

and on Wylfa Newydd Project mitigation which would address potential tourist concerns, the ES (Application Document Reference 6.4.3) states that the actual number of tourism visits that may be lost during construction is likely to be small. This could nevertheless represent a change in revenue for some businesses. However, this could be countered by spending from workers throughout the island and any impact would be limited and would vary by the type and location of the business.

- 7.3.15 Tourist accommodation businesses would benefit from demand for accommodation from construction workers. Across Anglesey and the Menai Mainland area it is estimated that up to 450 tourism bed spaces could be occupied by workers within hotels and bed and breakfast accommodation, and a further 650 bed spaces within caravan and camping accommodation at registered sites. This is based on Horizon's estimates of capacity. This would provide revenue to tourist accommodation providers, particularly in the winter months. However, to prevent excess demand from workers 'crowding out' tourists or affecting the quality of accommodation, measures in the Workforce Accommodation Strategy (application document reference 8.4) will seek to avoid adverse effects including through the WAMS.
- 7.3.16 Horizon has proposed a Tourism Fund (secured through planning obligations) to identify and help address any material effects on the local tourism sector in Anglesey as a result of the Wylfa Newydd DCO Project. Although the terms of reference and governance structure of this are subject to agreement, it would be administered via a Tourism Oversight Board attended by Horizon, IACC, Welsh Government and local sector representatives as appropriate.
- 7.3.17 Local businesses would also potentially experience beneficial supply chain effects. While it is not possible at present to estimate how much of the Wylfa Newydd Project value would be spent locally, according to the ES chapter C1 (Application Document Reference 6.3.1) if between 2% and 4% was spent locally (as at other nuclear project examples such as Sizewell B), this would be equal to an investment of between £200 million and £400 million within north Wales over the construction period, providing a range of opportunities for local businesses. Horizon's Supply Chain Charter and Action Plan set out its approach to procurement and would seek to support businesses to engage in the Wylfa Newydd Project and benefit directly.

### ***Community safety, health and well-being***

- 7.3.18 The main concentration of workers will be at the Site Campus, at the WNDA, not in the Aethwy and Seiriol area. Horizon will put in place a series of measures to manage worker behaviour, including a Workforce Management Strategy (Application Document Reference 8.5), Code of Conduct, background checks on staff, and community liaison with the police.
- 7.3.19 The potential health effects of the Wylfa Newydd Project have been assessed in the HIA (Application Document Reference 8.19). It also assesses the cumulative health effects from site-specific and combined impacts across all

sites for local population groups around the WNDA and the Associated Development sites.

- 7.3.20 The HIA considers the project-wide health and well-being effects relating to:
- road safety, air quality and noise around the road network including the mitigating effects of highway improvements;
  - tourism and housing displacement pressure, including mitigation measures such as the WAMS;
  - demand for and journey times to access healthcare services, including mitigation such as the on-site campus health facilities;
  - safety, lifestyle and behaviour;
  - identity and culture;
  - employment, income and economic development;
  - education and training;
  - public understanding of risk; and
  - low carbon energy generation.
- 7.3.21 Minor beneficial effects on health and well-being are assessed, for the positive effect on employment, and the availability of reliable electricity supplies. Moderate beneficial effects are assessed for education and training.
- 7.3.22 The HIA summarises effects for four population groups based on their sensitivity to potential changes attributable to the Wylfa Newydd Project (beneficial or adverse): children and young people; older people; people with existing poor health (physical and mental health); and people living in deprivation, including those on low incomes. Effects for these groups primarily relate to proximity to developments, which will not occur within the Aethwy and Seiriol area.
- 7.3.23 For other health and well-being issues, the effects are assessed as being negligible. The HIA also details a number of mitigation strategies and best practice to address health impacts (many of which are secured in other documents and summarised in this document), including monitoring of construction effects such as noise or dust, community liaison, promoting road safety, workforce management and workforce accommodation mitigation. Horizon will establish and chair an external stakeholder group (the Health and Well-being Monitoring Group) that will include members of the health and emergency services to monitor the implementation of the HIA mitigation strategy and provide advice on its delivery.

### ***Equalities***

- 7.3.24 The EqIA (Application Document Reference 8.22) assesses potential equalities effects the Wylfa Newydd Project could have. It assesses potential effects on people with 'protected characteristics' as defined by the Equality Act 2010 as:

- age;
- race;
- religion or belief;
- marriage and civil partnership;
- pregnancy and maternity;
- sex;
- sexual orientation;
- disability; and
- gender reassignment.

It also assesses potential effects on socio-economically deprived communities. It also considers the extent to which the Wylfa Newydd Project would contribute towards the goals of 'a more equal Wales', and 'a Wales of cohesive communities' set out in the Future Generations and Well-being (Wales) Act 2015.

7.3.25 The EqIA has identified five categories of effects as potentially occurring for some of these groups (which reflect the main Wylfa Newydd Project impacts):

- noise;
- employment and skills;
- traffic, transport and access;
- community infrastructure and public services; and
- community cohesion.

7.3.26 Noise, transport and access effects are not assessed as occurring in the Aethwy and Seiriol area. A population rise as a result of construction workers temporarily moving to the local area may affect communities if they impact on health services, which would affect groups most reliant on these; however, as noted above mitigation measures are designed to prevent this. Community cohesion may be affected if the Wylfa Newydd Project and a disproportionate increase in the male population of the north-west part of the Isle of Anglesey gave rise to a heightened risk or perception of crime, which would potentially affect older people, women and BAME residents in particular. Changes in social mix could affect social networks in an area where many older people would feel part of a small, close-knit community, according to the Wylfa Newydd Project HIA Report Community Survey (application document reference 8.19); however, it also indicates that younger people may view the impact on social networks of new residents positively. Furthermore, if prices rise locally for private rented sector housing this may adversely impact existing residents who experience housing deprivation. However, many of the measures which are designed to mitigate the general socio-economic effects

of the construction workforce including the Site Campus and the Housing Fund would also mitigate these equality issues.

- 7.3.27 The Wylfa Newydd Project would also have beneficial equalities effects through providing short- and long-term employment opportunities and a legacy of a more skilled workforce. This would be beneficial in particular for young people and deprived communities.

### ***Community facilities***

- 7.3.28 The Site Campus will provide a range of facilities that will cater to the needs of workers who live there. Some of these will also be available to workers living off-site, thereby reducing demand from them for existing services. This includes health facilities which will represent the easiest way of registering for primary care services for the visiting workforce. UK based workers who are registered for primary and dental care services at their home location may not wish to register with a local provider (noting that there are existing NHS provisions for providing services for any person who cannot attend their own registered practice through temporary registration arrangements). As a result of this on-site provision the HIA (Application Document Reference 8.19) has found the changes in demand for local health services would not have a significant impact for local resident groups.
- 7.3.29 Where workers are non-home-based and they bring family and dependants to the area (who will not be living in the Site Campus), these family and dependants will be expected to register with local NHS services such as GP and dental provisions. This is assessed as not likely to have a significant adverse demand on these local health services. Further details are available in the HIA (Application Document Reference 8.19).
- 7.3.30 Specific arrangements are not proposed for dental care. It is expected that the majority of UK based workers will remain registered with their dental services provider. It is expected that NHS services would be used for emergency dental services.
- 7.3.31 In terms of school places, IACC will monitor school enrolment. Should localised issues arise where applications are made for places in schools at capacity and IACC can demonstrate the nature of the resulting effect (e.g. temporary short-fall in funding, additional costs for appeals processes etc.) Horizon will provide funding to address this via the proposed Community Impact Fund.

### ***Welsh language***

- 7.3.32 In terms of the Welsh language, the Aethwy and Seiriol area is an area with a relatively high proportion of Welsh speakers. The WLIA (Application Document Reference 8.21) states that the arrival of workers to Anglesey during the construction period will lead to a change in the relative proportion of Welsh speakers, since most of these workers will be non-Welsh speakers. The assessment indicates that this would be an overall moderate adverse

effect. However, the temporary population increase in the Aethwy and Seiriol area of 2% as described above is less than in other areas; this area may be expected to be less affected than other areas as a result.

7.3.33 The assessment also considers the impact of the Wylfa Newydd Project on other topics relevant to the Welsh Language including quality of life, economic factors, infrastructure supply and education and social and cultural aspects. Some project-wide effects would impact these factors. The assessment finds that without additional mitigation there would be:

- a potential moderate adverse effect on the language due to an increase in the proportion of non-Welsh speakers in the KSA;
- a moderate adverse effect on the language due to potential increases in the cost of housing;
- a moderate adverse effect on the language as a result of increased demand for schools from non-Welsh speakers; and
- a potential moderate adverse effect on Welsh traditions and culture as a result of the in-migration of non-Welsh-speaking workers.

7.3.34 As these relate to the presence of new residents, it can be expected that the Aethwy and Seiriol area will be less likely to experience these impacts than some other areas.

7.3.35 Several mitigation measures will be provided by Horizon which are set out in the WLCMES. These include providing language awareness raising to Wylfa Newydd Project staff and appointing a WLCC to focus on the development and implementation of Welsh language and culture mitigation and enhancement measures during construction and operation of Wylfa Newydd.

7.3.36 However, the assessment also notes that mitigation measures for the Wylfa Newydd Project such as the WAMS, Housing Fund and accommodating workers at the Site Campus to mitigate the impact of the arrival of workers will also serve to mitigate the impacts on the Welsh language. In addition, the population rise in the Aethwy and Seiriol area to be relatively small compared to other areas.

7.3.37 In addition, the creation of job opportunities during construction and operation provides opportunities to aid the Welsh language through reducing the out-migration of Welsh-speaking young people from local communities. The assessment notes that there has been a continuous net out-flow and population decrease of young people from Anglesey in recent years, with a net out-flow of 220 among 15 to 29 year olds between 2014 and 2015. It notes that this may be partly due to a lack of job opportunities, with a reduction of 889 (5.4%) in the number of FTEs in employment between 2009 and 2014. The Wylfa Newydd Project will directly provide a large number of skilled jobs for local young people in Anglesey during construction and operation of the Power Station. It will also provide indirect benefits to local businesses through additional spending from workers, contracts for local supply chain businesses

and revenue to tourism accommodation businesses for bed spaces occupied by workers. This will provide further job opportunities for local people in the Aethwy and Seiriol area and result in a moderate beneficial effect in terms of the Welsh language.

- 7.3.38 Several strategies to maximise these opportunities for the Welsh language are also provided in the WLCMES, such as advertising jobs through recruitment channels targeting Welsh speakers, distributing information on job opportunities at Wylfa Newydd to young people including through bilingual channels, and through apprenticeship opportunities. In view of this, on balance the effect of population change on the Welsh language is assessed as negligible adverse during construction and minor beneficial during operation.

### **Project-wide effects during operation and decommissioning**

- 7.3.39 During operation, the workforce for the Wylfa Newydd Power Station is expected to consist of around 850 staff. However, no spatial breakdown of where these workers will live within Anglesey is available and cannot be assessed at the level of Aethwy and Seiriol area. The Wylfa Newydd Project is expected to produce a number of local economic benefits through providing new jobs.
- 7.3.40 Potential socio-economic effects during decommissioning of the Main Power Station are described in the ES, volume C chapter 1 (Application Document Reference 6.3.1). While decommissioning would lead to the loss of jobs and other effects, due to uncertainties over such a long time scale these effects cannot be assessed at the Aethwy and Seiriol area level.

### **Cumulative population and socio-economic effects**

- 7.3.41 Cumulative socio-economic effects as a result of both the Wylfa Newydd Project and other projects are assessed in the ES, volume I chapter 5 (Application Document Reference 6.9.5).
- 7.3.42 There will be cumulative economic benefits as a result of the combination of project-wide effects and the effects of other projects within Anglesey and elsewhere. Increased demand for the local construction sector and the local labour market from the Wylfa Newydd Project and other projects will create opportunities for local workers and businesses. Investment in the local economy would increase as a result of the cumulative effects of increased spending and investments across all projects.

### **Transport**

- 7.3.43 The Wylfa Newydd Project will result in a number of impacts on transport and traffic. This is primarily due to trips generated by workers and freight transport during the construction and operational phases. A full assessment of these impacts is given in the Transport Assessment (Application Document Reference 6.3.14).



- 7.3.44 An assessment of the traffic and transport impact of the Wylfa Newydd Project is also found in the ES, volume C chapter 2 (Application Document Reference 6.3.2). Section 2.5 of this document details the forecasted traffic level changes on individual sections of road throughout Anglesey and the Menai Mainland for the year the A5025 Off-line Highway Improvements are completed, the year of peak construction of the Power Station, and the year of peak operation of the Power Station.
- 7.3.45 Within the Aethwy and Seiriol area traffic associated with the Wylfa Newydd Project is forecast primarily to use the A55.
- 7.3.46 At peak construction, traffic flows on the A55 between Britannia Bridge and Junction 6 are forecast to increase by 4% over the baseline scenario, and by 6% between Junction 6 and Junction 3 (where traffic for the WNDA will alight for the A5025). However, because of the high capacity of the A55 this is not assessed as a significant adverse effect. Other routes in the area (including the Menai Bridge) are not forecast to be significantly affected.
- 7.3.47 A Construction Traffic Management Strategy is included within the Wylfa Newydd CoCP (Application Document Reference 8.6) setting out measures to mitigate the impact of traffic; this will include measures and monitoring to ensure construction traffic uses approved routes while travelling. A Traffic Incident Management Strategy to manage incidents on the public highway network would also be provided within the Wylfa Newydd CoCP (Application Document Reference 8.6).

### ***Noise and vibration***

- 7.3.48 No direct impacts are expected in this area.

### ***Air quality***

- 7.3.49 Project-wide air quality effects as a result of traffic are assessed in the ES, volume C chapter 4 (Application Document Reference 6.3.4) which indicates that no significant adverse impacts are expected within the Aethwy and Seiriol area. This is taking into account embedded and good practice mitigation such as the operation of the MOLF to allow large and bulk freight items to be imported by sea as well as the relatively good baseline air quality along the A55 (which most additional traffic will be directed along) which means the small change expected will represent a negligible effect.

### ***Landscape and visual***

- 7.3.50 No direct impacts are expected in this area.

### ***Public access and recreation***

- 7.3.51 No direct impacts are expected in this area.

## **7.4 Summary**

- 7.4.1 The Aethwy and Seiriol area will primarily be affected by impacts related to construction workers seeking accommodation, such as the potential effects on the Welsh Language.
- 7.4.2 Of the non-home-based workers, modelling estimates that 96 may live in Menai Bridge & Llanfairpwllgwyngyll, while 34 may live in Beaumaris. The WAMS will seek to match accommodation demand to supply, and monitor the effects.
- 7.4.3 Beneficial effects are likely in the local economy and labour market.
- 7.4.4 Table 7-2 below summarises residual effects in the Aethwy and Seiriol area.

**Table 7-2 Residual effects (after mitigation), Aethwy and Seiriol area**

Receptor	Significance of effect	Description of effect	Phase	Additional mitigation	Residual effect
<b>Socio-economics</b>					
Labour market on Anglesey.	Moderate beneficial (construction), major beneficial (operation)	Increase in employment as a result of construction and operation.	Construction/operation	-	Major beneficial
PRS accommodation in the KSA.	Moderate adverse	Increase in demand for bed spaces.	Construction	Workforce Accommodation Strategy measures.	Minor adverse
Local economy in north Wales.	Moderate beneficial	Investment in local economy.	Construction and operation	-	Moderate beneficial
Local economy on Anglesey.	Moderate beneficial	Investment in local economy.		-	
Welsh language - moderate adverse as result of	Moderate adverse	Drop in relative proportion of Welsh speakers due to immigration	Construction	Measures in WLCMES and in Workforce Accommodation	Potential moderate adverse (to be monitored)

Receptor	Significance of effect	Description of effect	Phase	Additional mitigation	Residual effect
population change.		of construction workers.		ation Strategy.	
Welsh language - potential effects due to housing demand.	Moderate adverse	Increased cost of housing for local Welsh speakers.	Construction	Measures in WLCMES and in Workforce Accommodation Strategy including Housing Fund.	Potential moderate adverse (to be monitored)
Welsh language - potential effects due to school demand.	Moderate adverse	Potential increase in the number of non-Welsh speaking children in local schools, altering balance of Welsh speakers and non-speakers in schools.	Construction	Measures in WLCMES.	Potential moderate adverse (to be monitored)
Welsh - potential effects on traditions & culture.	Moderate adverse	In-migration of non-Welsh speakers from different background/culture.	Construction	Measures in WLCMES and in Workforce Accommodation Strategy including	Potential moderate adverse (to be monitored)

Receptor	Significance of effect	Description of effect	Phase	Additional mitigation	Residual effect
				Housing Fund.	
Welsh - beneficial effects from economic benefits, investment, employment.	Moderate beneficial	Economic benefits of Wylfa Newydd Project creating jobs for local people and reducing out-migration of Welsh-speaking young people.	Construction and operation	Enhancement measures in WLCMES.	Moderate beneficial
Cumulative effect - economic investment.	Moderate beneficial	Local economic investment and spending as a result of Wylfa Newydd Project and other projects.	Construction and operation.	-	Moderate beneficial

## 8 Menai Mainland

### 8.1 Introduction

- 8.1.1 The Menai Mainland area consists of three wards in Conwy (Bryn, Pandy and Pant-yr-afon/Penmaenan) and 31 wards in Gwynedd<sup>36</sup>. This area is the mainland section of the KSA which has been used in the ES to evaluate socio-economic effects arising from the Wylfa Newydd Project.
- 8.1.2 This chapter summarises the main effects of the Wylfa Newydd Project in this area, and should be read alongside chapter 1 which sets the context.
- 8.1.3 This CIR has been developed in response to feedback, including from IACC. It has also been written with regard to key local concerns identified through the statutory consultation process. These are summarised in section 1.4 of this report.
- 8.1.4 This report looks at how these 'project-wide' effects may be felt locally by the community, including looking at the expected distribution of workers in different areas. It also looks at the more specific local effects of individual parts of the Wylfa Newydd Project, whether it be the main development area, or Associated Development elsewhere, such as highways. Where relevant the cumulative effect of these different parts of the development together is also considered.
- 8.1.5 As part of the application, various mitigation measures are planned to lessen or avoid many of the potential impacts. Where relevant to local effects these are described in this CIR.
- 8.1.6 This chapter includes a context section describing the area and what development will affect it, and then summarises the effects under topic headings. Many of the local effects, including those arising from the construction workforce, are included in the section on socio-economics. Other topic sections are transport, noise/vibration, air quality, landscape/visual, and access/recreation.
- 8.1.7 This report is based on the assessments that make up the DCO application, including the ES, WLIA (Application Document Reference 8.21), HIA (Application Document Reference 8.19) and EqlA (Application Document Reference 8.22). Those other documents cover the full range of potential impacts, of which this document summarises only the ones which are significant for local communities. If after reading this chapter you want further information, see appendix 8-2 for details of other relevant documents.

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<sup>36</sup> These wards are Arllechwedd, Deiniol, Deiniolen, Dewi, Garth, Gerlan, Glyder, Hendre, Hiraël, Marchog, Menai (Bangor), Ogwen, Penisarwaun, Pentir, Tregarth & Mynydd Llandygai, Y Felinheli, Bethel, Llanrug, Cwm-y-Glo, Llanllyfni, Penygroes, Clynog, Groeslon, Talysarn, Llanwnda, Seiont, Menai (Caernarfon), Cadnant, Waunfawr, Bontnewydd, and Peblig (Caernarfon).



## 8.2 Context

### *Project development in this area*

- 8.2.1 There will be no development associated with the Wylfa Newydd Project on the mainland. Therefore, the main impacts expected from the Project would relate to population and socio-economics as well as transport, as summarised in table 8-1.

**Table 8-1 Menai Mainland project components and impacts**

Project components	Impact topics
None	Population and socio-economics; Transport

### *Local area*

- 8.2.2 The Menai Mainland area includes a number of towns and cities in Gwynedd including Bangor, Caernarfon, Bethesda, Llanrug and Penygroes as well as Llanfairfechan and Penmaenmawr in Conwy. It is a large area with a great variety of landscapes and land uses including urban areas and parts of Snowdonia National Park. Bangor also includes a large student population at Bangor University.
- 8.2.3 The area also includes important transport infrastructure including the A55 and the A487 roads and the Britannia Bridge.

**Figure 8-1 Menai Mainland Area**



### ***Demographic baseline<sup>37</sup>***

- 8.2.4 The population of the Menai Mainland area in 2011 was 66,050. 18% of the population are aged under 16, the same as the Welsh average. 66% of residents are aged between 16 and 64 (compared to 63% in Wales) and 16% are aged over 65 (compared to 18% in Wales). The population grew by 7% or 4,410 between 2001 and 2011.
- 8.2.5 The 2011 Census recorded 29,557 homes in the area, of which 27,433 are permanently occupied. 7% of homes are not permanently occupied, slightly above the Welsh average of 6%. 63% of homes are owner-occupied, 19% are social rented and 16% are privately rented.
- 8.2.6 The population of the area is relatively well-educated. 28% of residents hold Level 4 or higher qualifications, compared to 24% in Wales. 21% of residents have no formal qualifications compared to 26% in Wales.
- 8.2.7 Full-time students aged 18 and over comprise 15% of the adult population, compared to 5% in Wales as a whole.
- 8.2.8 52% of residents aged three and over can speak, read and write Welsh, compared to 14% in Wales as a whole. 28% have no skills in Welsh, compared to 73% in Wales.
- 8.2.9 According to the 2011 Census, 64% of the population of the area are economically active compared to 66% in Wales. 13% are retired (compared to 16% in Wales) and 4% are unemployed, the same proportion as in Wales. In May 2016 1.9% of the population aged between 16 and 64 claimed Jobseekers Allowance compared to 2.2% in Wales.
- 8.2.10 38% of residents work in higher-skilled management, professional and technical occupations, compared to 36% in Wales as a whole. 27% of residents work in lower-skilled sales, process and elementary occupations, compared to 29% in Wales as a whole.
- 8.2.11 This overview of the Menai Mainland area indicates that it is an area with a large population with a number of substantial towns and the city of Bangor. The population are similar in age to the Welsh average and relatively well-educated and skilled, with a high proportion of students (likely due to the presence of higher education institutes such as Bangor University). The area also has a high proportion of Welsh speakers, suggesting that national policies to protect and promote Welsh language and culture in areas where they are strong would be particularly relevant here.

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<sup>37</sup> The data in this section is from Census 2001 and Census 2011 (RD5).

## 8.3 Local impacts and mitigation

### *Population and socio-economics*

- 8.3.1 This section looks at effects assessed in the socio-economic chapter of the ES. This includes the expected local distribution of project-wide effects from the construction workforce. This section also includes information drawn from the WLIA (Application Document Reference 8.21), the HIA (Application Document Reference 8.19), and the EqlA (Application Document Reference 8.22).
- 8.3.2 The Environmental Assessment has used a gravity model to provide an indication of the likely distribution of workers across the island and mainland during the peak construction phase of the Wylfa Newydd Project. This is based on information about the workforce, housing market, and travel distances. The information from the gravity model has been used in this report where possible to indicate the potential local distribution of project-wide effects relating to the workforce.

### *Project-wide socio-economic effects*

#### **Construction Workforce**

- 8.3.3 The Wylfa Newydd Project will require a substantial construction workforce. The construction workforce is expected to be up to 8,500 workers at peak construction, although impacts from up to 9,000 have been assessed. This will represent a substantial increase and will have some population impacts. Potential impacts could relate to demand for accommodation or community facilities, as well as effects on the economy and traffic.
- 8.3.4 The vast majority of these workers will be employed at the WNDA on the Isle of Anglesey. Full information on the construction workforce requirements for the Wylfa Newydd Project is provided in the ES, volume C chapter 1 (Application Document Reference 6.3.1).
- 8.3.5 Of the peak workforce of up to 9,000, at least 2,000 are expected to be home-based and thus already resident within the DCCZ, which is based on a 90-minute commuting zone from the WNDA. Of these approximately 265 are expected to come from the Menai Mainland area. These estimates are based on a review of the skills available in the area and of travel expectations. These workers are expected to be permanently resident and do not represent temporary new residents.
- 8.3.6 The Jobs and Skills Strategy (Application Document Reference 8.4) is designed to meet the labour needs of the Wylfa Newydd Project and deliver jobs and economic opportunities locally while avoiding negative labour impacts in the local economy. It will seek to maximise the recruitment of locally-based workers and will seek to increase the number of home-based workers above 2,000 in order to minimise the effects caused by the arrival of construction workers. This will also seek to maximise the economic benefits



for local residents that will result from the jobs created as a result of the Wylfa Newydd Project, in partnership with local stakeholders.

- 8.3.7 Measures to maximise local employment include developing a Skills Fund to support a range of education, training and employment initiatives relating to both the construction and operational phases of the Wylfa Newydd Project as well as a WNESS in partnership with Welsh Government, the Department for Work and Pensions and other stakeholders. Its role will be to place people into sustainable employment created by the Wylfa Newydd Project. The WNESS will work with contractors and stakeholders to maximise opportunities for local residents, unemployed people, young people and groups that traditionally are under-represented in the construction workforce. It will provide a pathway for jobseekers into the project, in some cases via initial education or apprenticeship routes to prepare young people for work on the project. For older or unemployed workers outreach or work readiness training will be facilitated. It will also provide a structure for 'backfilling' – allowing local employers to fill vacancies that happen when employees take up jobs on the Wylfa Newydd Project.
- 8.3.8 Of the peak workforce of up to 9,000, 3,000 are expected to take up existing accommodation temporarily within the seven assessment areas covered by this report. This is based on an assessment of the availability of bed spaces across several tenures (including private rented, owner-occupied, hotels, caravans and spare room accommodation) in the study areas. Further information on the breakdown of accommodation across tenures and the expected distribution of workers is found in the ES, volume C chapter 1 (Application Document Reference 6.3.1).
- 8.3.9 Data from the gravity model indicates that approximately 451 of these non-home-based workers will take up temporary accommodation in the Menai Mainland area. Estimates of accommodation availability across all sectors except caravans and camping produced for the EIA suggest there is currently capacity of approximately 2,270 bed spaces in the Menai Mainland, including 559 bed spaces in the private rented sector.
- 8.3.10 This estimated increase of 451 is for the peak of the construction phase and would represent an increase of less than 1% on the current population.
- 8.3.11 It is anticipated that workers would take up accommodation throughout the Menai Mainland area based on availability. As a result, it is anticipated that larger settlements such as Bangor or Caernarfon would host a significant proportion of these workers as a result of having more potential accommodation spaces. For example, approximately 174 workers are estimated by the gravity model to take up accommodation in Bangor, approximately 67 workers in Caernarfon and Bontnewydd and 26 in Bethesda.
- 8.3.12 Of the peak workforce of up to 9,000, up to 4,000 will be accommodated at the Site Campus. This will be a temporary accommodation facility within the WNDA on the Isle of Anglesey which will include independent living spaces for workers and a range of campus-style amenities and facilities. This is

intended as embedded mitigation to significantly reduce the impact of the construction workforce for the Wylfa Newydd Project on local communities.

8.3.13 In addition to the provision of Temporary Workers' Accommodation for up to 4,000 workers in the WNDA, Horizon has set out two central means of mitigating the impact of non-home-based workers taking up accommodation in the KSA.

- The WAMS will seek to match accommodation demand to supply in order to effectively distribute workers more widely and prevent excessive localised impacts. All workers will be required to register with the WAMS. Horizon and IACC have agreed to establish a CWAMP as part of the WAMS to help workers to find suitable and appropriate accommodation. The WAMS will monitor data and work with stakeholders to ensure workers are able to find this accommodation.
- Horizon has also proposed a flexible Housing Fund to provide support for housing in the local area. This would be used to mitigate a range of effects and to boost the supply of housing, including increasing availability of existing stock and funding council officers' time relating to additional housing matters (such as enforcement or dealing with residents' housing needs).

8.3.14 Horizon will use a 'plan, monitor and manage' approach in order to minimise adverse community impacts and flexibly respond to localised impacts if and when they occur. Full details of Horizon's approach to accommodation and mitigation are set out in the Workforce Accommodation Strategy (Application Document Reference 8.4).

8.3.15 The 451 non-home-based workers expected to take up accommodation in the Menai Mainland would represent a very small proportion (less than 1%) of the existing population. Therefore, the overall effect of this temporary population increase on community infrastructure and local communities is likely to be slight.

### ***Businesses and Tourism***

8.3.16 Local businesses would potentially experience beneficial supply chain effects. While it is not possible at present to estimate how much of the Wylfa Newydd Project value would be spent locally, according to the ES chapter C1 (Application Document Reference 6.3.1), if between 2% and 4% was spent locally (as at other nuclear project examples such as Sizewell B), this would be equal to an investment of between £200 million and £400 million within north Wales over the construction period, providing a range of opportunities for local businesses. Horizon's Supply Chain Charter and Action Plan set out its approach to procurement and would seek to support businesses to engage in the Wylfa Newydd Project and benefit directly.

- 8.3.17 Tourism is a vital part of the economy of north Wales and the Wylfa Newydd Project may have some effects on the sector such as potential changes to visitor behaviour; however, many of these would occur in Anglesey rather than the Menai Mainland. The Wylfa Newydd Project would also give rise to some demand for tourist accommodation from the construction workforce. However, estimates from the gravity model based on current capacity and other factors suggest that at peak construction approximately 76 workers are estimated to seek tourism accommodation in the Menai Mainland, which would be a small fraction of the estimated capacity of 1,407 bed spaces. A further 55 are estimated to seek caravan and camping accommodation, which is also a small fraction of the estimated capacity of 1,323 spaces. Therefore, no adverse effect on tourist accommodation capacity is expected. This demand for spaces would also provide some additional revenue for tourist accommodation providers.

### ***Welsh language***

- 8.3.18 The effects of the Wylfa Newydd Project on the Welsh language are assessed in the WLIA. It finds that some effects will occur on the language, including a potential moderate adverse effect on the language due to an increase in the proportion of non-Welsh speakers in the KSA and a potential moderate adverse effect on the language due to potential increases in the cost of housing. However, as noted, the population rise in the Menai Mainland area is assessed as being proportionately lower than in other parts of the KSA, and so effects in the Menai Mainland area will be more limited than elsewhere. A number of mitigation and enhancement measures are proposed in the WLCMES, including providing language awareness raising to Wylfa Newydd Project staff, appointing a WLCC and advertising job opportunities as a result of the Wylfa Newydd Project through recruitment channels targeting Welsh speakers.
- 8.3.19 In addition, the creation of job opportunities during construction and operation provides opportunities to aid the Welsh language through reducing the out-migration of Welsh-speaking young people from local communities. The Wylfa Newydd Project will directly provide a large number of skilled jobs for local young people during construction and operation of the Power Station. It will also provide indirect benefits to local businesses through additional spending from workers, contracts for local supply chain businesses and revenue to tourism accommodation businesses for bed spaces occupied by workers. This will provide further job opportunities for local people in the KSA and result in a moderate beneficial effect on the Welsh language.

### **Cumulative socio-economic effects**

- 8.3.20 Cumulative socio-economic effects as a result of both the Wylfa Newydd Project and other projects are assessed in the ES, volume I chapter 5 (Application Document Reference 6.9.5).

- 8.3.21 There will be cumulative economic benefits as a result of the combination of project-wide effects and the effects of other projects within Anglesey and elsewhere. Increased demand for the local construction sector and the local labour market from the Wylfa Newydd Project and other projects will create opportunities for local workers and businesses. Investment in the local economy would increase as a result of the cumulative effects of increased spending and investments across all projects.

### ***Transport***

- 8.3.22 The Wylfa Newydd Project will result in a number of impacts on transport and traffic. This is primarily due to trips generated by workers and freight transport during the construction and operational phases. A full assessment of these impacts is given in the Transport Assessment (Application Document Reference 6.3.14).
- 8.3.23 Traffic associated with the Wylfa Newydd Project will primarily use the A55 which passes through the Menai Mainland area.
- 8.3.24 An assessment of the traffic and transport impact of the Wylfa Newydd Project is also found in the ES, volume C chapter 2 (Application Document Reference 6.3.2). Section 2.5 of this document details the forecasted traffic level changes on individual sections of road throughout Anglesey and the Menai Mainland for the year the A5025 Off-line Highway Improvements are completed, the year of peak construction of the Power Station, and the year of peak operation of the Power Station.
- 8.3.25 This assessment shows that traffic over the Britannia Bridge is likely to be 5% higher than the forecast baseline in opening year of the A5025 Off-line Highway Improvements and 3% higher at peak construction; this is not assessed as being a significant effect. Other roads in the area are not assessed as likely to be significantly affected.
- 8.3.26 A Construction Traffic Management Strategy is included within the Wylfa Newydd CoCP (Application Document Reference 8.6) setting out measures to mitigate the impact of traffic; this will include measures and monitoring to ensure construction traffic uses approved routes while travelling. A Traffic Incident Management Strategy to manage incidents on the public highway network would also be provided within the Wylfa Newydd CoCP (Application Document Reference 8.6).

### ***Noise and vibration***

- 8.3.27 No direct impacts are expected in this area.

### ***Air quality***

- 8.3.28 No direct impacts are expected in this area.

### ***Landscape and visual***

8.3.29 No direct impacts are expected in this area.

### ***Public access and recreation***

8.3.30 No direct impacts are expected in this area.

## **8.4 Summary**

8.4.1 The Menai Mainland area is likely to host some additional construction workers. Furthermore, construction-related traffic will travel through the area via the A55 and over the Britannia Bridge. However, it is unlikely that any significant impacts will result, other than a moderate beneficial impact on the local economy in north Wales.

8.4.2 Of the non-home-based workers, modelling estimates that 174 may live in Bangor, 67 in Caernarfon/Bontnewydd, 26 in Bethesda, 18 in Bethel/Llanrug, 8 in Deiniolen and 3 in Llandygai. The WAMS will seek to match accommodation demand to supply, and monitor the effects.

8.4.3 Table 8-2 summarises residual effects for the Menai Mainland area.

**Table 8-2 Residual effects (after mitigation), Menai Mainland area**

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
PRS accommodation in the KSA.	Increase in demand for bed spaces.	Construction	Workforce Accommodation Strategy measures.	Minor adverse
Local economy in North Wales.	Investment in local economy.	Construction and operation	N/A	Moderate beneficial
Labour market in the DCCZ	Changes to employment in the construction sector in the DCCZ. Approximately 2,000 home-based workers would be employed during the	Construction	N/A	Major beneficial

Receptor	Description of effect	Phase	Additional mitigation	Residual effect
	peak period of construction.			
Welsh language in the KSA - moderate adverse as result of population change	Drop in proportion of Welsh speakers in the population as a result of	Construction	Measures in WLCMES and in Workforce Accommodation Strategy	Potential moderate adverse (to be monitored)

## 9 References

**Table 9-1 Schedule of references**

ID	Reference
RD1	Gwynedd and Môn Public Services Board. 2017. <i>Anglesey Well-being Assessment</i> . [Online] [Accessed July 2017]. Available from: <a href="https://gwyneddandmonwellbeing.files.wordpress.com/2016/10/anglesey-wellbeing-assessment-synopsis-may17.pdf">https://gwyneddandmonwellbeing.files.wordpress.com/2016/10/anglesey-wellbeing-assessment-synopsis-may17.pdf</a>
RD2	North Wales Social Care and Well-being Improvement Collaborative. April 2014. <i>North Wales population assessment</i> . [Online] [Accessed August 2017]. Available from: <a href="https://www.gwynedd.llyw.cymru/en/Council/Documents---Council/Strategies-and-policies/Health-and-Social-Services/North-Wales-Population-Assessment/NW-Population-Assessment-1-April-2017.pdf">https://www.gwynedd.llyw.cymru/en/Council/Documents---Council/Strategies-and-policies/Health-and-Social-Services/North-Wales-Population-Assessment/NW-Population-Assessment-1-April-2017.pdf</a>
RD3	Isle of Anglesey County Council. April 2017. <i>Community Involvement Officer's Report</i> . [Online] [Accessed July 2017] Available from: <a href="http://www.anglesey.gov.uk/Journals/r/e/v/Horizon-CIO-Overall-report-final.pdf">http://www.anglesey.gov.uk/Journals/r/e/v/Horizon-CIO-Overall-report-final.pdf</a>
RD4	Gwynedd and Môn Public Services Board. 2017. <i>Data Tables – Assessment of Local Well-being Gwynedd and Môn</i> . [Online] [Accessed July 2017]. Available from: <a href="https://gwyneddandmonwellbeing.files.wordpress.com/2016/10/data-tables-assessment-of-local-well-being-gwynedd-and-mc3b4n1.pdf">https://gwyneddandmonwellbeing.files.wordpress.com/2016/10/data-tables-assessment-of-local-well-being-gwynedd-and-mc3b4n1.pdf</a>
RD5	Nomis. 2013. 2011 Census Data for England and Wales. [Online] [Accessed: October 2016] Available from: <a href="https://www.Nomisweb.co.uk/census/2011">https://www.Nomisweb.co.uk/census/2011</a> .
RD6	Welsh Government. 2014. <i>Welsh Index of Multiple Deprivation (WIMD) 2014</i> . [Online] [Accessed December 2017]. Available from: <a href="http://wimd.wales.gov.uk">http://wimd.wales.gov.uk</a>

## Appendix 9-1 Further reading

The effects of the Wylfa Newydd Project are assessed in a number of documents which make up the DCO application. This CIR summarises the significant effects on local areas, but the full application documents contain a great deal more information.

If you wish to find out more about what is summarised in this CIR, including how the assessments are made, the following DCO application documents may be useful. The table includes the Application Reference Number assigned to each document as a means of standardising referencing among the DCO application documents

**Table 9-3 Further reading on Wylfa Newydd development effects**

Report title	Application Reference Number	Topics covered
<b>ES</b>		
ES Non-Technical Summary	6.11	Summary of the ES findings for ordinary readers [available in English and Welsh]
Volume C1	6.3.1	Project-wide socio-economic assessment
Volume C2	6.3.2	Project-wide traffic and transport assessment
Volume C3	6.3.3	Project-wide assessment of public access and recreation effects of traffic
Volume C4	6.3.4	Project-wide assessment of air quality effects of traffic
Volume C5	6.3.5	Project-wide assessment of noise and vibration effects of traffic
Volume D1	6.4.1	Power Station Main Site – proposed development
Volume D3	6.4.3	Power Station Main Site – socio-economics assessment
Volume D4	6.4.4	Power Station Main Site – public access and recreation assessment
Volume D5	6.4.5	Power Station Main Site – air quality assessment
Volume D6	6.4.6	Power Station Main Site – noise and vibration assessment
Volume D10	6.4.10	Power Station Main Site – landscape and visual impact assessment



Report title	Application Reference Number	Topics covered
Volume D11	6.4.11	Power Station Main Site – cultural heritage assessment
Volume D16	6.4.16	Power Station Main Site – combined topic effects assessment
Volume E1	6.5.1	Power Station Off-site Facilities – proposed development
Volume E3	6.5.3	Power Station Off-site Facilities – Socio-economics assessment
Volume E4	6.5.4	Power Station Off-site Facilities – public access and recreation assessment
Volume E5	6.5.5	Power Station Off-site Facilities – air quality assessment
Volume E6	6.5.6	Power Station Off-site Facilities – noise and vibration assessment
Volume E10	6.5.10	Power Station Off-site Facilities – landscape and visual impact assessment
Volume E11	6.5.11	Power Station Off-site Facilities – cultural heritage assessment
Volume E12	6.5.12	Power Station Off-site Facilities – combined topic effects assessment
Volume F1	6.6.1	Park and Ride Facility – proposed development
Volume F3	6.6.3	Park and Ride Facility – socio-economics assessment
Volume F4	6.6.4	Park and Ride Facility – public access and recreation assessment
Volume F5	6.6.5	Park and Ride Facility – air quality assessment
Volume F6	6.6.6	Park and Ride Facility – noise and vibration assessment
Volume F10	6.6.10	Park and Ride Facility – landscape and visual impact assessment
Volume F11	6.6.11	Park and Ride Facility – cultural heritage assessment

Report title	Application Reference Number	Topics covered
Volume F12	6.6.12	Park and Ride Facility – combined topic assessment
Volume G1	6.7.1	A5025 Off-line Highway Improvements – proposed development
Volume G3	6.7.3	A5025 Off-line Highway Improvements – socio-economics assessment
Volume G4	6.7.4	A5025 Off-line Highway Improvements – public access and recreation assessment
Volume G5	6.7.5	A5025 Off-line Highway Improvements – air quality assessment
Volume G6	6.7.6	A5025 Off-line Highway Improvements – noise and vibration assessment
Volume G10	6.7.10	A5025 Off-line Highway Improvements – landscape and visual impact assessment
Volume G11	6.7.11	A5025 Off-line Highway Improvements – cultural heritage assessment
Volume G12	6.7.12	A5025 Off-line Highway Improvements – combined topic effects assessment
Volume H1	6.8.1	Logistics Centre – proposed development
Volume H3	6.8.3	Logistics Centre – socio-economics assessment
Volume H4	6.8.4	Logistics Centre – public access and recreation assessment
Volume H5	6.8.5	Logistics Centre – air quality assessment
Volume H6	6.8.6	Logistics Centre – noise and vibration assessment
Volume H10	6.8.10	Logistics Centre – landscape and visual impact assessment
Volume H11	6.8.11	Logistics Centre – cultural heritage assessment
Volume H12	6.8.12	Logistics Centre – combined topic effects assessment

Report title	Application Reference Number	Topics covered
Volume I4	6.9.4	Intra-project cumulative effects [i.e. cumulative effects as a result of Wylfa Newydd Project components]
Volume I5	6.9.5	Inter-project cumulative effects [i.e. cumulative effects as a result of Wylfa Newydd Project and other projects]
Volume I, Appendix I-3.01	6.9.8	Master tables of residual effects
Volume J1	6.10.1	Environmental commitments
Volume J2	6.10.2	Summary of residual effects
<b>Other documents</b>		
Welsh Language Impact Assessment	8.21	Project-wide assessment of effects on Welsh language and culture
Welsh Language and Culture Mitigation and Enhancement Strategy	[8.21]	Strategy for addressing impacts identified in Welsh Language Impact Assessment and enhancing potential benefits for the Welsh language [Appendix to WLIA]
Health Impact Assessment	8.19	Project-wide assessment of effects on human health and well-being
Equality Impact Assessment	8.22	Project-wide assessment of effects for protected groups identified in the Equality Act (2010)
Planning Statement	8.1	Summary of project and planning position
Jobs and Skills Strategy	8.3	Strategy to maximise labour market opportunities as a result of the Project
Workforce Accommodation Strategy	8.4	Strategy to manage the accommodation of Wylfa Newydd Project workers and mitigate impacts of worker accommodation
Workforce Management Strategy	8.5	Strategy to manage workforce resources, ensure effective management of the construction workforce and mitigate any

Report title	Application Reference Number	Topics covered
		impacts as a result of the presence of workers.
Code of Construction Practice (and sub-CoCPs for each project component)	8.6 [and 8.7-8.12)	These strategies aim to maximise safety, health and security during construction of the Wylfa Newydd Project (including at each specific site) and manage the construction process.
Code of Operational Practice	8.13	Covers the management requirements for the operational phase of the permanent elements of the Wylfa Newydd Project

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