Uwchraddio'r Grid
Pentir i Drawsfynydd

The Great Grid Upgrade
Pentir to Trawsfynydd

PTNO-AEC-ZZZZ-ZZZZZZ-RPT-ES-000034

Prosiect i Atgyfnerthu'r cysylltiad rhwng Pentir a Thrawsfynydd

Pentir to Trawsfynydd Reinforcement Project

Pentir Works: Planning Statement
September 2025

nationalgrid

Contents

1. Introduction

1.1 Introduction

1.1.1 This Planning Statement has been prepared to accompany an application made by National Grid Electricity Transmission plc (NGET) ('the Applicant') for full planning permission for the replacement of existing underground cables; installation of new underground cables in the existing Pentir substation and ancillary works ('the proposed works').

1.1.2 This planning application is required for development at the existing Pentir substation in North West Wales which is needed to support the wider Pentir to Trawsfynydd Reinforcement Project ('the Project'). Further details on the need case for the proposed works and the Project are set out in Section 2 of this Planning Statement.

1.1.3 The proposed works constitute 'major development', as defined in article 2 of the Town and Country Planning (Development Management Procedure) (Wales) Order 2012 (Ref. 1-1), as it comprises development carried out on a site with an area of 1 hectare (ha) or more. The application site is defined by the red line boundary in **Figure 1** and covers a total area of 1.5 ha. An application for full planning permission will be submitted to Gwynedd Council ('the Council'), in its capacity as the relevant Local Planning Authority (LPA).

1.1.4 In accordance with section 61Z of the Town and Country Planning Act 1990 (as amended) (Ref. 1-2), the Applicant is undertaking a statutory pre-application consultation for the proposed works. The purpose of the consultation is to provide adjoining landowners and occupiers, community consultees (including local members), specialist consultees and any non-statutory consultees as necessary with an opportunity to review and comment on the proposals and work undertaken to date, prior to the submission of the planning application to the Council.

1.1.5 This Planning Statement forms part of the suite of planning application documents prepared to enable effective community and stakeholder engagement to inform and iterate the formal planning application submissions whilst ensuring compliance with statutory requirements.

1.2 Pentir to Trawsfynydd Reinforcement Project

1.2.1 The Project encompasses the reinforcement of overhead lines and cables on the existing circuits ('inland' A circuit and 'coastal' B circuit) between Pentir and Trawsfynydd substations in North West Wales. The Project is part of the wider network transmission upgrades required to facilitate the connection of 50 Gigawatt (GW) of offshore wind by 2030 (5.48 GW in the north-west region). This was confirmed in the National Energy System Operator (NESO) Network Options Assessment (NOA) 2022 (Ref. 1-3) and the Holistic Network Design (HND) 2022 (Ref. 1-4).

1.2.2 The Applicant requires other works to be consented which are integral to the construction, operation and maintenance of the wider Project. The consents associated with these other works are set out below and illustrated in **Figure 1** below.

1.2.3 Full planning permission required from the relevant LPA:

- **Bryncir** – A new 400/132 kV substation south of Bryncir village ('Bryncir Substation'). New 132 kV underground cables (part of the route) to connect the existing SPEN DB route to the new Bryncir Substation.
- **Glaslyn Cables** – an extension to the existing Wern Cables Sealing End Compound (CSEC); replacement of the Glaslyn Cables and associated infrastructure with new 400 kV sections ('inland' A circuit and 'coastal' B circuit) between Wern CSEC and a new Minffordd CSEC; increased floor height to the Tunnel Head House, previously consented by the Eryri Visual Impact Provision (EVIP) Project at Minffordd, removal of the existing Garth CSEC, removal of some redundant sections of the existing 400 kV and 132 kV cables and making safe other sections of redundant Glaslyn Cables left in-situ.
- **Trawsfynydd** – Installation of new underground cables, installation of a shunt reactor and a new gantry.

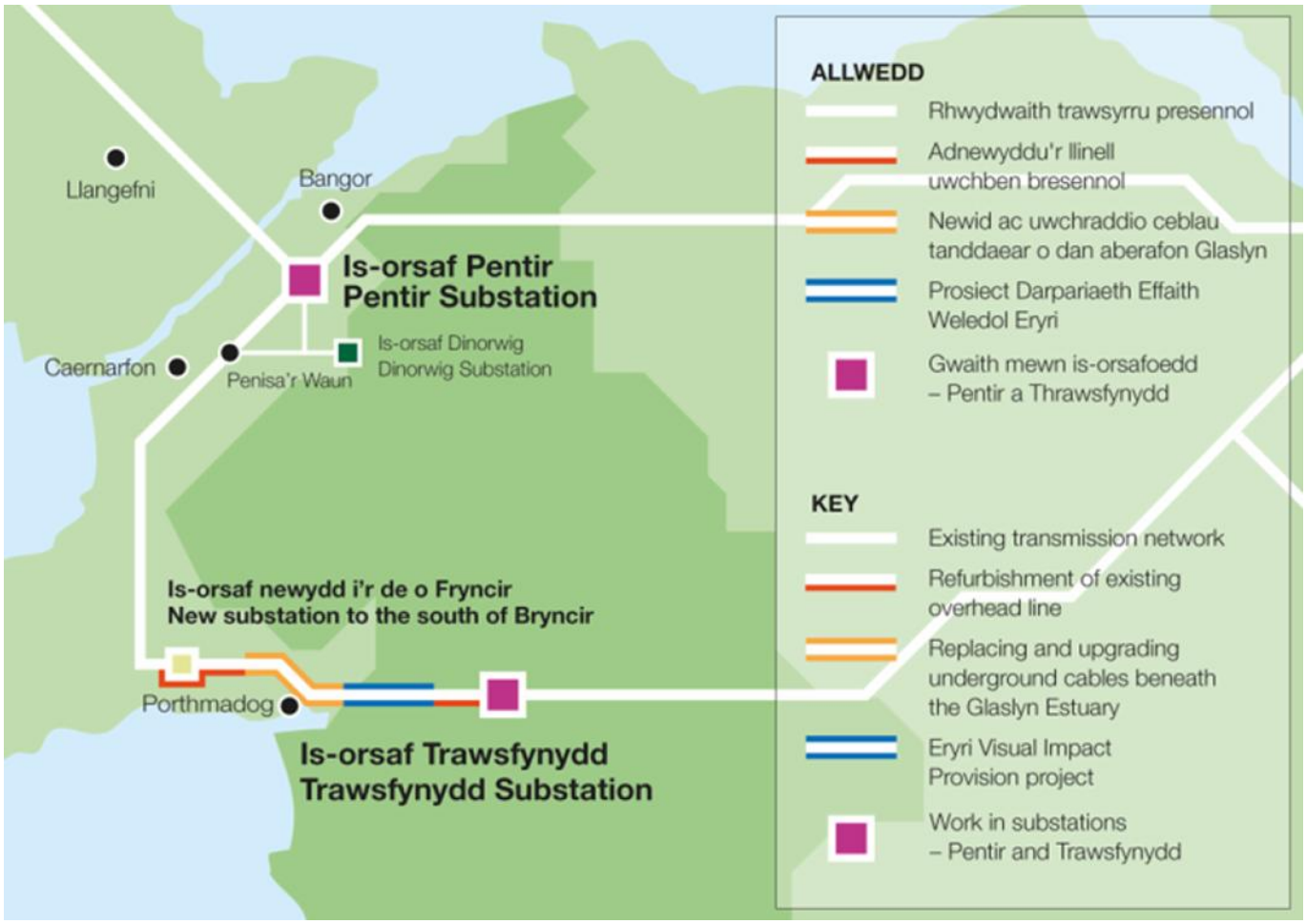
1.2.4 Section 37 consent under the Electricity Act 1989 (Ref. 1-5):

- **Bryncir** – Replacement of Tower 4ZC067 and downleads into the proposed Bryncir Substation.
- **Bryncir** - A new 132 kV overhead line (for part of the route) to connect the existing SPEN DB route to the Bryncir Substation and removal of a redundant section of SPEN DB route.
- **Trawsfynydd –** Amendment to downleads from the existing Tower 4ZC005 to turn into a new gantry in the substation and changes to the alignment of substation compound south-western boundary fence.

1.2.5 The Project involves works at and between the Pentir substation (SH 559677), approximately 4.5 km south-west of Bangor, and Trawsfynydd substation (SH 691384), approximately 1.2 km south of Gellilydan, in the administrative areas of Gwynedd Council and Eryri National Park Authority. The locations of the Project works are illustrated on **ES Figure 7.2.1**.

1.2.6 The proposed works forming part of this planning application are summarised in Section 1.3 and described in further detail in Section 4. Other works associated with the wider Project described in paragraphs 1.2.3 to 1.2.4 will require subsequent approvals either through the Town and Country Planning Act 1990 (as amended) (Ref. 1-2) or the Electricity Act 1989 (Ref. 1-5). Development comprising the proposed works to Bryncir, Glaslyn Cables and Trawsfynydd Substation as described in paragraph 1.2.4 will be subject of separate planning applications.

Figure 1: Project Schematic



1.3 The Proposed Works

1.3.1 The proposed works comprise works in the operational boundary of the existing Pentir substation compound. The description of development is:

> *"replacement of existing underground cables; installation of new cross site underground cables in the existing Pentir substation; and ancillary works"*

1.3.2 Further details of the proposed works are in Section 4 of this Planning Statement, and a description of the design and access arrangements are in the Design and Access Statement which supports this planning application.

1.3.3 Full planning permission is being sought for the proposed works. However, in isolation from the wider Project, the proposed works would constitute works benefitting from deemed consent removing the need for full planning permission constituting permitted development under Schedule 2, Class G, Part 17 of the Town and Country Planning (General Permitted Development) Order 1995 (as amended) (GDPO 1995) (Ref. 1-6), which applies to Wales. Class G applies to electricity undertakings and sets out works carried out by statutory undertakers for the generation, transmission or supply of electricity for the purposes of their undertaking. The Applicant is a statutory undertaker and therefore benefits from deemed consent afforded by Class G(a). Permitted development under Class G(a) includes the installation or replacement in, on, over or under land of an electric line and the construction of shafts and tunnels and the

installation or replacement of feeder or service pillars or transforming or switching stations or chambers reasonably necessary in connection with an electric line.

1.3.4 The GDPO 1995 (as amended) confirms that development permitted by Class G is only deemed consent if the works comply with conditions G.1 (a) and G.2 (a). None of these conditions relate to the proposed works. However, article 3 (10) of the GDPO 1995 (as amended) confirms that development is not permitted by the Order if it constitutes Schedule 2 development within the meaning of the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (Ref. 1-7). The proposed works form part of the wider Project, which is EIA development and so does not benefit from deemed consent as permitted development under Class G in Part 17 of Schedule 2of the GDPO 1995 (as amended). The proposed works require full planning permission.

1.3.5 Due to the urgency of the infrastructure upgrades associated with the Project, the works have been identified as part of Ofgem's Accelerated Strategy Transmission Investment (ASTI) framework (Ref. 1-8) which includes decisions to streamline the regulatory approval process.

1.4 The Applicant

1.4.1 The Applicant operates the electricity transmission system in Great Britain and owns the system in England and Wales. Transmission of electricity in Great Britain requires permission by way of a licence granted under Section 6(1)(b) of the Electricity Act 1989 (Ref. 1-5) ("the Electricity Act"). The Applicant has been granted a transmission licence and is bound by legal obligations, which are set out in the Electricity Act and in the transmission licence.

1.4.2 The Applicant is the only company licensed to transmit electricity in England and Wales. Under Section 9 of the Electricity Act, the Applicant is required, in this capacity, to develop and maintain an efficient, coordinated and economical system of electricity transmission to facilitate competition in the supply and generation of electricity.

1.5 Purpose and Structure of this Planning Statement

1.5.1 The structure of this Planning Statement is as follows:

- Chapter 1: Introduction – Introduces the Proposed works and the Project, provides context for the preparation of this Planning Statement and planning application, and provides an overview of the content of the planning application and Environmental Impact Assessment (EIA).
- Chapter 2: The Need Case – Sets out the overarching needs case for the Proposed works.
- Chapter 3: Site and Surroundings – Provides a description of the proposed works site and the surrounding area, including statutory and non-statutory designations, planning policy allocations, the spatial context in relation to the Project and an overview of relevant planning history associated with the proposed works site.
- Chapter 4: The Proposed Works – Details each element associated with the proposed works, the access arrangements and provides an overview of the construction works which form part of the wider Pentir to Trawsfynydd Reinforcement (PTR) project.

- Chapter 5: Pre-Application Consultation – Provides an overview of the pre-application consultation undertaken for the proposed works, including engagement with Gwynedd Council and relevant stakeholders and details of the statutory pre-application consultation to be held.
- Chapter 6: Planning Policy Context – Provides an overview of key legislation relevant to the proposed works, sets out the National Development Framework and Local Development Plan and considers any relevant policies contained in these documents. Policy and legislation that can be considered a material consideration when determining the application is also outlined in this chapter.
- Chapter 7: Planning Appraisal – Presents an appraisal of the proposed works compliance with the key planning policy identified in chapter 6 of this Planning Statement.
- Chapter 8: Planning Balance and Conclusion – Provides a summary of the planning balance following the appraisal of the proposed works.

1.6 Form and Structure of the Planning Application

1.6.1 This Planning Statement should be read with the wider application documents outlined in **Table 1-1** below. These application documents have been prepared to inform the statutory pre-application consultation. Following the close of the pre-application consultation, it is intended that these documents will be finalised for the purposes of the formal planning application submission to the Council for determination.

Table 1-1. Application Documents

Application Documents
Forms and Certificates
Application form
Plans and Relevant Information
Site location Plan (1:2500)
Existing Site Plan (scale of 1:500 or 1:200)
Proposed Overall Layout Plan (1:1000)
Proposed Works (1:200)
Existing and Proposed Sections (1:100)
Proposed Underground Works (1:200)
Technical Documents
Planning Statement
Design and Access Statement
Pre-Application Consultation Report

Environmental Statement
Habitats Regulations Assessment
Net Benefit for Biodiversity and Green Infrastructure Statement
Welsh Language Statement

1.7 Environmental Impact Assessment

1.7.1 EIA screening is the process of determining whether a project falls under the descriptions or thresholds in Schedule 1 and 2 of the Town and Country Planning (Environmental Impact Assessment) (Wales) 2017 (the '2017 TCP EIA Regulations') (Ref. 1-7) or the Electricity Works (Environmental Impact Assessment) (England and Wales) Regulations 2017 (2017 Electricity Works EIA Regs)(Ref. 1-38) and if there is potential for significant adverse effects on the environment.

1.7.2 No element of the Project falls within the developments identified in Schedule 1 of the 2017 TCP EIA Regs or the 2017 Electricity Works (EIA) Regs and none are a type of development described in Schedule 2 of the 2017 TCP EIA Regs. However, NGET is mindful that the Regulations have been found to have a "*wide scope and broad purpose*" and that the Glaslyn Cables section of the Project could be deemed an urban development project under 10. Infrastructure Projects in Schedule 2 due to the overall area of the development exceeding 5 hectares (ha).

1.7.3 A Screening Opinion for the Glaslyn Cables element of the Project was requested from Gwynedd Council on 6 September 2024 and a Screening Opinion was received on 10 October 2024 confirming an EIA would be required. An EIA has been undertaken for the whole Project as described in **Chapter 3** of **ES Volume 1: Project Introduction**. Due to the urgency of the infrastructure upgrades associated with the Project, the works have been identified as ASTI. To maintain an accelerated programme a Scoping Opinion has not been requested from the competent authorities that will receive consent applications. Instead, the Scoping stage of the EIA process has been incorporated into the Environmental Statement (ES).

1.7.4 The ES sets out the findings of an EIA. The ES will accompany all the consent applications required by the Project and addresses requirements under both the 2017 TCP EIA Regs and the 2017 Electricity Works EIA Regs. There are no material differences between these two sets of regulations in terms of the required information for inclusion in an ES.

2. The Need and Benefit Case

2.1 Policy and Legislative Background

2.1.1 The Paris Agreement (Ref. 1-9) was adopted in December 2015 at the United Nations Climate Change Conference (COP21). It introduced a common goal and commitment of reducing greenhouse gas emissions and limiting global temperature rises to combat climate change. It was a landmark agreement in the multilateral climate change process as it brought into force internationally binding emission reduction targets and legally binding targets for developed countries (including the United Kingdom) to reduce greenhouse gas emissions bringing UN members together to combat climate change and adapt to its effects.

2.1.2 The UK has since made several further legal commitments to address climate change and meet the objectives of the Paris Agreement. This includes introducing the Net Zero target for greenhouse gas emissions by 2050 and updating legally binding carbon budgets to cap emissions over five-year periods. The UK Government has also developed and published a number of policy documents and strategies to drive the transition to net zero and provide opportunities to increase energy efficiency.

2.1.3 The Energy White Paper (Ref. 1-10), published in December 2020, outlined a strategy to transform the energy system, tackling emissions while continuing to ensure secure and reliable electricity supply, and affordable bills for households and businesses. This was built on by the Net Zero Strategy (Ref. 1-11), published in October 2021, which set out a long-term plan for the economy-wide transition to net zero that will take place over the next three decades. The British Energy Security Strategy (BESS) (Ref. 1-12), published in April 2022, and the Growth Plan (Ref. 1-13) published in September 2022 further reinforced ambitions and the importance of addressing the UK's underlying vulnerability to international oil and gas prices and reducing UK's dependence on imported oil and gas. Powering Up Britain (Ref. 1-14), published in March 2023, set out how the government will enhance the UK's energy security, seize the economic opportunities of the transition, and deliver on the UK's net zero commitments.

2.1.4 The 'Clean Power 2030 Action Plan: a new era of clean electricity' (Ref. 1-21) published in December 2024 sets out the UK Government's targets for the 2030 capacities of key technologies at national and regional level including an ambition to achieve 43-50 gigawatts (GW) of offshore wind by 2030. The latest consultation draft NPS' published in April 2025 explicitly refer to the Government's 2030 Clean Power Action Plan and the need for significant new energy infrastructure.

2.1.5 The Welsh Government also has ambitious targets for renewable energy and the electricity transmission network, to make substantial contributions to decarbonisation and energy security. Wales's net zero target highlights the Welsh Government's commitment to achieving net-zero by 2050, and for Wales to meet the equivalent of 100% of its annual electricity demand from renewable energy sources by 2035. Additionally, the Environment (Wales) Act 2016 (Ref. 1-15) sets out the Welsh Government's interim carbon budgets which are legally binding targets to reduce emissions compared to 1990 levels.

2.1.6 Wales and UK Governments have set ambitious legally binding targets for developing new homegrown sources of renewable energy at scale over the next decade. In 2017,

the Welsh Government set a target to meet the equivalent of 70% of Wales's electricity demand from renewable energy sources by 2030 as part of its commitment to a more sustainable future for Wales. The latest Energy Generation in Wales Report (Ref. 1-16) is based on 2022 statistics and was published in October 2023. This confirmed that the equivalent of approximately 59% of Wales's annual electricity consumption came from renewables, working towards the 70% target by 2030. This target was upscaled in July 2023 to meet 100% of the demand for electricity from renewable energy sources by 2035 following a consultation on Wales's Renewable Energy Targets in January 2023.

2.1.7 The National Infrastructure Commission for Wales published its report 'Preparing Wales for a Renewable Energy 2050' (Ref. 1-17) in October 2023. This report notes '*that the Welsh Government has set targets to meet the equivalent of 100% of its annual electricity demand from renewable sources by 2035 and to achieve net zero by 2050*'. However, it also notes that 'the current levels of renewable energy generation…suggest that significant additional interventions will be necessary to achieve the target'. It highlights the importance of ensuring that Wales has a grid system that is fit for the future of renewable energy generation and recommends that, by 2025, Ofgem should reform the system that plans for and delivers grid access for renewable energy to enable rapid deployment.

2.2 The Need and Benefits of the Project and Proposed Works

2.2.1 The Energy Act 2023 (Ref. 1-18) established an independent system planner and operator to help accelerate Great Britain's energy transition, creating the National Energy System Operator (NESO). NESO is built on the previous experience as the National Grid Electricity System Operator (ESO). In July 2022, ESO recommended a new electricity network design called the 'Pathway to 2030 Holistic Network Design' (Ref. 1-4) which will connect 23 GW of offshore wind power. The aim of the Pathway to 2030 Holistic Network Design is to help to unlock the Government's ambition of 50 GW of offshore wind by 2030 by setting out a single, integrated approach to support large scale delivery of electricity from offshore wind which is required across the UK.

2.2.2 The NESO annually reviews the network capabilities and requirements which includes the following:

- Future Energy Scenarios – are developed annually by the NESO with input from industry and other stakeholders. The Scenarios represent a range of different, credible ways in which the energy could evolve taking account of policy and legislation, including net zero targets.
- Electricity Ten Year Statement – is an annual assessment by NESO which, by using data from the Future Energy Scenarios, identifies points on the transmission system where more network capability is needed to ensure that energy is delivered efficiently and reliably to where it is needed.
- Network Options Assessment – sets out the NESO's recommendation for which reinforcement projects should receive investment during the coming year. These are assessed by the NESO so that the most economic and efficient solutions are recommended to proceed, and others told to hold or stop. The Assessment uses the latest methodology approved by Ofgem, and outputs from the Future Energy Scenarios and Electricity Ten Year Statement.

2.2.3 One of the documents that was published as part of the Pathway to 2030 Holistic Network Design is National Grid's 'Network Options Assessment' (NOA). This identifies

which network reinforcement projects should receive investment, and when. The latest National Grid NOA is the 'NOA 2021/22 Refresh' (Ref. 1-19) which identifies 94 schemes that are required to meet the Government's ambition for 50 GW of offshore wind by 2030; it demonstrates that there is insufficient transmission capacity in the existing electricity transmission network in North Wales to connect additional consented, forecasted and foreseeable large scale power generation developments, notably from renewable offshore energy in the Irish Sea off the north coast of Wales and west coast of England. The 'Pentir to Trawsfynydd cable replacement' is one of the projects identified as the Holistic Network Design's essential options to deliver Pathway to 2030. The Earliest in Service Date (EISD) for the Project is 2027, with the earliest optimal delivery date being 2028 having regard to regulatory and consenting requirements, including the need to secure planning permission and Section 37 consent.

2.2.4 Building on this ambition, in March 2024 NESO published 'Beyond 2030' (Ref. 1-20), mapping the way to a clean, secure and affordable energy future by facilitating the connection of an additional 21 GW of offshore wind, laying the foundations for a decarbonised electricity system in the UK. The upgrade to the Pentir to Trawsfynydd electricity network was highlighted in the NESO 'Beyond 2030' report. The Project would play an important part in improving the Grid network and helping to facilitate the connection of this additional offshore wind.

2.2.5 The 'Clean Power 2030 Action Plan: a new era of clean electricity' (Ref. 1-21) aims to tackle the three major energy challenges: the need for a secure and affordable energy supply, the creation of essential new energy industries and the need to reduce greenhouse gas emissions. The Clean Power 2030 Action Plan recognises that around twice as much new transmission network infrastructure will be needed in the nation's grid by 2030 than has been built in the past decade. The Action Plan recognises the need to reduce the end-to-end delivery time for new transmission infrastructure to deliver necessary infrastructure in a timely manner to support the development of clean energy generation projects.

2.2.6 The proposed works will provide additional transmission capacity in North Wales that is essential to distribute and make use of both new and existing energy generation in the area. The existing cables are near the end of their operational life and as installed could not operate at the capacity now required. These cables need replacing and it is considered that there is no suitable alternative to the replacement of the existing cables. The existing. If the cables are not upgraded their operational efficiency will continue to decrease and it would not be possible for the electricity that is generated to be transferred to areas where it is needed. The additional capacity will allow energy generated by renewable sources to be transferred around the region and will assist the government in meeting targets for reducing carbon emissions and achieving Net Zero. The proposed works form part of the wider Pentir to Trawsfynydd Reinforcement project and without the replacement of the existing underground cables and associated infrastructure reinforcement then this section of the PTR project will form a bottleneck and the objectives of the PTR project will not be achieved. Government policy recognises that additional transmission capacity is necessary, and outlines support specifically for the Pentir to Trawsfynydd Reinforcement as a strategic project that will reinforce and increase capacity of the grid. The proposed works will benefit the region by providing a secure and reliable supply of electricity.

2.2.7 The documents outlined above demonstrate that there is clear policy support for the provision of an efficient and effective electricity transmission network. There is a clear need for the Proposed Work to replace old and inefficient transmission lines and equipment to deliver capacity in the transmission network recognised by national policy.

2.3 Grid Connection Capacity Requirements

2.3.1 The NESO has also published a suite of documents under the 'Pathway to 2030: A holistic network design to support offshore wind deployment for net zero' (July 2022) in response to the UK Government's ambitions concerning offshore wind (see below). The Pathway to 2030 Holistic Network Design (HND) Executive Summary recognises that as the scale of offshore wind deployment increases so does the need for additional transmission infrastructure to deliver the electricity generated to customers. It states that:

'*A significant step change is required to move from the current capacity of 11.3 GW to 50 GW by 2030, both in the roll out of the additional offshore wind farms themselves and the network required to connect and transport the electricity to where it can be used. Therefore, innovative thinking in network design has never been more important to ensure delivery of affordable, clean and secure power and meet the UK Government's ambitions….*

Publication of the innovative HND is just the start of the delivery of the transmission network required to facilitate 50 GW offshore wind by 2030…. Specifically, the time taken to build onshore transmission network infrastructure will need to be significantly reduced in order to meet the offshore wind ambitions and net zero targets.'

2.3.2 The Network Options Assessment published in July 2022 forms part of the Pathway to 2030 suite of documents. In relation to Wales, this notes that the HND recommends a coordinated network on the west coast of the country resulting in a significant power import to North Wales and a requirement to export this power to areas of the country with greater demand and to satisfy boundary transfer requirements. Table 3.10 of the Assessment identifies that 'Pentir to Trawsfynydd cable replacement' and 'A second transmission circuit on the existing Pentir to Trawsfynydd route' are HND essential options for Wales and Southwest. These are the components central to the Project, which includes cables that were installed in the 1960s, are a limiting factor on the circuit and are now coming to the end of their operational life. The replacement of the cables is essential to enable an increase to the network capacity that is required to contribute towards the Welsh Government renewable energy targets summarised above.

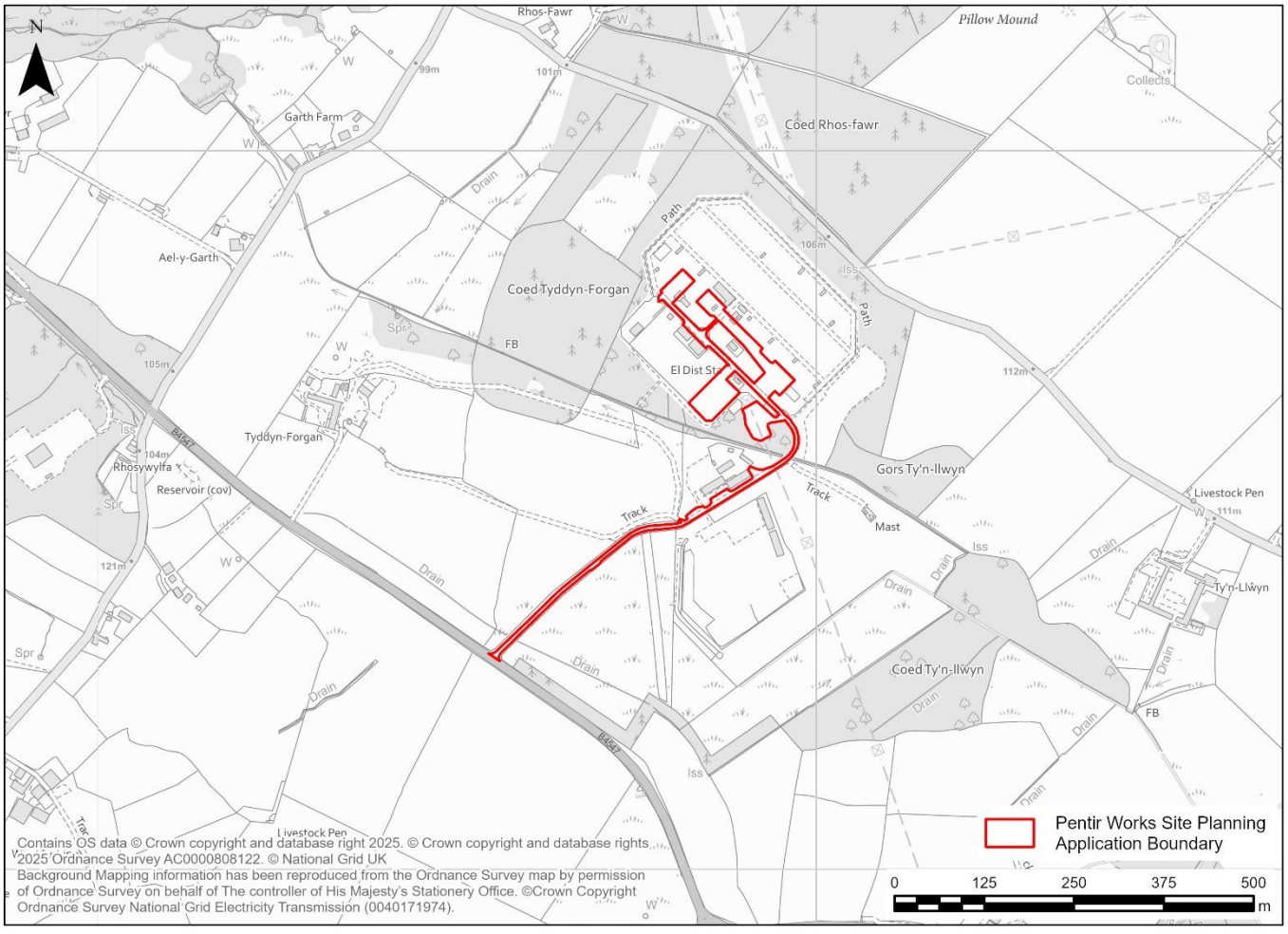
2.3.3 The need for the Project is elevated further by Ofgem identifying it as one of the Accelerated Strategic Transmission Investment (ASTI) projects. ASTI projects form part of a new regulatory approval and funding framework for onshore transmission projects which Ofgem sets out are required to deliver the Government's 2030 Net Zero ambitions. To help meet those ambitions, Ofgem has identified that significant upgrades to the capacity of the electricity network in North Wales are required to allow the connection of new offshore windfarms.

3. Site and Surroundings

3.1 Description of the Proposed Works Site

3.1.1 The proposed works site is defined by the red line boundary shown in **Figure 2** below and is in the administrative district of Gwynedd Council, approximately 4.5 km south-west of Bangor. The proposed works site covers an area of approximately 1.5 ha and comprises land in the existing Pentir substation compound and the existing access road leading from the adopted highway to the compound. The boundary of the proposed works site includes part of the existing Pentir substation comprising office and welfare facilities, laydown storage and car parking. As the part of the proposed works site where new equipment will be installed is in the existing substation compound, it is predominantly bound by associated electrical infrastructure. Access to the proposed works site is provided from the B4547 via a private metalled access road to the south.

Figure 2: Red line boundary



3.2 Description of the Surrounding Area

3.2.1 The area immediately surrounding the part of the proposed works site that falls in the substation compound, consists of electrical infrastructure associated with Pentir substation, with the access road and beyond the substation footprint being surrounded mainly by woodland and agricultural land. The substation is predominantly bound on all sides by mature trees however parts of the northern and southern boundaries are punctuated by overhead lines and associated pylons, while the existing access runs to the south. The northern boundary of the proposed works site is bound by a single-track road, Pont Felin, running broadly east to west. Beyond the Pont Felin single-track road lies further woodland, comprising ancient woodland, and agricultural fields that are traversed by the overhead lines heading in north easterly and north westerly directions. Agricultural fields extend beyond the east and south of the proposed works site, with an overhead line heading in a south westerly direction. Ancient woodland extends to the west of the proposed works site, beyond which is further agricultural land.

3.2.2 There are a number of isolated farmhouses, agricultural buildings and residential properties in the vicinity of the proposed works site, the closest being approximately 400 metres (m) west. The Rhos Fawr Camping Site (only open August to September) is approximately 350 m north-west of the proposed works site, while the village of Pentir lies approximately 1.5 km south-east.

3.2.3 The local highway network includes the B4547, which provides access from the south-east to the existing Pentir substation. The B4547 intersects with the A4244 and the B4366 via a roundabout approximately 500 m south of the proposed works site. There are no Public Rights of Way (PRoW) in or adjacent to the proposed works site. The closest PRoW is Footpath Pentir No 14, approximately 730 m north-west of the proposed works site at its nearest point.

3.3 Environmental Designations

3.3.1 The proposed works site is not covered by any statutory designations. As presented in **Chapter 5: Ecology and Nature Conservation** of **ES Volume 2: Pentir Works**, the closest statutory sites of international importance for nature conservation are:

- Eryri Special Area of Conservation (SAC) 2.89 km south-east;
- Y Fenai a Bae Conwy/Menai Strait and Conwy Bay SAC 3.11 km west;
- Traeth Lafan/Lavan Sands Conway Bay Special Protection Area (SPA) 6.06 km north-east;
- Afon Gwyrfai a Llyn Cwellyn SAC 8.76 km south-west;
- Glynllifon SAC 13.62 km south-west; and
- Coedydd Derw a Safleoeff Ystlumod Meirion SAC 17.09 km south-east.

3.3.2 There are eight Sites of Special Scientific Interest (SSSIs) of National importance within 5 km of the proposed works site:

- Eryri SSSI 2.89 km south-east;
- Eithinog SSSI 2.93 km north;
- Moelyci a Chors Ty'n y Caeau 3.09 km;

- Coedydd Afon Menai 3.30 km north-west;
- Glannau Porthaethwy 3.61 km north;
- Sgistau Glas Ynys Mon 4.34 km north-west;
- Caeau Tyddyn Dicwm 4.62 km east; and
- Llyn Padarn 4.88 km south;

3.3.3 The Coed Cyrnol Local Nature Reserve (LNR) lies 3.68 km north of the proposed works site and is an area of mixed woodland and foreshore, which provides views of wading birds.

3.3.4 The proposed works site is within 500 m of five non-statutory sites designated for nature conservation. These include:

- Pentir Substation Candidate Local Wildlife Site, comprising coniferous and broadleaved woodland, surrounding the whole substation compound.
- Near Breakers' Yard Candidate Local Wildlife Site comprising semi-improved neutral grassland, adjacent to the access road.
- Coed Ty'n-llwyn Candidate Local Wildlife Site comprising broadleaved woodland and neutral grassland, approximately 130 m south-east
- Coed Rhos-fawr Candidate Local Wildlife Site comprising coniferous woodland and acid grassland, approximately 170 m north-east.
- Coed Nant y Garth Local Wildlife Site comprising mixed lowland woodland and a stream approximately 500 m north-west.

3.3.5 The nearest National Landscape, Ynys Mon, is approximately 3.5 km to the west at Anglesey. The closest National Park is Eryri National Park approximately 6 km to the east of the proposed works site at its closest point.

3.3.6 The proposed works site lies in the Dinorwig Registered Historic Landscape which is a registered landscape of outstanding and special interest of Wales as identified by the non-statutory Register of Landscapes of Historic Interest in Wales.

3.3.7 The Cadw Historic Assets map (Ref. 1-22) confirms that there are no designated historic assets in the proposed works site. The closest designated historic assets are a Scheduled Monument approximately 800 m south of the proposed works site; nine listed buildings approximately 500 m south-east; and 15 National Monuments within 1 km, which are mainly concentrated to the south-east and south-west. The closest National Monument is part of a non-designated Roman Road, which linked Segontium with Canovium near Conwy (PRN 17566), and is projected to run through the eastern end of the proposed works site in a north-east to south-west orientation.

3.3.8 As shown on the Natural Resources Wales Flood and Coastal Erosion Risk Maps (Ref. 1-23) the proposed works site is outside of the mapped areas of flooding from small watercourses and surface water flooding and is therefore in Flood Zone 1 and at a low risk. The substation Site is also shown to lie outside of the mapped areas of fluvial or tidal flooding, in Flood Zone A and is at a low risk at flooding from this source. In accordance with the Natural Resource Wales Development Advice Map (Ref. 1-24), the existing access to the Pentir substation is shown to cross an area of Flood Zone B, with a moderate risk of flooding from surface water and small watercourses.

3.3.9 Agricultural fields surrounding the proposed works site are categorised as Agricultural Land Classification (ALC) Grade 3a, 3b, and 5 on the Predictive Agricultural Land Classification (ALC) Map 2 (Ref. 1-25).

3.4 Local Planning Policy Allocations and Designations

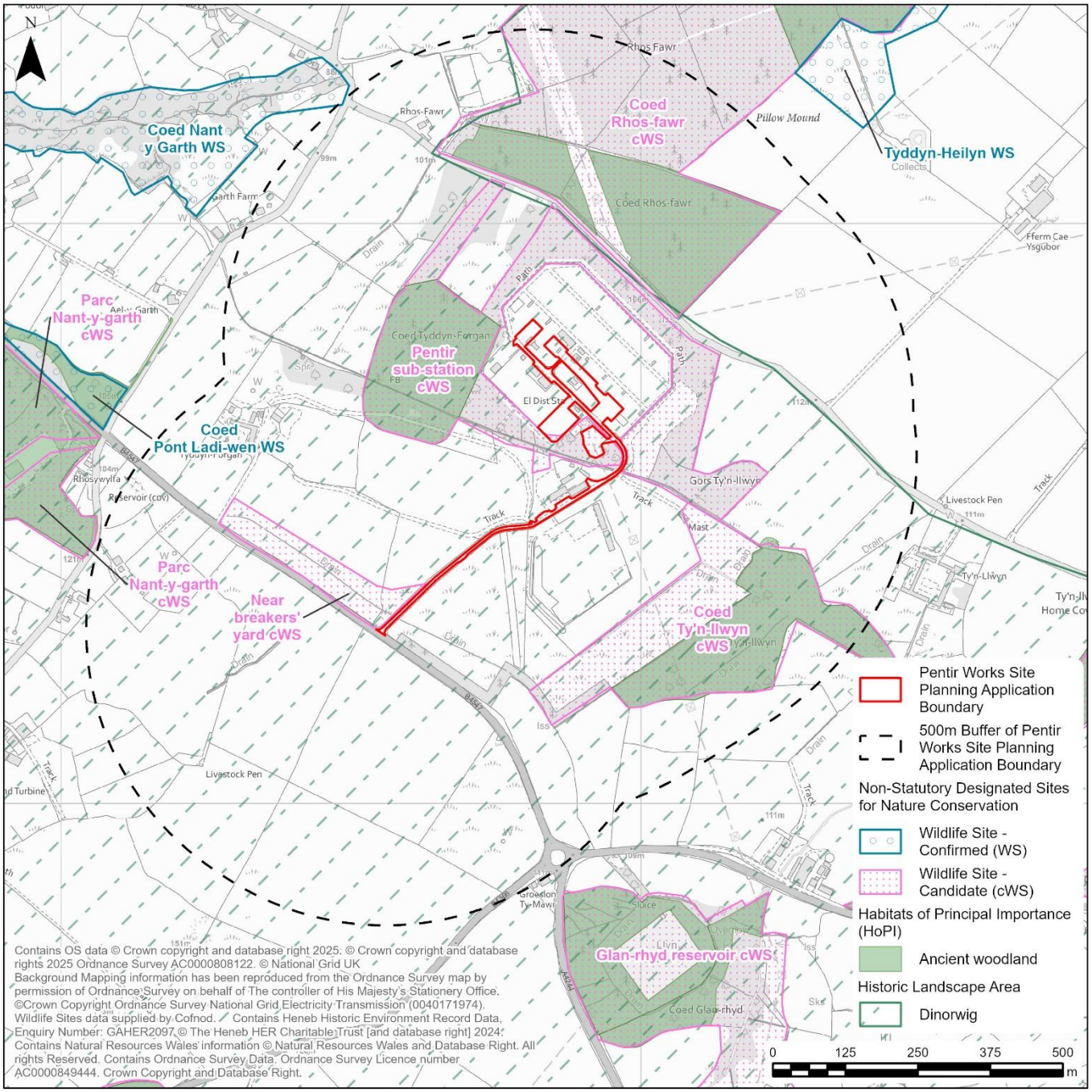
3.4.1 As the proposed works site falls in the administrative boundary of Gwynedd Council. Allocations and designations that are represented on the Proposals Map of the Anglesey and Gwynedd Joint Development Plan (Ref. 1-26) (the LDP) have been reviewed.

3.4.2 The Local Development Plan Proposals Map confirms that the proposed works site lies within an area of unconstrained land and there are no designations or allocations associated with the proposed works site or the immediately adjacent land.

3.4.3 The North-Western Fringes of Snowdonia Special Landscape Area (SLA) is approximately 1.3 km south-east of the proposed works site. Bangor Mountain & Minffordd rural hinterland SLA and Vaynol Estate and Surrounds SLA are approximately 1.8 km north-east and north-west of the proposed works site respectively. An extract of the Proposals Map, showing the location of the three SLAs (in green) in the context of the proposed works site, is provided in **Figure 3** below.

3.4.4 There is a Candidate Wildlife Site (cWS) that surrounds the proposed works site, known as the Pentir Substation cWS. This comprises coniferous and broadleaved woodland and is immediately adjacent to the substation footprint. A cWS is a site that is first identified through an initial desk-top survey to verify its quality as a Wildlife Site. Once this has been done, then Policy AMG6: 'Protecting Sites of Regional or Local Significance' can apply to a cWS. Policy AMG6 sets out that proposals causing significant harm to wildlife sites would be refused unless there is an overriding social, environmental and/or economic need for the development and that there is no other suitable site what would avoid having detrimental impact on sites of local nature conservation.

Figure 3: Pentir Site Constraints Map



3.5 Relevant Planning History

3.5.1 A review of Gwynedd Council's online planning register (Ref. 1-28) has been conducted to establish the relevant planning history associated with the proposed works site and land within 2 km of the red line boundary. The planning history search includes applications for major development that were submitted and are currently awaiting determination or those that were approved in the last five years, or those that are similar in nature to the proposed works. Minor applications such as changes of use or householder applications have been excluded from the search. **Table 3-1** below provides details of these applications.

Table 3-1 Relevant Planning History

Application Reference	Description	Status	Site Location	Distance from Site
C16/0886/15/LL	Application for the installation of underground 132kV grid connection cables between the Glyn Rhonwy Storage Facility and the Pentir Substation	Approved (29/09/2016)	Glyn Rhonwy Pumped Storage Glyn Rhonwy, Llanberis, LL55 4EL	Within substation footprint
C21/0934/15/AC	Application to amend condition 1 of planning permission reference C16/0886/15/LL for installation of underground 132kV grid connection cables between the Glyn Rhonwy Storage Facility and Pentir Substation so as to extend the development commencement period for an additional 2 years.	Approved (30/12/2021)	Glyn Rhonwy Pumped Storage Glyn Rhonwy, Llanberis, LL55 4EL	Within substation footprint
C23/0959/15/AC	Application to amend condition 1 of planning permission reference C21/0934/15/AC for installation of underground 132kV grid connection cables between the Glyn Rhonwy Storage Facility and Pentir Substation so as to extend the development commencement period for an additional 2 years.	Approved (05/02/2024)	Land Glyn Rhonwy Estate, Llanberis, Gwynedd, LL55 4EL	Within substation footprint
C22/1064/18/LL	Construction of a temporary bellmouth (5) vehicular access (for 3 years) with white lining and associated infrastructure, in support of the Dinorwig Pentir Cable Replacement scheme.	Approved (14/12/23)	Land Off A4244, Pentir, LL55 3AW	0 km, adjacent to red line boundary (Proposed Works access) on the B4547
C23/0925/25/SC	Screening opinion for electricity storage scheme	EIA not required (17/11/2023)	Pentir Substation, Pentir, Bangor, LL57 4ED	0.2 km west of red line boundary
C24/0532/25/LL	Proposed Energy Storage facility, related access, landscaping, infrastructure, ancillary equipment, with a grid connection import and export capacity of 57MWac.	Approved (29/07/24)	Land at Pentir Substation, Pentir, Bangor, LL57 4ED)	0.2 km west of red line boundary
C25/0554/18/LL	Installation of underground electricity cable in association with Pentir BESS energy storage scheme (LPA reference: C24/0532/25/LL)	Validated (31/07/2025) In Progress	Llanddeiniolen, Caernarfon, Gwynedd, LL55 3AN	0 km within red line boundary

Application Reference	Description	Status	Site Location	Distance from Site
C24/1070/25/TR	Upgrade five spans of existing 11kV Overhead electricity line between pole number 37 (main Line) and pole No 5 (Spur line).	Validated (05/12/2024) In Progress	Brithdir Mawr Lôn Wern, Pentir, Bangor, Gwynedd, LL57 4BY	1km north-east of red line boundary
C25/0266/18/LL	Temporary planning permission for a period of 40 years for the erection of an Energy Storage System (ESS), together with associated infrastructure, site access, landscaping and ancillary works.	Validated (03/04/2025) In Progress	Land At Tyddyn Forgan, Llanddeiniolen, Caernarfon, LL55 3AN	Immediately south of the Pentir Substation access road
C25/0305/18/SC	Screening Opinion for proposed development of a battery energy storage system, associated infrastructure, access and landscaping	Validated (09/04/2025) In Progress	Land South of B4547 Seion/Pentir, Llanddeiniolen, LL55 3AN	0.18km south-east of red line boundary
C25/0277/18/LL	Proposed development of a battery energy storage system, associated infrastructure, access and landscaping	Validated (08/04/2025) In Progress	Land South Of B4547 Seion/pentir, Llanddeiniolen, LL55 3AN	0km, adjacent to red line boundary (south of the B4547)

3.5.2 The proposed works site is an established substation which has been subject to previous upgrade works including the Glyn Rhonwy Pumped Storage Grid Connection (16/0886/15/LL). This proposes a 132kV grid connection from the Glyn Rhonwy Pumped Storage facility (a Nationally Significant Infrastructure Project consented March 2017) to the Pentir substation. The grid connection is approximately 10 km long and is completely underground. Two subsequent applications were submitted to amend Condition 1 of 16/0886/15LL and extend the development commencement period for an additional 2 years (C21/0934/15/AC and C23/0959/15/AC). The development must now be commenced by 5 February 2026. This development will not impact on or prevent the proposed works being undertaken).

3.5.3 More recently, an energy storage facility (C24/0532/25LL) has been approved approximately 0.2 km north-west of the proposed works site for an energy storage facility, and a subsequent related application has been submitted to connect this to Pentir substation and is pending consideration (C25/0554/18/LL). A temporary planning permission for an energy storage system (C25/0266/18/LL) is also pending consideration, and a proposed battery energy storage (C25/0277/18/LL) is pending consideration following a Screening Opinion (C25/0305/18/SC), which if implemented will further reinforce the immediate character of the area as being defined by electrical and energy infrastructure. The remaining applications listed in **Table 3-1** will not impact the proposed works.

3.5.4 In addition to the planning applications listed in **Table 3-1**, there has been an application for one Development of National Significance (DNS) within a 5 km radius of the proposed works site. This application (reference: DNS/3250903) was made by Lightsource BP for a *'Circa 50 MW solar farm with ancillary infrastructure'*. The solar farm was proposed to be approximately 0.15km north-east of the Pentir substation. A pre-application advice meeting took place on the 21st February 2023, however the application was subsequently withdrawn. At the time of writing there are currently no

details provided as to the rationale for withdrawal, the date of the withdrawal or if there are any intentions to re-submit the application.

4. The Proposed Works

4.1 Introduction

4.1.1 As outlined in Chapter 1 of this Planning Statement, planning permission is sought for the following development at Pentir substation:

"replacement of existing underground cables and installation of new underground cables at the existing Pentir substation"

4.1.2 These works are described in further detail below and described in more detail in **Chapter 2: Pentir Substation Works** of **ES Volume 2 Pentir Works.**

4.2 Removal of Existing Electrical Equipment

4.2.1 The existing electrical apparatus to be removed is the existing cable sealing ends and associated steel structures; which will be disconnected and dismantled; all dismantled equipment would be disposed of into designated recycling waste skips in the Pentir works site. A section of busbar and overhead line downdropper also would be removed.

4.2.2 The 400 kV cables and associated plant would be drained, decommissioned and dismantled by a specialist contractor appointed to undertake these works. All waste material would be disposed of off-site at designated licensed waste and recycling sites.

4.2.3 Redundant concrete foundations would be broken down and the resultant arisings would be disposed of in a designated waste skip on Site.

4.2.4 **Section 2.3** of **ES Volume 2: Pentir Works** provides further detail on the removal of existing equipment as part of the proposed works.

4.3 New Equipment

Electrical Equipment

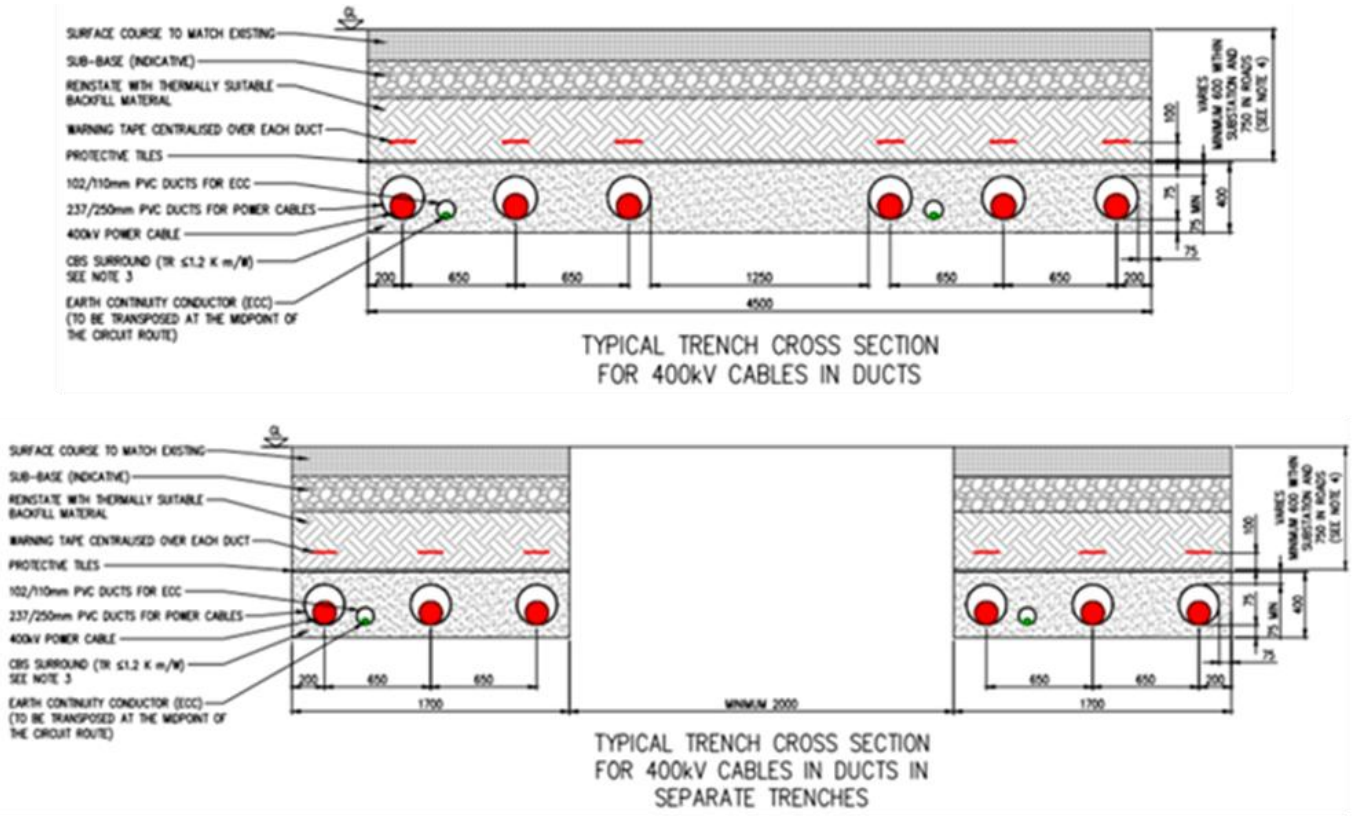
4.3.1 The new and replacement electrical apparatus to be installed is new cable sealing ends and associated steel structures. Existing Capacitive Voltage Transformers with support structures will be relocated from the present location to the other side of the circuit (to accommodate the additional set of cable sealing ends). There will also be a replacement section of busbar, replacement overhead line downdropper and earth switch and above and below ground earthing

Cables

4.3.2 New 2,500 square millimetre (mm^2) single core 400 kV cables comprising a segmented copper conductor, semi-conducting polymer conductor screen, extruded cross-linked polyethylene insulation, extruded semi-conducting polymer insulated screen, smooth welded aluminium sheath and high-density polyethylene outer sheath will be installed. A complete cable diameter is 145 millimetres (mm) in diameter.

4.3.3 The new cables would pass beneath the existing electrical high voltage circuit busbar, requiring power outages for this part of the works. The cables would be contained in ducts in either a single trench or separate trenches approximately 1 m deep as illustrated in **Figure 4**. Cable works would also be required below the overhead line downleads.

Figure 4: Typical cable Trench Cross Section



Reinstatement

4.3.4 Within the Pentir substation compound, all working areas would be reinstated with 300 mm of type 1 and 75 mm of 10 mm limestone chippings. All scaffolding used for cable termination and mounting structures would be removed.

4.4 Access

4.4.1 During construction, the existing metalled access road from the B4547 to the existing Pentir substation will be used and no works are needed to it.

4.5 Construction

Installation Activities

4.5.1 Foundations for the new structures would be constructed from reinforced concrete delivered to the Pentir works site by truck mixer from the nearest supplier.

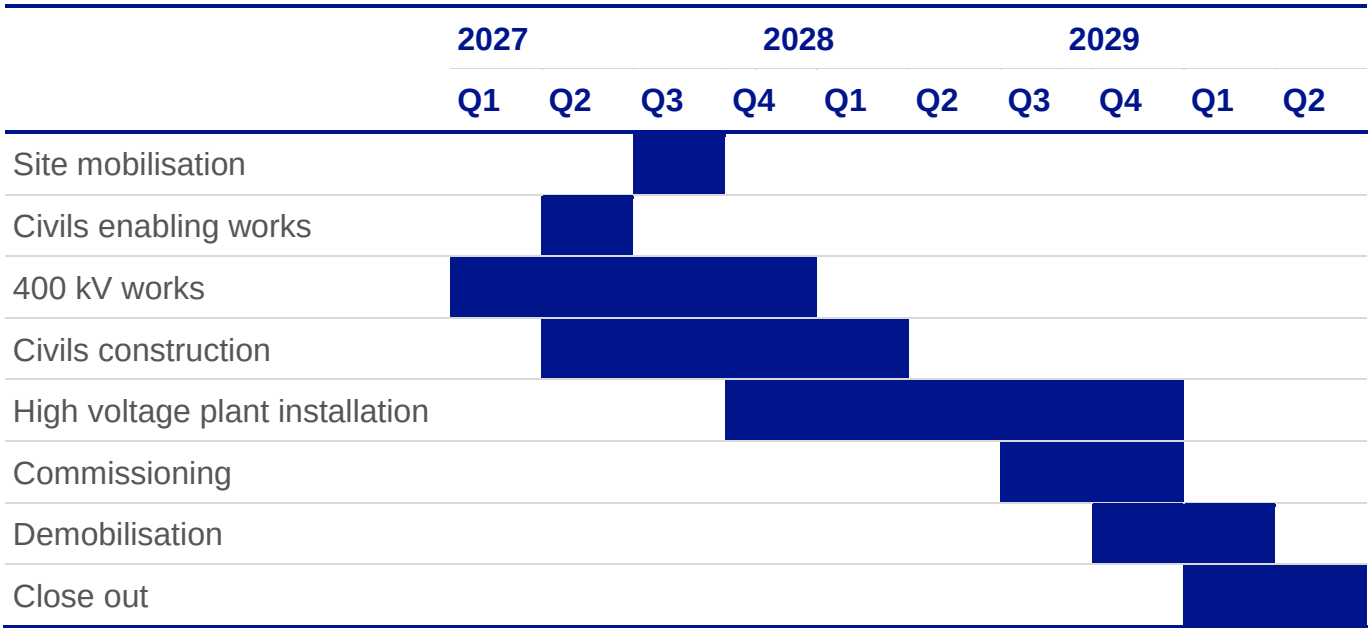
4.5.2 Stone and aggregate would be delivered to the Pentir works site as required.

4.5.3 Steel structures and associated electrical infrastructure would be erected using a combination of mobile cranes, mobile elevated work platforms (MEWPs) and telehandlers. Mobile cranes will be used for any heavy equipment; HV plant equipment, MEWPs will be used for bolting, fixing, busbars and telehandlers will be used for small lifts and traversing the site.

Construction Programme

4.5.4 The construction of the proposed works is planned to be undertaken over a period of approximately two years from Q1 2027 – Q2 2029 to coordinate with the wider Project. Construction will occur in phases as summarised below.

Table 4-1 Construction Programme



4.5.5 As outlined in the **ES Volume 2: Pentir Works**, construction activities will broadly comprise of the following:

- Site mobilisation – site set up for cabins and civils.
- Civils enabling work – access, main site office establishment, earthworks, drainage and platform.
- 400 kV works – de-oiling and purging of existing cables; removing lids, breaking concrete bound sand and exposing cables; cutting and capping at joint bays, removal of cables; and clean throughs and removal of steelwork.
- Civils construction – cable sealing end bases and structures.
- High voltage plant installation.
- Commissioning – testing of the individual items of plant and culminating with the testing of the installed system as a whole before being brought into operation.
- Demobilisation – removal of all temporary infrastructure i.e. cabins and offices.
- Close out – handover assets and final as built drawings.

Construction Site Layout

4.5.6 The construction compound would be established in the south-west corner of the existing Pentir substation compound (see **ES Figure 2.2.2**) and would comprise office space, welfare facilities and laydown storage space.

4.5.7 A designated parking area immediately west of the Pentir substation compound would be used. This area is currently hardstanding and would remain unmodified.

Staffing, Employment and Hours of Working

4.5.8 As detailed in the **ES Volume 2: Pentir Works**, the number of staff on the proposed works site would vary according to the construction phase and activities being undertaken, however it is anticipated that the following would be required for each phase of work:

- Removing and decommissioning old equipment, concrete break out and service diversions – 12 operatives.
- Constructing the new duct routes for the two circuits – 12 operatives.
- Installing, terminating and testing the new cable – 8 operatives.

4.5.9 Construction activities would be undertaken during daytime periods only from Monday to Friday 7:30am – 5:30pm (including an hour set up and hour shut down). Construction will not take place on bank holidays or weekends, unless agreed with the Local Planning Authority.

4.5.10 There may be some periods of extended or 24-hour working, however this would be by agreement with the Local Planning Authority.

4.6 Operation

4.6.1 Generally, the Pentir substation is manned and there would be no change to the current frequency of attendance, inspections and maintenance regimes during operation due to the proposed Pentir works. Maintenance of the substation is triggered by issues arising from monthly inspections.

5. Pre-Application Consultation

5.1 Pre-application Engagement with Gwynedd Council

5.1.1 The Applicant has undertaken pre-application engagement with Gwynedd Council from 2023-2025. This has included regular virtual meetings, e-mail correspondence and telephone conversations on a number of matters such as the scope of the application. Further engagement is expected with the Council prior to the submission of the planning application(s).

5.2 Pre-Application Engagement with Other Stakeholders

5.2.1 Throughout the development of the proposed works, the Applicant has engaged with a number of other stakeholders through face-to-face meetings, virtual meetings, letters, e-mails and telephone calls. Organisations and individuals consulted include Natural Resources Wales, Heneb, Cadw, landowners and members of the public.

5.3 Statutory Pre-Application Consultation

5.3.1 In accordance with Section 61Z of The Town and Country Planning Act 1990 (as amended) (Ref L) and Part 1A of the Town and Country Planning (Development Management Procedure) (Wales) (Amendment) Order 2016 (Ref. 1-29), all major developments are required to be subject to pre-application consultation prior to submitting a planning application. Consequently, and in accordance with the regulations, statutory pre-application consultation is being undertaken in respect of the proposed works.

5.3.2 This Planning Statement forms part of the suite of planning application documents prepared for the statutory pre-application consultation. Following consultation, further details on the statutory pre-application consultation process will be presented in the Pre-Application Consultation Report.

6. Planning Policy Context

6.1 Introduction

6.1.1 This section sets out the key legislation and planning policy that is of relevance to the proposed works.

6.2 The Development Plan

6.2.1 Sections 38(6) of the Planning and Compulsory Purchase Act 2004 (Ref. 1-30) and paragraph 1.18 of Planning Policy Wales emphasises that planning decisions should be made in accordance with the development plan, unless material considerations indicate otherwise. The Development Plan for the proposed works site comprises:

a) Future Wales – The National Plan 2040 (Ref. 1-31); and

b) Joint Anglesey and Gwynedd Local Development Plan 2011 – 2026 (Ref. 1-26).

Future Wales – The National Plan 2040

6.2.2 Future Wales: The National Plan 2040 ('Future Wales') (Ref. 1-31) was adopted by the Welsh Government in 2021 and is the National Development Framework for Wales. Future Wales sets out the spatial strategy for growth and development in Wales. This includes providing a framework for the location of nationally significant development.

6.2.3 Chapter 2 of Future Wales provides an overview of opportunities and constraints to future growth. This includes progressing a reduction in Greenhouse Gas Emissions, which includes supporting the low carbon economy and the development of renewable energy (particularly wind) and resultant need for new strategic grid infrastructure to support the growth of renewable and low carbon electricity generation.

6.2.4 Policy 5: Supporting the rural economy, provides Welsh Government support for sustainable, appropriate and proportionate economic growth in rural areas. The supporting text also sets out strong support for the development of innovative and emerging technologies, including those that play a key role in helping to decarbonise Wales.

6.2.5 Policy 8: Flooding requires the consideration of flood risk management in development proposals while Policy 9: Resilient Ecological Networks and Green Infrastructure seeks to ensure the enhancement of biodiversity.

6.2.6 Policy 17: Renewable and Low Carbon Energy and Associated Infrastructure confirms support for the principle of the development of renewable and low carbon energy from all technologies and at a scale to meet future energy needs. The policy recognises the importance of the provision of new grid infrastructure in delivering the growth in renewable energy provided that infrastructure is "designed to minimise visual impact on nearby communities". It goes on to state that the Welsh Government is committed to working with stakeholders including National Grid, and to reducing barriers to the implementation of new grid infrastructure.

6.2.7 The proposed works site is in North West Wales. Policy 24: North West Wales and Energy supports North West Wales as a location for new energy development. confirming that *"On-shore developments associated with off-shore renewable energy projects will be supported in principle".*

The Joint Anglesey and Gwynedd Local Development Plan

6.2.8 The Local Development plan (LDP) in respect of the proposed works comprises the Joint Anglesey and Gwynedd Local Development Plan 2011 – 2026 (adopted July 2017).

6.2.9 The following planning policies from the Local Development Plan are relevant to the proposed works:

- Strategic Policy PS 1: Welsh Language and Culture
- Policy ISA 1: Infrastructure Provision
- Policy TRA 4: Managing Transport Impacts
- Strategic Policy PS 5: Sustainable Development
- Policy PCYFF 1: Development Boundaries
- Policy PCYFF 2: Development Criteria
- Policy PCYFF 3: Design and Place Shaping
- Policy PCYFF 4: Design and Landscaping
- Policy PCYFF 6: Water Conservation
- Strategic Policy PS 7: Renewable Energy Technology
- Strategic Policy PS 19: Conserving and where appropriate enhancing the Natural Environment
- Policy AMG 3: Protecting and enhancing features and qualities that are distinctive to the Local Landscape Character
- Policy AMG 5: Local Biodiversity Conservation
- Policy AMG 6: Protecting Sites of Regional or Local Significance
- Policy PS 20: Preserving and where appropriate enhancing Heritage Assets
- Policy AT 1: Conservation Areas, World Heritage Sites and Registered Historic Landscapes, Parks and Gardens
- Policy AT 3: Locally or Regionally Significant Non-Designated Heritage Assets
- Policy AT 4: Protection of Non-Designated Archaeological Sites and their setting
- Policy ADN 3: Other Renewable Energy and Low Carbon Technologies

6.3 Material Considerations

Planning Policy Wales (Edition 12)

6.3.1 Planning Policy Wales (February 2024) (PPW) (Ref. 1-32) sets out the land use policies of the Welsh Government with the primary objective of ensuring that *"the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales, as required by the Planning (Wales) Act 2015, the Well-being of Future Generations (Wales) Act 2015 and other key legislation"*.

6.3.2 PPW establishes five key planning principles for the planning system, aimed at achieving the right development, in the right place (paragraph 2.13), three of which are relevant to the proposed works:

- Growing our economy in a sustainable manner – Enabling development which contributes to long-term economic wellbeing, making the best use of existing infrastructure and planning for new supporting infrastructure and services.
- Making best use of resources – Making development resilient to climate change, decarbonising society and developing a circular economy for the benefit of both the built and natural environment.
- Maximising environmental protection and limiting environmental impact – Natural, historic and cultural assets must be protected, promoted, conserved and enhanced. Negative environmental impacts should be avoided in the wider public interest.

6.3.3 Chapter 3 Strategic and Spatial Choices expands on the benefits of effective strategic placemaking, including paragraph 3.61 which provides a *"need for supporting infrastructure that is "adequate and efficient", including electricity infrastructure which is recognised as being "crucial for economic, social and environmental sustainability".*

6.3.4 In Chapter 5 Productive and Enterprising Places, the economic components of placemaking are covered. Paragraph 5.7.2 recognises that for future demand to be met, significant investment will be needed in energy generation, transmission and distribution infrastructure. It is acknowledged in paragraph 5.7.7 that to achieve overall commitments to tackling climate change the planning system should *"integrate development with the provision of additional electricity grid network infrastructure"*.

6.3.5 Paragraph 5.7.8 sets out that an integrated approach should be adopted towards planning for energy developments and additional electricity grid network infrastructure to fulfil the Welsh Governments renewable and low carbon ambitions. It is recognised that additional electricity grid network infrastructure will be needed to support new energy generating developments more generally. The Welsh Government's position on new power lines is outlined in paragraph 5.7.9, and these, where possible, should be laid underground.

6.3.6 Paragraph 5.9.10 states that *"Planning authorities should plan positively for grid infrastructure"*, with appropriate grid developments being supported, and development plans facilitating grid infrastructure required to support renewable and low carbon energy.

6.3.7 Chapter 6 Distinctive and Natural Places covers the environmental and cultural components of placemaking and provides in-depth guidance relating to a wide range of environmental topics including but not limited to the historic environment, landscape, biodiversity and ecology, water environmental and air quality.

Technical Advice Notes

6.3.8 PPW is supplemented by topic-based Technical Advice Notes (TANs), of which there are 21 in total. The TANs provide detailed planning advice and are material considerations in the determination of planning applications in Wales. The following TANs are of relevance to the proposed works:

- Technical Advice Note (TAN) 5: Nature conservation and planning (2009) (Ref. 1-33);
- Technical Advice Note (TAN) 6: Sustainable rural communities (2010) (Ref. 1-39)
- Technical Advice Note (TAN) 11: Noise (1997) (Ref. 1-40);
- Technical Advice Note (TAN) 12: Design (2016) (Ref. 1-41);
- Technical Advice Note (TAN) 15: Development, flooding and coastal erosion (2025) (Ref. 1-34);
- Technical Advice Note (TAN) 20: Planning and the Welsh Language (Ref. 1-42);
- Technical Advice Note (TAN) 23: Economic development (2014) (Ref. 1-43)
- Technical Advice Note (TAN) 24: The historic environment (2017) (Ref. 1-35).

National Policy Statement EN-1

6.3.9 The Overarching National Policy Statement (NPS) for Energy (EN-1) (Ref. 1-36) published by the Department for Energy Security and Net Zero (DESNZ) came into effect in January 2024. NPS EN-1 sets out national policy for energy infrastructure, including *"the electricity transmission and distribution system"*. It emphasises the need for new energy projects that will contribute towards a secure, diverse and affordable energy supply.

6.3.10 Paragraph 1.4.2 sets out that, *"… energy policy is generally a matter reserved to the UK Ministers and this NPS may therefore be a relevant consideration in planning decisions in Wales and Scotland."*

6.3.11 In view of this, both NPS EN-1 and the National Policy Statement for Electricity Networks Infrastructure (EN-5) which also came into effect in January 2024, may be material considerations in respect of the proposed works.

6.3.12 Paragraph 3.2.6 to 3.2.8 of NPS EN-1 (Ref. 1-37) establishes the need for the types of infrastructure covered by EN-1. These paragraphs set out that the Secretary of State has determined that substantial weight should be given to this need when considering applications. Paragraph 3.3.65 adds that *"there is an urgent need for new electricity network infrastructure to be brought forward at pace to meet our energy objectives"*. In addition, paragraph 3.3.68 acknowledges that *"the volume of onshore reinforcement works needed to meet decarbonisation targets is substantial"*.

6.3.13 Paragraphs 3.3.62 and 4.2.4 confirm that *"there is a critical national priority (CNP) for the provision of nationally significant low carbon infrastructure".* Paragraph 4.2.5 confirms that all power lines in the scope of NPS EN-5 (Ref. 1-37), including network reinforcement and upgrade works, are a CNP. Paragraph 4.2.15 confirms that where residual non-HRA or non-MCZ impacts remain after the mitigation hierarchy has been applied, that these residual impacts *"are unlikely to outweigh the urgent need"*. It is only in all but the *"most exceptional circumstances"* that consent will be refused.

6.3.14 Paragraph 4.11.3 sets out the government's acceleration of the development of the grid network to facilitate the UK's net zero energy generation development and transmission. Good design is a key consideration in the development of renewable energy infrastructure, with paragraph 4.7.2 outlining that energy projects expected to produce infrastructure sensitive to place. Paragraph 4.7.2 also highlights that the government acknowledge the limitations that an Applicant may have on the physical appearance of energy infrastructure. This is furthered by Paragraph 4.7.6 which states *"the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure"*.

National Policy Statement EN-5

6.3.15 Paragraph 1.1.1 of EN-5 (Ref. 1-37) explains that an increased capacity in the UK's electricity network is fundamental to ensure the security and reliability of the current and future energy supply, to provide the infrastructure necessary to facilitate the transition to net zero.

6.3.16 Paragraph 1.1.2 goes on to explain that a large amount of this new electricity network infrastructure is required in the near term, to support the Government's ambition of deploying up to 50 GW of offshore wind capacity by 2030. Without a reliable and secure electricity network, EN-5 is clear that this ambition cannot be achieved (paragraph 1.1.3).

Emerging Gwynedd Local Development Plan

6.3.17 Following cessation of the joint working agreement on Planning Policy matters in March 2023 between Cyngor Gwynedd and the Isle of Anglesey County Council, the Gwynedd Planning Policy Service was established. The process of preparing a new LDP for the Gwynedd Local Planning Authority area has commenced. It will cover a period between 2024 and 2039 and is currently at the Pre-Deposit stage.

6.3.18 A Call for Candidate Sites consultation closed on 15 January 2025 to identify potential sites for a range of land uses including housing, employment and other uses such as recreation. The Candidate Site Register is available to view via the Gwynedd Local Development Plan (the new Plan) Portal.

6.3.19 Following the closure of the Call for Candidate Sites consultation, Gwynedd Council had planned a consultation period that was anticipated to take place between March 2025 and April 2025 on a Pre-deposit Plan, Preferred Strategy and Impact Assessments. However, this stage in the preparation of the Plan has not yet taken place. A Deposit Plan (Draft Local Plan) was expected between September 2025 and August 2026, with this submitted for examination in September 2026. The new Gwynedd LDP currently has an anticipated adoption date of September/October 2027. It is anticipated that these stages in the preparation of the Local Plan may now take place at a later date.

7. Planning Appraisal

7.1 Introduction

7.1.1 This section sets out how the proposed works are in accordance with the development plan as per section 38(6) of the Planning and Compulsory Purchase Act 2004.

7.2 Principle of Development

7.2.1 There is strong national policy support for the strengthening and reinforcement of the electricity network in Wales, particularly to support the transition to net zero. The proposed works accord with Future Wales Policy 17 as they are required to increase the capacity of the electricity transmission network, of which Wales has international commitments to “generate 70% of consumed electricity by renewable means by 2030”. Policy 17 also explicitly earmarks the need for new, strategic grid infrastructure. The proposed works, as part of the Project, will play a key role in supporting the development of innovative and emerging technologies to help decarbonise Wales in rural areas, in accordance with Future Wales Policy 5. In line with Future Wales Policy 24, the proposed works comprise onshore development that will connect offshore renewable energy projects.

7.2.2 The proposed works will support the continued expansion of renewable energy generation in the UK, in particular, the growth of the offshore wind sector in Wales. In turn, this will contribute to the decarbonisation of the power sector as renewables increasingly replace higher-carbon generation sources. This aligns with the UK Government’s goal of achieving a fossil fuel-independent electricity system by 2035 and the Welsh Government’s aims of reducing greenhouse gas (GHG) emissions to Net Zero by 2050, with the ambition of collectively reach net zero by 2030 in the public sector. This also aligns with Policy PS 5 and Policy PS 6 in the LDP which sets out criteria required to alleviate and adapt to the effects of climate change and outlines the need to reduce greenhouse gas emissions.

7.2.3 While the proposed works are outside the Development Plan Boundaries identified under Policy PCYFF 1 of the LDP, the works are justified as per the national policy support outlined in paragraph 7.2.1 above and the principle of locating transmission infrastructure in this location is established due to the presence of existing electricity infrastructure. Utility services are also supported as set out in the LDP Policy ISA 1.

7.2.4 In accordance with Policy PCYFF 2 of the LDP and the requirement for proposals to “make the most efficient use of land”, the proposed works are in the existing Pentir substation thereby reducing and minimising potential environmental impacts and demonstrating appropriate use of land. Strategic Policy PS 7 supports the plan area as a host of renewable energy technologies, which will require new grid capacity for the council to realise Gwynedd as “a leading area for initiatives based on renewable or low carbon technologies”.

7.2.5 The proposed works site is an existing operational substation, in a suitable location for reinforcement works required to ensure that there is sufficient capacity to meet demand through offshore wind. The Project is identified by the NOA 2022 (Ref1-3) as a strategic project forming part of the national great grid upgrade to transition to net zero by 2050.

7.2.6 PPW paragraph 3.61 recognises the need for electricity infrastructure such as the proposed works (forming part of the Project) as being crucial for economic, social and environmental sustainability. The need for significant investment in energy transmission and distribution infrastructure is also highlighted in paragraph 5.7.2, while paragraph 5.7.7 outlines that commitments to climate change will only be achieved if new energy development is integrated with the provision of additional electricity grid network infrastructure. TAN 6 and 23 support development that is intended to enhance infrastructure networks in rural areas, as the proposed works would do. NPS EN-1 recognises that substantial weight should be given to the need for energy infrastructure such as that of the proposed works (forming part of the Project), and that it falls under CNP infrastructure where there is a presumption to grant consent.

7.2.7 In conclusion, the principle of the proposed works is in accordance with Policies PS 7 and PCYFF 2 of the LDP, Policies 5, 17 and 24 of Future Wales, and PPW and NPS EN-1. There is a compelling need for the proposed works and the principle of developing and upgrading transmission networks to facilitate the connection of 50 GW of offshore wind by 2030, and upgrading grid capacity is supported by both national policy (including the National Plan) and local policy.

7.3 Landscape and Visual Amenity

7.3.1 A Landscape and Visual Impact Assessment (LVIA) of the proposed works has been undertaken and is set out in **Chapter 4: Landscape and Visual Amenity** of **ES Volume 2: Pentir Works**, which confirms that the proposed works will have no significant adverse impacts on both landscape character and visual amenity due to the location of the proposed works being in the context of the existing Pentir substation.

7.3.2 Policy AMG 3 of the LDP sets out the measures that should be taken to ensure the features and qualities that are distinctive to local landscape character are protected. This includes taking measures to ensure development does not “cause significant adverse impacts to the character of the built or natural landscape”. The construction works would be temporary and due to the proposed works being in the context of the existing substation and their underground nature, the effects on landscape character would be barely discernible and the existing substation is screened from surrounding views by the adjacent woodland. There would be no significant adverse impacts on landscape character in accordance with LDP Policy AMG 3.

7.3.3 Policy PCYFF 4 of the LDP highlights the importance of considering the landscape and visual impacts of development. It states that all proposals for development should “*integrate into their surroundings*” and will be refused if they fail to show how landscaping (appropriate to the nature, scale and location of the proposed works) has been considered from the outset.

7.3.4 The proposed works site is in the Dinorwig Registered Historic Landscape, with many elements associated with this listing remaining as part of the rural character of the area, including the “*scenic grandeur of the area*”. In accordance with LDP policy AT 1, PPW paragraph 6.1.21 and TAN 24, and having regard to the non-statutory Register of Landscapes of Special Historic Interest in Wales, the proposed works are in the confines of the existing substation compound and the construction effects are temporary and screened from surrounding views by woodland. The proposed works will have no significant adverse impacts on or affect the integrity of the Registered Historic Landscape.

7.3.5 Due to the rural setting and nature of the development, residential visual receptors are limited to scattered farms and individual dwellings in the vicinity of the proposed works site. There are no long-distance walking routes or national cycle networks close to the proposed works site, and there are no promoted routes in the vicinity of the proposed works site. The closest part of a PRoW is 730 m from the proposed works site and screened by intervening vegetation including existing woodland around Pentir substation. The strategic road network consists of the B4547, which provides access to the existing Pentir substation, the A4244, and the B4366, as well as a number of local and minor roads connecting individual farms and properties. Given the location of these visual receptors and the physical attributes of the proposed works, they will have no adverse impacts on visual receptors.

7.3.6 In conclusion, the proposed works would occur in the existing operational substation boundary. Effects on landscape character and visual amenity would be temporary and barely discernible as they would occur within the context of existing Pentir substation infrastructure that is screened by surrounding existing vegetation, resulting in no significant adverse impacts on either landscape or amenity. Due to the limited and temporary nature of potential change, all landscape and visual effects were scoped out the ES assessment. The proposed works comply with LDP policies PCYFF 4 and AMG 3, and national policies addressing landscape and visual amenity.

7.4 Design

7.4.1 LDP Policy PCYFF 3 provides criteria that development should meet, where relevant, to demonstrate high quality design that takes into account the natural, historic and built environment. The requirement for developments to respect the context of the site in which they are proposed and its place in the local landscape is particularly relevant. Future Wales Policy 17 requires the designing of new strategic grid infrastructure to minimise visual impact on nearby communities.

7.4.2 NPS EN-1 recognises that "*the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure*", emphasising the need to demonstrate good design in terms of siting relative to existing landscape character, landform and vegetation.

7.4.3 The proposed works will respect the context of the site and its place in the local landscape as it comprises additional electrical infrastructure within an existing substation, demonstrating good design in terms of siting. The siting also minimises impacts on nearby settlements as it is in an already established substation site and the operational cables will be underground. Therefore, the proposed works are in accordance with LDP Policy PCYFF 3, Future Wales Policy 17, TAN 12 and NPS EN-1.

7.5 Ecology and Nature Conservation

7.5.1 Under Strategic Policy PS 19 of the LDP, proposals that have a significant adverse effect on the Plan area's distinctive natural environment, countryside and coastline will be refused unless the need for and benefits clearly outweigh the harm, while Policy AMG 6 protects sites of regional or local significance from proposals that are likely to cause direct or indirect harm. Policy AMG 5 requires development proposals to protect and enhance biodiversity through sensitive location and enhancement of habitats. This is also reiterated by Future Wales Policy 9 which requires the maintenance and enhancement of biodiversity including the provision of a *"net benefit"*.

7.5.2 Section 6.4 of PPW and TAN 5 require proposals for development to deliver a net benefit for biodiversity.

7.5.3 An assessment of the likely significant effects on ecologically sensitive receptors is presented in **Chapter 5: Ecology and Nature Conservation** of **ES Volume 2: Pentir Works**. This concludes that no significant adverse impacts are anticipated through the construction, operation and maintenance of the proposed works.

Arboriculture

7.5.4 An **Arboricultural Report (ES Volume 8, Appendix 2.5.C)** assesses the likely impact of the proposed works on trees. A Plantation of Ancient Woodland Site directly abuts the western boundary of the proposed works site and forms part of the Pentir Substation cWS. This woodland was assessed as part of the National Grid North Wales Connection (NWC) project in 2018 and determined to be in poor condition at that time. A review of the Woodland Trust Ancient Tree Inventory does not indicate any ancient or veteran trees within the proposed works site, with the closest approximately 1.6 km to the south-west.

7.5.5 The proposed works have been designed to avoid key natural features present within or adjacent the proposed works site as far as possible. Proposed mitigation includes minimum buffers including a 15 m buffer from both woodland and individual trees, and the implementation of a Construction Environmental Management Plan (CEMP) to ensure adherence to best practice measures. As the proposed works fall wholly in the existing hardstanding areas of the Pentir substation, no trees or woodland will be directly impacted, and no significant effects will occur.

7.5.6 The proposed works will not impact any trees or woodland in line with LDP PS 19, which requires the consideration of protecting, retaining or enhancing trees, hedgerows and woodland.

Net Benefits for Biodiversity

7.5.7 The Environment (Wales) Act 2016 Part 1 Section 6: 'Biodiversity and resilience or ecosystems duty' states that public authorities "*must seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales, and in so doing, promote the resilience of ecosystems, so far as consistent with the proper exercise of those functions*".

7.5.8 Future Wales Policy 9: 'Resilient Ecological Networks and Green Infrastructure' sets out that "*action towards securing the maintenance and enhancement of biodiversity (to provide a net benefit), the resilience of ecosystems and green infrastructure assets must be demonstrated as part of development proposals through innovative, nature-based approaches to site planning and the design of the built environment*."

7.5.9 PPW expands on this by stating that the "*planning system has a key role to play in helping to reverse the decline in biodiversity and increase the resilience of ecosystems. Recognising that development needs to take place and some biodiversity may be impacted, the planning system should ensure that…there is a net benefit for biodiversity…"*

7.5.10 PPW also states that "*all development must deliver a net benefit for biodiversity and ecosystem resilience from the baseline state (proportionate to the scale and nature of the development proposed)"*

7.5.11 PPW TAN 5: ‘nature conservation and planning’ sets out the key principles of positive planning for nature conservation, and states that the town and country planning system in Wales should “…*look for development to provide a net benefit for biodiversity conservation with no significant loss of habitats or populations of species, locally or nationally.”*

7.5.12 A Net Benefit for Biodiversity (NBB) and Green Infrastructure (GI) Statement for Pentir (**ES Volume 8, Appendix 2.5.D: Net Benefit for Biodiversity and Green Infrastructure Statement**) has been prepared to support this Planning Application. The NBB and GI statement has been produced in response to the approach to delivering NBB and GI in Wales, as mandated in Planning Policy Wales 12. This combined NBB and GI Statement demonstrates how the proposed works have applied the stepwise approach and DECCA framework, through habitat avoidance, mitigation, creation and/or enhancement to reduce the permanent and temporary impact of habitats within the planning application boundary and provide proportionate compensation where achievable. Mitigation measures are included in the CEMP to reduce the potential effects of on-site important ecological features. A Landscape and Visual Impact Assessment (LVIA) of the proposed works has been undertaken and is set out in **Chapter 4: Landscape and Visual Amenity** of **ES Volume 2: Pentir Works**. Both reports should be read in conjunction with the NBB and GI Statement.

7.5.13 The proposed works would not have any direct or indirect impacts on semi-natural habitats. Avoidance of all impacts to semi-natural habitats has been achieved and there is no requirement to evidence the additional steps in the stepwise approach. The DECCA framework and GI standards have been evidenced. A Net Benefit for Biodiversity has been achieved, inclusive of maintaining GI networks on-site through the implementation of species-specific enhancement. All species-specific enhancements will be managed and maintained for a length of time proportionate to the enhancements provided.

7.5.14 In conclusion, in line with the species-specific enhancements set out within the NBB and Green Infrastructure Statement, the proposed works would result in a net biodiversity benefit and would accord with the requirements of the Environment (Wales) Act 2016, FW Policy 9 and the PPW.

Statutory and Non-Statutory Designated Sites, Habitats and Species

7.5.15 The proposed works site is neither a statutory or non-statutory designated site for nature conservation. The closest statutory site for nature conservation is 2.89 km south-east at its closest point and the nearest Local Wildlife Site (WS) is within 500 m. The Pentir Substation cWS will also not be adversely impacted through the works. The proposed works will not result in either direct or indirect impacts to these sites in accordance with LDP Policy PS 19 and AMG 6.

7.5.16 The proposed works site comprises an existing substation with the proposed works confined to the existing footprint of the substation, with no connectivity to existing habitat. Following the use of best practice measures and the implementation of the mitigation measures outlined in the CEMP (**Volume 8, Appendix 2.2.A: Outline Construction Environmental Management Plan**), no adverse impacts are anticipated on habitats and species including woodland and hedgerow adjoining the proposed works site.

7.5.17 Considering the entirety of the proposed works will be confined to the existing hardstanding area of the proposed works site, no adverse impacts are anticipated on statutory and non-statutory designated sites for nature conservation, notable habitats (Ancient Woodland or Habitats of Principal Importance) or protected or notable species and the proposed works are in compliance with LDP Strategic Policy PS 19 and Policy AMG 5. The proposed works also provide for a net benefit in biodiversity in accordance with Future Wales Policy 9 and PPW and TAN 5.

7.6 Historic Environment

7.6.1 **Chapter 6: Historic Environment** of **ES Volume 2: Pentir Works** provides an assessment of the potential effects of the proposed works on heritage and archaeological assets. A study area of 3 km from the proposed works site from the Pentir works site has been defined to provide historical and archaeological context and to identify designated assets with the potential to be affected by the proposed works and for consistency across the Project (refer to **ES Figure 2.6.1**). It is not anticipated that the construction or operation of the proposed works would have an impact on any designated heritage assets or significant adverse impacts on unknown archaeological remains and all assessment of historic environment effects were scoped out of the ES.

7.6.2 LDP Policies PS 5 and PS 20 require developments to preserve and enhance the quality of the historic environment assets, including their setting. The proposed works would not result in changes to the setting of designated heritage assets as there would be no intervisibility between the proposed works site and World Heritage Sites, Scheduled Monuments or Listed buildings.

7.6.3 A study area of 500 m from the proposed works site was assessed in relation to non-designated historic assets and for the assessment of archaeological potential.

7.6.4 Policy AT 3 of the LDP requires proposals to conserve non-designated heritage assets while Policy AT 4 requires the protection of non-designated archaeological sites and their setting. The proposed works are not anticipated to result in any significant adverse impacts on non-designated heritage assets or archaeological sites.

7.6.5 The proposed works will not result in significant impacts to any designated or non-designated heritage assets or unknown archaeological remains; the proposed works are therefore compliant with LDP Policies PS 5, PS 20, AT 3 and AT 4, and PPW section 6.1 and TAN 24.

7.7 Ground Conditions

7.7.1 **Chapter 7: Geology, Hydrogeology, Land Use and Agriculture** of **ES Volume 2: Pentir Works** provides an assessment of the likely significant effects on ground conditions that could arise from the construction, operation and maintenance of the proposed works.

7.7.2 LDP Policy PCYFF 2 requires development proposals to demonstrate they will not have unacceptable adverse impacts in terms of pollution. LDP Policy PS 19 requires all proposals to reduce effects on water resources and quality,

7.7.3 PPW seeks to ensure both land contamination and water quality are considered in proposals for development and remedial measures implemented where appropriate.

7.7.4 During construction, areas of contaminated ground (if encountered during the ground investigation) would be avoided, where possible. Where this is not possible, remediation would be undertaken to either remove the source or prevent the creation of pathways to receptors. This will be managed through the CEMP and following implementation of mitigation measures no significant adverse impacts are anticipated.

7.7.5 The proposed works site will be reinstated following construction and continue to be covered by the Pentir substation and existing internal roads, which will form an effective barrier to any residual contamination on site. There will be little potential for any users to be exposed to contamination once operational.

7.7.6 Following the implementation of a CEMP and Soil Management Plan (SMP), no significant adverse impacts are anticipated from soil and groundwater pollution during the construction, operation or maintenance of the proposed works. The CEMP and SMP would ensure protection of human receptors on site.

7.7.7 The proposed works are not anticipated to result in significant adverse impacts in terms of ground conditions, with appropriate measures proposed to reduce impacts from pollution to soils and groundwater, in accordance with LDP Policies PCYFF 2 and PS 19. In accordance with PPW, the design of the proposed works has appropriately considered issues arising from potential land contamination and proposes the implementation of remedial measures should they be necessary.

7.8 Flood Risk and Drainage

7.8.1 An assessment of the likely flood risk effects that could arise from the construction, operation and maintenance of the proposed works has been undertaken and is set out in **Chapter 8: Water Quality, Resources and Flood Risk** of **ES Volume 2: Pentir Works**. No receptors in which the proposed works has the potential to cause significant adverse impacts were identified and therefore flood risk was scoped out of the ES.

7.8.2 The closest watercourse to the proposed works site is an unnamed watercourse approximately 70 m south, and there are no ponds, lakes, canals or other waterbodies near the proposed works site. The proposed works site is in Flood Zone A outside mapped areas of fluvial or tidal flooding. The existing access to Pentir substation which forms part of the proposed works boundary crosses an area of Flood Zone B, however no development is proposed in this area.

7.8.3 The proposed works are not anticipated to have any adverse impacts on flood risk and drainage. In accordance with Policy 8 of Future Wales, the proposed works are in an area with low risk of flooding. A suitable existing drainage system is in operation at the Pentir substation, which the proposed works will utilise to minimise flood risk in accordance with LDP Policies PCYFF 6 and PS 5.

7.9 Traffic and Transport

7.9.1 **Chapter 9: Traffic and Transport** of **ES Volume 2: Pentir Works** provides an assessment of the likely significant traffic and transport effects that could arise from the construction, operation and maintenance of the proposed works at Pentir substation.

7.9.2 Construction traffic will access the proposed works site via the B4547, with all staff and HGVs entering and exiting through the Pentir substation access. Construction activities are expected to generate an average daily traffic of 63 construction worker vehicles, accounting for arrivals and departures of construction workers over a typical day. It is

estimated there would a peak of up to five HGV deliveries (including waste removal) per day (five inbound and five outbound). The proposed works are anticipated to have the largest proportional increase in Annual Average Daily Traffic (AADT) at Automatic Traffic Count 2.9 (B4547 west of Pentir substation), with only an estimated increase in average daily traffic if of 1.1%.

7.9.3 During construction, the impact would be temporary and would be managed through embedded mitigation measures. Traffic levels are expected to increase only minimally, and none of the links assessed in the ES will experience increases substantial enough to result in significant impacts.

7.9.4 During operation, there will be no change to current traffic levels on site and operational effects were scoped out of the ES.

7.9.5 No abnormal Indivisible Load (AIL) movements are anticipated during the operation and maintenance of the proposed works.

7.9.6 The proposed works have been designed, as far as practicable, to avoid and reduce impacts and effects on traffic and transport during both the construction and operation phase, through the process of design development and by embedding mitigation measures into the design of the proposed works. **Chapter 9: Traffic and Transport** of **ES Volume 2: Pentir Works** explains these embedded mitigation measures in further detail.

7.9.7 The proposed works would not lead to unacceptable harm to the safe and efficient operation of the highway. The assessment of transport impacts detailed in **Chapter 9: Traffic and Transport** of **ES Volume 2: Pentir Works** confirms no adverse impacts are anticipated, in accordance with LDP Policy TRA 4. The proposed works also accord with PPW as the assessment covers the construction, operation and maintenance and concludes no adverse impacts will arise during any of the phases of development.

7.10 Amenity

7.10.1 This section appraises the impacts of the proposed works on air quality and emissions and noise and vibration.

Air Quality and Emissions

7.10.2 **Chapter 10: Air Quality and Emissions** of the **ES Volume 2: Pentir Works** provides an assessment of the likely significant air quality and emissions effects that could arise from the construction, operation and maintenance of the proposed works at Pentir substation.

7.10.3 The source of potential air quality and emissions effects during the construction phase includes construction dust emissions and site plant emissions.

7.10.4 The area surrounding the Pentir works site, which is predominantly rural, has limited human health and nature conservation receptors. There are no residential properties or recreational activities within 250 m of the proposed works site and it therefore has low sensitivity to dust soiling, human health impacts, and nature conservation impacts.

7.10.5 The impact of site plant and Non-Road Mobile Machinery emissions during construction is not anticipated to result in adverse impacts and there is no potential for them to contribute to any significant adverse impacts on local air quality.

7.10.6 All construction activities will adhere to the mitigation measures outlined in **Chapter 10: Air Quality and Emissions** of **ES Volume 2: Pentir Works** and in the CEMP and no significant adverse impacts are anticipated from the proposed works. This is in accordance with LDP Policy PCYFF 2 as the amenity of local residences and other land and property uses will not be adversely impacted by the proposed works. Compliance is also demonstrated with PPW as no areas of poor air quality will be created.

Noise and Vibration

7.10.7 **Chapter 11: Noise and Vibration** of the **ES Volume 2: Pentir Works** provides an assessment of the likely significant noise and vibration effects that could arise from the construction, operation and maintenance of the proposed works at Pentir substation.

7.10.8 One sensitive receptor lies within 300 m of the proposed works site, comprising Gamekeepers Cottage, Rhos Fawr. As the surrounding area is rural with no dominant sources of noise, the area is likely to be quiet with daytime ambient noise levels expected to be around 40db $L_{Aeq,T}$.

7.10.9 The three main phases of activity that would generate the highest levels of noise would be the enabling works, trench digging and reinstatement. The ES assesses that the highest level of noise during the enabling works, is likely to occur during the breaking of concrete and have a potential noise level of 62 dB $L_{Aeq,T}$ at Gamekeeper Cottage 310 m from the nearest point of these works. The highest level of noise during the trench digging works is likely to occur from excavators digging the trench. If excavation occurred at the nearest Pentir works site location (250 m from Gamekeepers Cottage) a noise level of 51 dB $L_{Aeq,T}$ is anticipated. During the reinstatement works, the highest level of noise is likely to occur during the compaction of concrete. The nearest hard standing area to Gamekeepers Cottage is approximately 310 m away and if continuous compaction occurred an anticipated noise level of 49 Db $L_{Aeg,T}$ would occur at the receptor. These noise levels are not anticipated result in significant adverse impacts to Gamekeepers Cottage.

7.10.10 During construction, measures to control noise and vibration will be adopted where reasonably practicable. These measures are detailed in **Chapter 11: Noise and Vibration** of **ES Volume 2: Pentir Works** and will be implemented and secured through the Construction Environmental Management Plan.

7.10.11 The proposed new and replacement underground cables would not emit noise or vibration that would be perceptible at the surface so there would be no operational noise or vibration effects.

7.10.12 In accordance with LDP Policy PCYFF 2, the proposed works will not have an unacceptable adverse impact on the amenity of local residences, other land, and property uses through noise and vibration. The development will also not create an inappropriate soundscape and will incorporate measures to reduce overall exposure to noise pollution in accordance with PPW and TAN 11.

7.11 Cumulative Effects

7.11.1 **Chapter 5: Cumulative Effects** of **ES Volume 7: The Project and Cumulative Effects** provides an assessment of cumulative effects associated with proposed works. There are five developments of note within 2 km of the proposed works site, which comprise the following Gwynedd Council applications:

- Application ref. C25/0554/18/LL for the installation of an underground electricity cable in association with Pentir BESS energy storage scheme (C24/0532/25/LL)
- Application ref. C25/0266/18/LL for a temporary planning permission for a period of 40 years for the erection of an Energy Storage System (ESS), together with associated infrastructure, site access, landscaping, and ancillary works.
- Application ref, C25/077/18/LL for a battery energy storage system, associated infrastructure, access and landscaping.
- Application ref. C24/0532/25/LL for a proposed energy storage facility with related landscaping, infrastructure, ancillary equipment and a grid connection import and export capacity of 57MWac.
- Application ref. C16/0886/15/LL for the installation of an underground 132kV grid connection cable between the Glyn Rhonwy Storage Facility and the Pentir substation. Two applications to extend the commencement period have been submitted for C/16/0886/15/LL: C21/0934/15/AC and C23/0959/15/AC.

7.11.2 The potential cumulative effects of the proposed works have been assessed in relation to landscape, visual, noise, ecology and ground and surface water impacts in accordance with LDP Policy ADN 3. PPW also requires consideration of cumulative impacts of development and an assessment of these impacts is set out in **ES Volume 7: The Project and Cumulative Effects**. The assessment of cumulative effects concludes that there will not be any significant adverse cumulative effects on any receptors during construction or operation as a result of the proposed works at Pentir.

7.12 Welsh Language

7.12.1 In accordance with LDP Policy PS 1 and TAN 20, a Welsh Language Statement has been submitted as part of the application, which demonstrates that the proposed works will not lead to adverse impacts on the character and language balance of local communities (**Ref 2.12.A).** Despite no adverse impacts, it is expected that measures will be implemented to ensure that use of the Welsh language is preserved. Measures will include the use of bi-lingual signage on affected road routes and PRoW, and where possible, ensuring local people are employed who may speak or have knowledge of the Welsh language. As identified in the Key Considerations, the project could provide resources for workers, such as key phrase lists, to help those who cannot speak Welsh.

8. Planning Balance and Conclusion

8.1.1 This Planning Statement has been prepared as a suite of documents which form part of an application being made by the Applicant for full planning permission for the replacement of existing underground cables and installation of new underground cables at the existing Pentir substation.

8.1.2 This planning application is required for development at Pentir substation and is necessary to support the wider Pentir to Trawsfynydd Reinforcement Project. The Project is a transmission upgrade scheme to increase the capacity of the network between Pentir and Trawsfynydd substations in North West Wales. The Project is part of the wider network transmission upgrades required to facilitate the connection of 50 GW of offshore wind by 2030.

8.1.3 It is important to maintain and upgrade the existing network as some components are now several decades old and are coming to the end of their operational life (having been installed in the late 1960s). Regardless of their age, some of these components also need to be replaced because they require uprating to meet wider Project needs.

8.1.4 The replacement of the cables is essential to enable an increase to the network capacity that is required to contribute towards the Welsh Government renewable energy targets summarised above. There is strong national policy support for strengthening and reinforcing the electricity network in Wales, particularly to support the transition to net zero. New, strategic grid infrastructure is explicitly earmarked by the Welsh Government, along with a commitment to work with stakeholders, including National Grid, to transition to a multi-vector grid network and *"reduce the barriers to the implementation of new grid infrastructure"*.

8.1.5 Planning Policy Wales outlines in chapter 5 that an effective electricity grid network is required to fulfil the Welsh Government renewable and low carbon ambitions, and furthermore that additional electricity grid network infrastructure should be provided. The proposed works will reinforce the electricity network helping to meet the demand in North West Wales, including through the distribution of electricity from offshore renewable energy projects.

8.1.6 There is an identified and established need for the proposed works as set out in the Energy White Paper (2020) that outlines a strategy to transform the energy system, tackling emissions while continuing to ensure secure and reliable supply, and affordable bills for households and businesses. The Welsh Government has also set ambitious targets for renewable energy and the electricity transmission network in order to decarbonise and provide energy security.

8.1.7 NESO recognises the Project as essential for the transmission of electricity in Wales. The need for the Project is elevated further by Ofgem identifying it as one of the Accelerated Strategic Transmission Investment (ASTI) projects. ASTI projects form part of a new regulatory approval and funding framework for onshore transmission projects which Ofgem sets out are required to deliver the Government's 2030 Net Zero ambitions. To help meet those ambitions, Ofgem has identified that significant upgrades to the capacity of the electricity network in North Wales are required to allow the connection of new offshore windfarms.

8.1.8 The proposed works have been the subject of environmental surveys and assessments to identify, design out and mitigate adverse effects. The proposed works have been assessed against their compliance with policies within the Development Plan and regard has been had to other material considerations. The appraisal in Section 7 sets out how the proposed works are in accordance with relevant policies forming part of the Development Plan with respect to landscape and visual, ecology, the historic environment, ground conditions, flood risk and drainage, traffic and transport, air quality, noise and vibration and cumulative effects.

8.1.9 Substantial positive weight should be given to the urgent need for the proposed works as demonstrated in this Planning Statement, along with the other associated benefits including the contribution towards a reliable, secure electricity system. The **ES Volume 2: Pentir Works** and appraisal in this Planning Statement demonstrate that adverse impacts have been minimised with all environmental matters having neutral impacts through the inclusion of embedded mitigation and largely due to the works taking place within the footprint of an existing substation.

8.1.10 In conclusion, there is a compelling urgent need for the proposed works and the principle of developing and upgrading transmission networks to facilitate the connection of new renewable energy generation, and upgrading grid capacity is supported by both the Development Plan and National Policy. Further, this Planning Statement and the accompanying ES has demonstrated that there would be minimal adverse impacts with the proposed works being fully in accordance with the Development Plan. Moreover, the proposed works deliver substantial public benefits and planning permission should be granted without delay.

9. Bibliography

Ref. 1-1 Stationary Office (2012). The Town and Country Planning (Development Management Procedure) (Wales) Order 2012. Available at https://www.legislation.gov.uk/wsi/2012/801/contents [Accessed 06/03/2025]

Ref. 1-2 Stationary Office (1990). Town and Country Planning Act 1990. Available at https://www.legislation.gov.uk/ukpga/1990/8/contents [Accessed 06/03/2025]

Ref. 1-3 National Energy System Operator (2022). Network Options Assessment. Available at https://www.neso.energy/publications/network-options-assessment-noa [Accessed 06/03/2025]

Ref. 1-4 National Energy System Operator (2022). Pathway to 2030, Holistic Network Design. Available at https://www.neso.energy/publications/beyond-2030/holistic-network-design-offshore-wind [Accessed 06/03/2025]

Ref. 1-5 Stationary Office (1989). Electricity Act 1989. Available at https://www.legislation.gov.uk/ukpga/1989/29/contents [Accessed 06/03/2025]

Ref. 1-6 Stationary Office (1995). The Town and Country Planning (General Permitted Development) Order 1995. Available at https://www.legislation.gov.uk/uksi/1995/418/contents/made [Accessed 06/03/2025]

Ref. 1-7 Stationary Office (2017). The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017. Available at https://www.legislation.gov.uk/wsi/2017/567/contents [Accessed 06/03/2025]

Ref. 1-8 Ofgem (2023). Accelerated Strategy Transmission Investment (ASTI) Framework. Available at https://www.ofgem.gov.uk/sites/default/files/2023-08/Accelerated%20Strategic%20Transmission%20Investment%20Guidance%20And%20Submission%20Requirements%20Document.pdf [Accessed 06/03/2025]

Ref. 1-9 United Nations Climate Change Conference (2015). The Paris Agreement. Available at https://unfccc.int/process-and-meetings/the-paris-agreement [Accessed 06/03/2025]

Ref. 1-10 Department for Energy Security and Net Zero (2020). Energy white paper: Powering our net zero future. Available at https://www.gov.uk/government/publications/energy-white-paper-powering-our-net-zero-future [Accessed 06/03/2025]

Ref. 1-11 Department for Energy Security and Net Zero (2021). Net Zero Strategy: Build Back Greener. Available at https://www.gov.uk/government/publications/net-zero-strategy [Accessed 06/03/2025]

Ref. 1-12 UK Government (2022). British Energy Security Strategy. Available at https://www.gov.uk/government/publications/british-energy-security-strategy/british-energy-security-strategy [Accessed 06/03/2025]

Ref. 1-13 HM Treasury (2022). The Growth Plan 2022. Available at https://assets.publishing.service.gov.uk/media/632d5bca8fa8f51d1ddaf824/CCS207_CCS0822746402-001_SECURE_HMT_Autumn_Statement_2022_BOOK_Web_Accessible.pdf [Accessed 06/03/2025]

Ref. 1-14 Department for Energy Security and Net Zero (2023). Powering Up Britain. Available at: https://assets.publishing.service.gov.uk/media/642468ff2fa8480013ec0f39/powering-up-britain-joint-overview.pdf [Accessed 06/03/2025]

Ref. 1-15 Stationary Office (2016). Environment (Wales) Act 2016. Available at https://www.legislation.gov.uk/anaw/2016/3/contents [Accessed 06/03/2025]

Ref. 1-16 Welsh Government (2023). Energy Generation in Wales 2023. Available at https://www.gov.wales/sites/default/files/publications/2025-02/energy-generation-in-wales-2023.pdf [Accessed 06/03/2025]
Ref. 1-17 National Infrastructure Commission for Wales (2023). Preparing Wales for a Renewable Energy 2050. Available at https://www.gov.wales/sites/default/files/publications/2024-03/preparing-wales-for-a-renewable-energy-2050.pdf [Accessed 06/03/2025]
Ref. 1-18 Stationary Office (2023). Energy Act 2023. Available at https://www.legislation.gov.uk/ukpga/2023/52 [Accessed 06/03/2025]
Ref. 1-19 National Energy System Operator (2022). Network Options Assessment 2021/22 Refresh. Available at https://www.neso.energy/document/262981/download [Accessed 06/03/2025]
Ref. 1-20 National Energy System Operator (2024). Beyond 2030 Technical Report. Available at https://www.neso.energy/publications/beyond-2030 [Accessed 06/03/2025]
Ref. 1-21 Department for Energy Security and Net Zero (2024). Clean Power 2030 Action Plan. Available at https://www.gov.uk/government/publications/clean-power-2030-action-plan [Accessed 06/03/2025]
Ref. 1-22 Welsh Government (2021). Cadw Historic Assets. Available at https://datamap.gov.wales/maps/cadw-historic-assets/ [Accessed 06/03/2025]
Ref. 1-23 Natural Resources Wales (2023). Flood and Coastal Erosion Risk Maps. Available at https://flood-risk-maps.naturalresources.wales/ [Accessed 06/03/2025]
Ref. 1-24 Natural Resources Wales (2025). Flood map for planning. Available at https://naturalresources.wales/flooding/flood-map-for-planning/?lang=en [Accessed 06/03/2025]
Ref. 1-25 Welsh Government (2019). Predictive Agricultural Land Classification (ALC) Map 2. Available at https://datamap.gov.wales/layers/inspire-wg:wg_predictive_alc2 [Accessed 06/03/2025]
Ref. 1-26 Cyngor Gwynedd (2017). Joint Local Development Plan. Available at https://www.gwynedd.llyw.cymru/en/Council/Strategies-and-policies/Environment-and-planning/Planning-policy/Joint-Local-Development-Plan/Joint-Local-Development-Plan-Current/Joint-Local-Development-Plan.aspx [Accessed 06/03/2025]
Ref. 1-27 Cyngor Gwynedd (2025). Gwynedd Local Development Plan (the new Plan). Available at https://www.gwynedd.llyw.cymru/en/Council/Strategies-and-policies/Environment-and-planning/Planning-policy/Joint-Local-Development-Plan/Cynllun-Datblygu-Lleol-ar-y-Cyd-diwygiedig/Gwynedd-Local-Development-Plan-the-new-Plan.aspx [Accessed 06/03/2025]
Ref. 1-28 Cyngor Gwynedd (2025). View planning applications (Track and Trace). Available at https://www.gwynedd.llyw.cymru/en/Residents/Planning-and-building-control/Planning/View-planning-applications-Track-and-Trace.aspx [Accessed 06/03/2025]
Ref. 1-29 Stationary Office (2016). The Town and Country Planning (Development Management Procedure) (Wales) (Amendment) Order 2016. Available at https://www.legislation.gov.uk/wsi/2016/59/made [Accessed 06/03/2025]
Ref. 1-30 Stationary Office (2004). Planning and Compulsory Purchase Act 2004. Available at https://www.legislation.gov.uk/ukpga/2004/5/contents [Accessed 06/03/2025]
Ref. 1-31 Welsh Government (2021). Future Wales: The National Plan 2040. Available at https://www.gov.wales/sites/default/files/publications/2021-02/future-wales-the-national-plan-2040.pdf [Accessed 06/03/2025]
Ref. 1-32 Welsh Government (2024). Planning Policy Wales Edition 12. Available at https://www.gov.wales/planning-policy-wales [Accessed 06/03/2025]

Ref. 1-33 Welsh Government (2009). Planning Policy Wales Technical Advice Note 5: Nature Conservation and Planning. Available at https://www.gov.wales/sites/default/files/publications/2018-09/tan5-nature-conservation.pdf [Accessed 06/03/2025]
Ref. 1-34 Welsh Government (2004). Planning Policy Wales Technical Advice Note 15: Development, Flooding and Coastal Erosion. Available at https://www.gov.wales/sites/default/files/publications/2025-03/technical-advice-note-15-development-flooding-and-coastal-erosion.pdf [Accessed 06/05/2025]
Ref. 1-35 Welsh Government (2017). Planning Policy Wales Technical Advice Note 24: The Historic Environment. Available at https://www.gov.wales/technical-advice-note-tan-24-historic-environment [Accessed 06/03/3025]
Ref. 1-36 Department for Energy Security and Net Zero (2024). Overarching National Policy Statement for Energy (EN-1). Available at https://assets.publishing.service.gov.uk/media/64252f3b60a35e00120cb158/NPS_EN-1.pdf [Accessed 06/03/2025]
Ref. 1-37 Department for Energy Security and Net Zero (2024). National Policy Statement for Electricity Networks Infrastructure (EN-5). Available at https://www.gov.uk/government/publications/national-policy-statement-for-electricity-networks-infrastructure-en-5 [Accessed 06/03/2025]
Ref. 1-38 Electricity Works (Environmental Impact Assessment) (England and Wales) Regulations 2017 (2017 Electricity Works EIA Regs) Available at: The Electricity Works (Environmental Impact Assessment) (England and Wales) Regulations 2017 [Accessed 19/05/2025]
Ref. 1-39 Welsh Government (2010). Technical Advice Note (TAN) 6: Planning for sustainable rural communities. https://www.gov.wales/technical-advice-note-tan-6-planning-sustainable-rural-communities [Accessed 23/05/2025]
Ref. 1-40 Welsh Government (1997). Technical Advice Note (TAN) 11: Noise https://www.gov.wales/technical-advice-note-tan-11-noise. [Accessed 19/05/2025]
Ref. 1-41 Welsh Government (2016). Technical Advice Note (TAN) 12: Design https://www.gov.wales/technical-advice-note-tan-12-design. [Accessed 19/05/2025].
Ref. 1-42 Welsh Government (2014). Technical Advice Note (TAN) 20: Planning and the Welsh Language. https://www.gov.wales/technical-advice-note-tan-20-planning-and-welsh-language. [Accessed 19/05/2025]
Ref. 1-43 Welsh Government (2014). Technical Advice Note (TAN) 23: Economic development. https://www.gov.wales/technical-advice-note-tan-23-economic-development [Accessed 23/05/2025]

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