Uwchraddio'r Grid
Pentir i Drawsfynydd

The Great Grid Upgrade
Pentir to Trawsfynydd



PTNO-AEC-ZZZZ-ZZZZZZ-RPT-ES-000041

Prosiect i Atgyfnerthu'r cysylltiad rhwng Pentir a Thrawsfynydd

Pentir to Trawsfynydd Reinforcement Project

Bryncir: Design and Access Statement
November

nationalgrid

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1. Introduction

1.1 Background

1.1.1 This Design and Access Statement (DAS) has been prepared to accompany a planning application being made by National Grid Electricity Transmission (plc) (NGET) (the Applicant) under the Town and County Planning Act 1990. The planning application seeks full planning permission for a new substation south of Bryncir village and associated infrastructure and ancillary works, including a new access road from the A487 and the upgrading of an existing agricultural access track, and new underground 132 kV cables to connect to the existing Electricity Networks overhead line.. This DAS specifically considers matters included in the planning application and is submitted as part of the planning application submission.

1.1.2 The Proposed Works forms part of the Pentir to Trawsfynydd Reinforcement Project ('the Project') by NGET. 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 Northwest 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 northwest region). This was confirmed in the National Energy System Operator (NESO) Network Options Assessment (NOA) and the Holistic Network Design (HND).

1.2 Summary of the Proposed Works

1.2.1 The Proposed Works include the following:

- new substation (in place of the previously consented 400/132 kV substation in this location)
- new access road from the A487;
- new 132 kV underground cables from the new substation to their connection with the proposed new 132 kV overhead line to the north-west;
- upgrading of an existing access track
- installation of a small kiosk to provide low voltage electricity to the substation.

1.2.2 Additional works at Bryncir are required to enable the Project which require consent under section 37 of the Electricity Act 1989. Section 37 consents will be sought for:

- Replacement of Tower 4ZC067 and downleads into the proposed Bryncir Substation
- Installation of fibre optic cable.
- A new 132 kV overhead line (part of the route) to connect the existing SPEN DB route.

1.2.3 The Environmental Statement (ES) **Volume 3, Chapter 2: Bryncir Works** provides a detailed description of the Proposed Works.

1.3 Purpose of this Document

1.3.1 A DAS is required by the Town and Country Planning (Development Management Procedure) (Wales) Order 2012 (as amended) (Ref. 1-1) ('the Development Management Procedure Order') to accompany applications for major development in Wales. The Proposed Works constitute 'major development' as defined in Article 2 of the Town and Country Planning (Development Management Procedure) (Wales) Order 2012, as it constitutes development carried out on a site with an area of 1 hectare (ha) or more. The Proposed Works Site, as defined by the red line boundary in **Plate 2-1**, covers a total area of 12.4 hectares.

1.3.2 Article 7(4) of Part 2 of the Development Management Procedure Order (Ref. 1-1) states that:

"A design and access statement must:

a) Explain the design principles and concepts that have been applied to the development;

b) demonstrate the steps taken to appraise the context of the development and how the design of the development takes that context into account;

c) explain the policy or approach adopted as to access, and how policies relating to access in the development plan have been taken into account; and

d) explain how any specific issues which might affect access to the development have been addressed."

1.3.3 Paragraph 3.17 of Planning Policy Wales 12 (Ref. 1-2) ('PPW') explains that the purpose of a DAS is to communicate what development is proposed, to demonstrate the design process that has been undertaken and to explain how the objectives of good design and placemaking have been considered. It goes on to state that a DAS should be a 'living' document that deals with all relevant aspects of design throughout the process and the life of the development, with the design principles and concepts clearly stated.

1.3.4 The DAS should reflect the objectives of good design as set out in PPW and the Technical Advice Note 12: Design (Ref. 1-3) (TAN 12). In TAN 12, DASs are described as a *'communication tool'* that is used to outline how the design of the proposal has been considered from the outset of the development process and how the good design objectives have been used to inform this. The objectives of good design are set out in TAN 12 and are access, character, community safety, environmental sustainability and movement. These are discussed further in section 3.2 of this DAS.

1.3.5 This DAS has been prepared in accordance with the above requirements and should be read alongside other draft application documents, particularly the Planning Statement and the supporting drawings and plans, which will be submitted as part of the planning application.

1.4 Structure of this Document

1.4.1 This DAS provides context of the Proposed Works site (as defined by the red line planning application boundary) and surrounding area, outlines the details of the Proposed Works including its design; considers relevant site constraints that have influenced the design and identifies the relevant design and access policy, both on a local and national scale. This DAS is structured as follows:

- Chapter 1: Introduction – introduces the Proposed Works and the Project, provides context for the preparation of this Statement and provides an overview of the content of the planning application.
- Chapter 2: Site and Context Analysis – provides more detail on the context of the Proposed Works site including location, constraints, and statutory and non-statutory designations.
- Chapter 3: Design and Access Policy and Guidance – provides an overview of the relevant design and access policy context, both at a local and national level.
- Chapter 4: Design – summarises the design process of the Proposed Works and how the design was formulated, considering the context and surroundings of the Proposed Works site, and how the design relates to relevant local and national policies.
- Chapter 5: The Proposed Works – describes the use, layout, scale, appearance of the Proposed Works and provides details on the construction and operation.
- Chapter 6: Conclusion – provides a summary of the design and access of the Proposed Works and how the Proposed Works has considered context, policy and guidance documents.

2. Site and Context Analysis

2.1 Context of the Proposed Works site

2.1.1 The proposed works site is shown on **Plate 2-1** below and is approximately 12.4 hectares (ha), with the proposed substation covering approximately 1 ha. The proposed works site is in the administrative boundary of Gwynedd Council, approximately 1 kilometre (km) south of Bryncir village

2.1.2 The proposed works site comprises undeveloped land, primarily formed of agricultural fields and is sited on Grade 3b agricultural land. Vegetated boundaries separate the proposed works site from the A487 along the northern boundary, and the B4411 along the southwest of the proposed works site. The Afon Dwyfach is approximately 125 m to the west of the proposed works site. The area is punctuated by overhead lines, pylons, the B4411 and an access road to commercial and residential properties off the B4411.

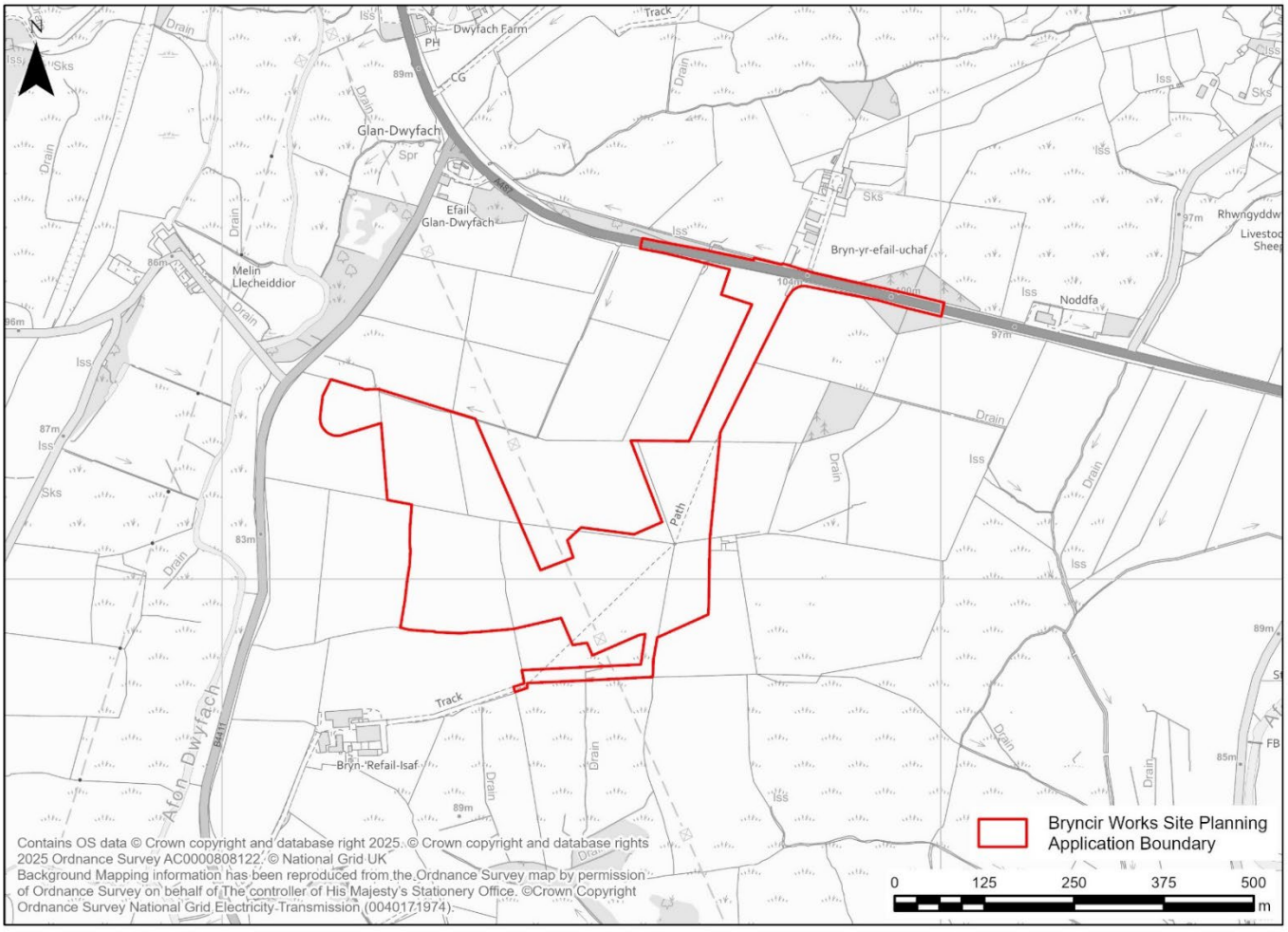


Plate 2-1 – Site Location Plan

2.1.3 The 4ZC overhead line was installed in the late 1960s, so the Proposed Works site has had electrical infrastructure in it for almost 60 years.

2.2 Wider Site Context

2.2.1 The proposed works site is immediately surrounded by open fields to the north, east, south and west, which is classified as Grade 3b, 4 and 5 agricultural land, according to the Predictive Agricultural Land Map (Ref. 1-4), none of which is categorised as best and most versatile agricultural land. There are areas of purple moor grass and rush pastures to the northwest, northeast and south of the proposed works site, which is immediately adjacent to the B4411.

2.2.2 The fields around the proposed works site have a mix of field boundary types, predominantly dry-stone wall and post and wire fences, but with overgrown hedgerows and hedgerow trees towards the north and south. There are managed hedgerows that line the A487 to the south as it faces the proposed works site.

2.2.3 There are a number of isolated farms and residential properties in the vicinity of the proposed works site, with the closest approximately 40 metres (m) to the north, immediately north of the A487, with the another approximately 250 m to the west, accessed from the B4411 and one approximately 300 m north-west, on the junction between the A487 and the B4411.

2.2.4 The strategic road network includes the A487 and the B4111, which both provide access to the proposed works site from the north. The A487 runs in a north-south direction and connects Bangor to Gellilydan in Eryri National Park. The B4111 joins the A487 from a south-west direction and meet approximately 300 m north of the proposed works site. Public Right of Way (PRoW) 18 runs through the southeast of the proposed works site. PRoW 17 terminates within the proposed works site but does not extend through the proposed works site.

2.2.5 The proposed works site lies partly in Flood Zone 2 and partly in Flood Zone 3 and is at high risk from both surface water and small water course flooding .

2.2.6 The existing 132 kV SPEN DB route is approximately 600 m west of the proposed Bryncir substation and runs south-southwest from Tower 4ZC70. The overhead line runs for approximately 1.2 km before turning further west at another steel gantry support and continuing westwards.

2.2.7 As outlined within Table 3-1 of the accompanying **Planning Statement**, the Proposed Works Site is subject to extant planning permission for a new 400 kV substation (ref C17/0772/36/LL, as varied by C22/1102/36/AC). However, the permissions no longer meet the needs of the Project and has led to the Proposed Works contained within the current planning application.

2.3 Statutory and Non-Statutory Designations

2.3.1 The proposed works site does not contain a Mineral Safeguarding Area (MSA), but there is a MSA for Sand and Gravel approximately 250 m from the west of the proposed works site boundary, which runs from north to south.

2.3.2 There are no priority habitats in the proposed works site boundary, but there are four adjacent to the proposed works site to the east and south These priority habitats consist of purple moor grass and rush pastures.

2.3.3 There are Wildlife Sites surrounding the proposed works site boundary within 5 km. There are three candidate Wildlife Sites (cWS) that are adjacent to the proposed works site boundary. These cWS comprise of marshy grassland and wet heath and acid grassland. There is a further cWS approximately 51 m to the northwest and one 80 m to the west. A cWS is a site that may be suitable to be considered a Wildlife Site in the Anglesey and Gwynedd Joint Local Development Plan (Ref. 1-7).

2.3.4 The Public Right of Way (PRoW) Dolbenmaen No. 18 runs through the east of the proposed works site. PRoW Dolbenmaen No. 17 terminates at the north of the proposed works site, but does not extend through the proposed works site.

2.3.5 **Plate 2-2** below shows the proposed works in relation to the cWSs and PRoWs.

2.3.6 The proposed works site lies partly in both Flood Zone 2 and partly Flood Zone 3 and is at risk of both surface water and small watercourse flooding, as shown on the Natural Resources Wales Flood Map for Planning (Ref. 1-6). These areas of flood risk pass directly through the centre of the proposed works site.

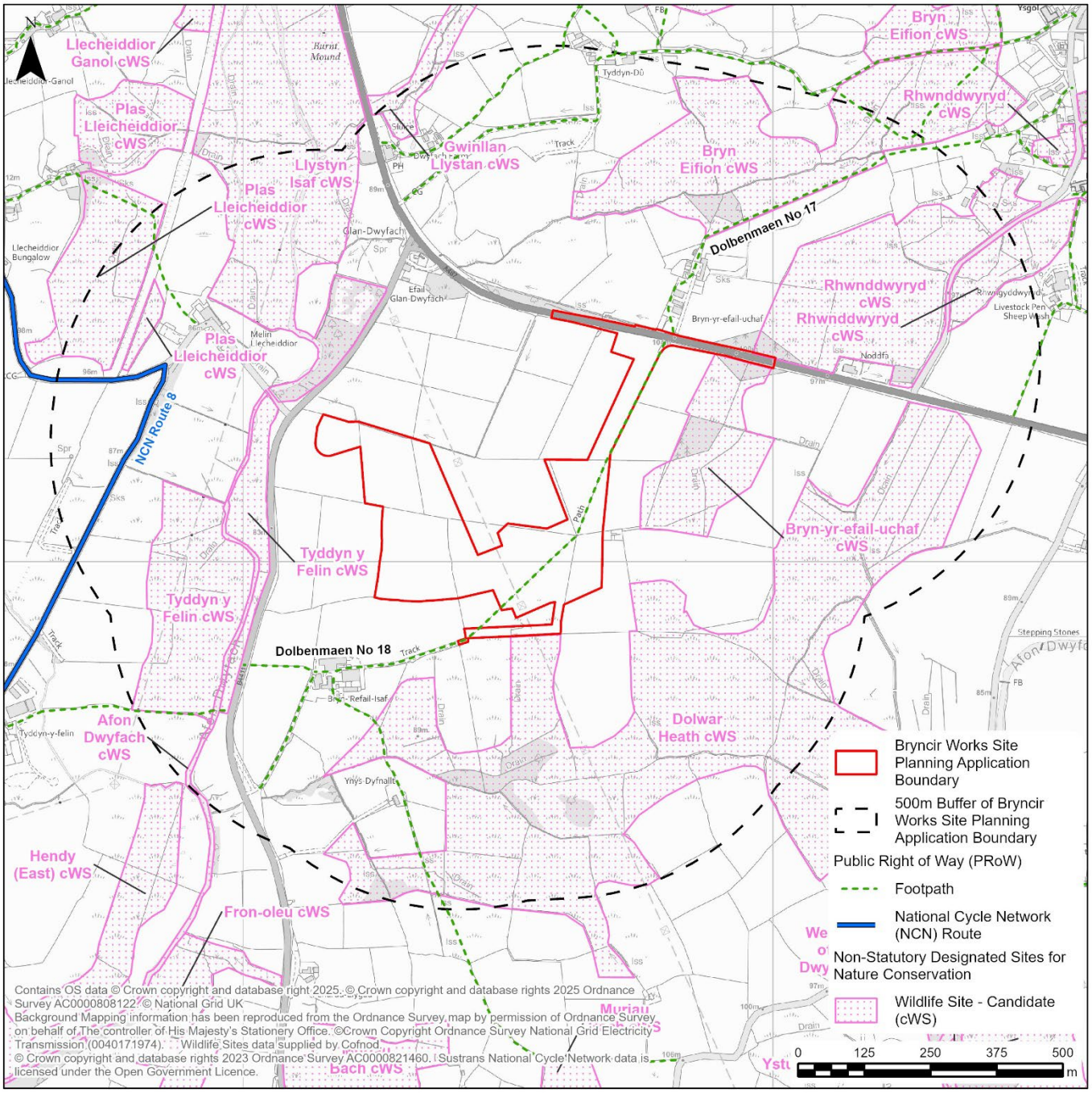


Plate 2-2 – Constraints Map

3. Design and Access Policy and Guidance

3.1 Introduction

3.1.1 This section provides an overview of the planning policies and guidance relevant to the design and development process of the proposed works. The Planning Statement sets out the planning policy context overall, including a detailed assessment of how the proposed works aligns with these policies.

3.2 National Planning Policy

Planning Policy Wales edition 12 (PPW) (2024)

3.2.1 PPW (Ref. 1-2) was published in February 2024 and sets out land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes (TANs), which are discussed later in this chapter.

3.2.2 PPW states that developments should promote 'good design' and that DASs should explain how the objectives of good design and placemaking have been considered from the outset of the development process. This chapter provides a review of the policy in relation to the objectives of 'good design' and how the proposals fulfil those objectives.

3.2.3 PPW sets out land use planning policies of the Welsh Assembly Government. Design is defined in PPW, in paragraph 3.3:

"Design is… the relationship between all elements of the natural and built environment and between people and places. To achieve sustainable development, design must go beyond aesthetics and include the social, economic, environmental, cultural aspects of the development, including how space is used, how buildings and the public realm support this use, as well as its construction, operation, management, and its relationship with the surrounding area."

3.2.4 Paragraph 3.5 of PPW states that:

""Good design is inclusive design. Development proposals should place people at the heart of the design process, acknowledge diversity and difference, offer choice where a single design solution cannot accommodate all users, provide for flexibility in use and provide buildings and environments that are convenient and enjoyable to use for everyone."

3.2.5 Paragraph 3.7 sets out that good design promotes environmental sustainability. It explains that development should seek to maximise:

"Energy efficiency and the efficient use of other resources including land, maximise sustainable movement, minimise the use of non-renewable resources, encourage decarbonisation and prevent the generation of waste and pollution".

3.2.6 Paragraph 3.8 sets out that:

"good design can help to ensure high environmental quality. Landscape and green infrastructure considerations are an integral part of the design process".

3.2.7 Paragraph 3.9 sets out that:

"*The special characteristics of an area should be central to the design of a development. The layout, form, scale and visual appearance of a proposed development and its relationship to its surroundings are important planning considerations…*"

3.2.8 Paragraph 3.13 of PPW encourages existing infrastructure to be utilised and maximised wherever possible, to maximise accessibility, particularly by sustainable non-car modes of transport.

3.2.9 The site and context of a development should be integral to ensure that the proposal responds to its surroundings and integrates well into the existing environment (paragraph 3.14). Paragraph 3.16 directs decision-makers to reject proposals for development that are not well-designed or do not consider of the local context or the objectives of good design.

Technical Advice Notes (TAN)

TAN 12 - Design

3.2.10 TAN 12 (Ref. 1-3) was published in March 2016 and provides supplementary design guidance for PPW. TAN 12 sets out the five objectives of good design:

- Access – Ensuring ease of access for all.
- Character – Sustaining or enhancing local character; promoting legible development; promoting a successful relationship between public and private space; promoting quality, choice and variety; promoting innovative design.
- Community Safety – Ensuring attractive, safe public space; security through natural surveillance.
- Movement – Promoting sustainable means of travel.
- Environmental Sustainability – Achieving efficient use and protection of natural resources; enhancing biodiversity; designing for change.

3.2.11 The concepts and principles in relation to these five objectives must be explained in a DAS. TAN 12 notes that early and continued design considerations in advance of submitting a planning application are essential to achieving good design.

TAN 15 – Development, flooding and coastal erosion

3.2.12 TAN 15 (Ref. 1-8) was updated in March 2025 and provides supplementary guidance to PPW. TAN 15 provides a framework in which the flood risks arising from rivers, the sea and surface water, and the risk of coastal erosion can be assessed.

3.2.13 TAN 15 provides the requirement for Sustainable Drainage Systems (SuDS) to be incorporated into the design of development to manage run-off from development.

3.3 Local Planning Policy

Anglesey and Gwynedd Joint Local Development Plan 2011-2026

3.3.1 The adopted Anglesey and Gwynedd Joint Local Development Plan (Ref. 1-7) (the 'LDP') sets out the land use planning policies for the areas of Gwynedd and Anglesey concerning planning and development. The policies outlined form the basis for decision making for applications made to these local planning authorities. A number of planning policies regarding design quality, location, and layout, building design and landscaping are outlined in the LDP, and these policies form the basis for decision making for applications made to these local planning authorities.

3.3.2 Strategic Policy PS 4 relates to sustainable transport, development and accessibility. Under this policy, proposals for development should, where possible, safeguard, improve, enhance and promote public rights of ways including footpaths, bridleways and byways to improve safety and accessibility. Policy TRA 4 furthers this by adding proposals that would cause unacceptable harm to the safe and efficient operation of public rights of way and bridle routes, will be refused.

3.3.3 Strategic Policy PS 5 states that developments will be supported where they are consistent with the principles of sustainable development. To meet these principles, development should promote high standards of design that make a positive contribution to the local area that can respond to future requirements and reduce crime, antisocial behaviour and the fear of crime. Proposals should also give priority to effective use of sustainable drainage systems.

3.3.4 Policy PCYFF 3 sets out the policy for design and place shaping. This policy states that all proposals will be expected to "*demonstrate high quality design which fully takes into account the natural, historic and built environmental context and contributes to the creation of attractive, sustainable places. Innovative and energy efficient design will be particularly encouraged*". Proposals will only be acceptable if they comply with, amongst others, the following design criteria:

- The development complements and enhances the character and appearance of the site in terms of siting, appearance, scale, height, massing and elevation treatment.
- The development respects the context of the site and its place in the local landscape, its effects on townscape and the local historic and cultural heritage and considers the site topography and prominent skylines or ridges.
- It utilises materials appropriate to its surroundings and incorporates hard and soft landscaping and screening where appropriate.

3.3.5 Policy PCYFF 4 relates to landscaping and design. This policy states that all proposals should integrate into their surroundings. It notes that failing to show how landscaping that is proportionate to the development has been considered from the outset as part of the design proposal would result in proposals being refused. The Policy supporting text explains that it is important to establish the requirements of a landscaping scheme early in the design process so that it can contribute to the overall design and layout of the development.

3.3.6 Policy PCYFF 6 requires proposals, where appropriate, to incorporate SuDS.

3.3.7 Policy AMG 6 requires the protection of sites of regional and local significance including Wildlife Sites. Where a development is granted planning permission, it will be necessary to ensure that there are appropriate mitigation measures in place to protect against direct or indirect significant harm to these sites.

4. Design

4.1 Design Evolution and Alternatives

4.1.1 The site for the new substation in the proposed works site is in the same location as the land that benefits from planning permission (C17/0772/36/LL). The location remains unchanged as this was the preferred option based on previous feedback and practicalities of connection to both the 400 kV and 132 kV networks for a new substation and there have been no material changes to this since the planning permission was granted, and its validity extended.

4.1.2 The substation design in the planning permission (C17/0772/36/LL) is a 'mesh' design, which would not allow future extension, for example, for another transformer to be installed. This does not meet contemporary requirements. A double busbar design using very similar footprint to the already approved substation allows this flexibility and has been adopted for the design in the new planning application.

4.1.3 No other reasonable alternative solution has been identified.

4.2 Overarching Design Considerations

4.2.1 While the design of the proposed works is bound by their functionality, the importance of protecting the natural environment has been recognised in the design of the development.

4.2.2 The proposed works have been designed with consideration of the policies set out in Section 3 and has sought to consider features of the natural environment, landscape, safety and minimise any potential effects to sensitive receptors.

Ecology and the Natural Environment

4.2.3 As explained in Section 2 above, the proposed works are on an undeveloped area of land, surrounded by candidate wildlife sites to the north, west and south and within the proposed works site boundary. The impacts on features of the natural environment were considered during the design. The proposed works, excluding the use of the unmodified existing access road, have been designed with the following buffers from key habitat features:

- 15 m from woodland
- 5 m from hedgerows; extended to 10 m where trees are present.
- 15 m from individual trees
- A minimum of 10 m from watercourses (bank top), including dry ditches, to protect riparian habitats and to mitigate for potential hazards such as chemical and soil spills into watercourses or water bodies

4.2.4 The incorporation of these ecological buffers, along with the implementation of best practice and mitigation measures, including a Construction Environmental Management Plan (CEMP), demonstrates how the design of the Proposed Works has considered the effect of development on the natural environment in accordance with LDP Policies PCYFF3, AMG 6 and PS 19 and TAN 12.

Landscape and Visual

4.2.5 The proposed works site lies in the National Landscape Character Area (NLCA) 05 Tremadoc Bay and the 10 Central Llyn Local Landscape Character Area (LCA), with LCA 04 Moel Hebod Uplands approximately 1.1 km to the northeast of the Proposed Works site. However, the proposed works are designed to be sympathetic to the setting and would have mitigation landscaping on the boundaries of the proposed substation, which would reduce the impact on landscape. Also, there is existing electrical infrastructure present in the surrounding area, including the existing electricity pylons, to the southwest and northwest of the proposed substation, so the proposed works would not introduce any discordant features and would not be out of place in this setting. This demonstrates compliance with PPW, as it makes efficient use of land as the connection point would be close to the existing electrical infrastructure. It also complies with LDP Policy PS 5 in terms of land use as it constitutes effective use of land and infrastructure. The NCLA and LCAs would be preserved in line with LDP Policies PS 19, AMG3 and PCYFF 4 as the setting and views would not be significantly impacted by the proposed works.

4.2.6 The existing local landscape character will not be significantly altered as a result of the proposed works due to the relatively minor scale as well as the setting among existing electrical infrastructure and would be suitable in terms of siting, scale, appearance and massing, in accordance with Policy PCYFF 3 of the LDP and TAN 12. The proposed works will incorporate hard and soft landscaping and screening where appropriate in accordance with Policy PCYFF 3.

Water (Surface) and Waste Management

4.2.7 The proposed works site would lie in partly in flood zones 2 and 3 and an area at risk of surface water and watercourse flooding. The proposed substation would be classed as less vulnerable development under TAN 15 (Ref. 1-8) as it is development not directly associated with a power station.

4.2.8 The proposed substation would increase the area of impermeable surface, so could increase surface run-off and flood risk. Mitigation measures would be employed to minimise the risk of flooding during construction and operation of the proposed substation. A Flood Consequence Assessment (FCA) (**Volume 8, Appendix 3.8.A: Flood Consequence Assessment**) has been completed for the proposed works which concludes that the substation would be compliant with the requirements of TAN 15 over the proposed design life. Also, the design of the proposed substation would incorporate a diversion channel to divert the surface water flow path and SuDS with attenuation to ensure there is no increase in flood risk.

4.2.9 Waste management has been scoped out of the ES assessment for the operational phase. During construction it is not considered that there would be any significant waste impacts because of the proposed works.

Community Safety

4.2.10 The design of the proposed works has taken community safety into consideration in accordance with LDP Policy PCYFF 2 and TAN 12 (Ref. 1-3). Access to the proposed works site would be restricted with only authorised personnel being permitted to enter. In relation to the proposed works, only construction personnel, maintenance staff and authorised visitors would be able to access the substation.

4.2.11 PRoW 18 passes through fields where the substation will be constructed and so it will be necessary to divert it before construction works commence. The temporary closures apply to the new diverted footpath. It is expected that the diversion could be for up to 20 months for the duration of the construction works.

4.2.12 PRoW Dolbenmaen No 18 footpath currently runs through the proposed works site. The footpath will be permanently diverted to facilitate the proposed Bryncir substation. The footpath will be diverted initially on an alignment adjacent the proposed substation access track until it reaches the substation at which point it follows the boundary to the south of the proposed drainage pond before connecting back into the existing right of way west of the substation. The footpath would not be surfaced. The diverted footpath would not be substantially longer than the current route. The application for the permanent diversion will be made via a separate application under Section 257 TCPA 1990.

4.2.13 This diversion would benefit users as it would provide more of a walking route for users to enjoy. As the route would not be used for commuters, there would be no impact on commuting times or times to access facilities. The proposed diversion would still connect to the existing route, so would not result in an isolated footpath, so this would ensure the footpath remains safe and accessible. Also, the footpath would be safeguarded with the footpath diversion being created rather than being lost altogether by the development. The increased distance would help benefit health, wellbeing and leisure.

4.2.14 The proposed works would incorporate security fencing consisting of 2.4 m high palisade fencing with an electric fence backing of 3.4 m from ground level.

5. The Proposed Works

5.1 Use

5.1.1 The planning application will seek permission for a new substation and the new access road from the A487; 132 kV underground cables from the new substation to their connection with the proposed new 132 kV overhead line to the north-west; upgrading of an access track and the diversion of a footpath.

5.1.2 The proposed works form part of the Pentir to Trawsfynydd Reinforcement Project by NGET and comprise an integral part of the wider network transmission upgrades required to facilitate the connection of 50 GW offshore wind by 2030.

5.1.3 The Project requires the replacement of the existing 132 kV circuit between Trawsfynydd and Tower 170 with a 400 kV circuit. The Bryncir works will provide a replacement 132 kV feed to the SPEN DB route maintaining and enhancing existing local supply.

5.2 Layout

5.2.1 The layout of the proposed works (shown in **Plate 5-1 and 5-2** below, extracted from planning drawing PTNO-WSP-SS50-C00484-DRW-CP-000005) is based on the most efficient use of space which allows safe operation, maintenance and repair or replacement of equipment during its operational life.

5.2.2 The red line boundary covers 12.4 ha; however, the substation would cover an area of approximately 1ha, with the new 132 kV cable being underground, with no significant change in appearance and design to the existing site.

5.2.3 The layout of the proposed works has been determined primarily by the operational requirements of the development, but environmental and safety considerations have also been considered during the design process (as explained in Section 4 of this Statement).

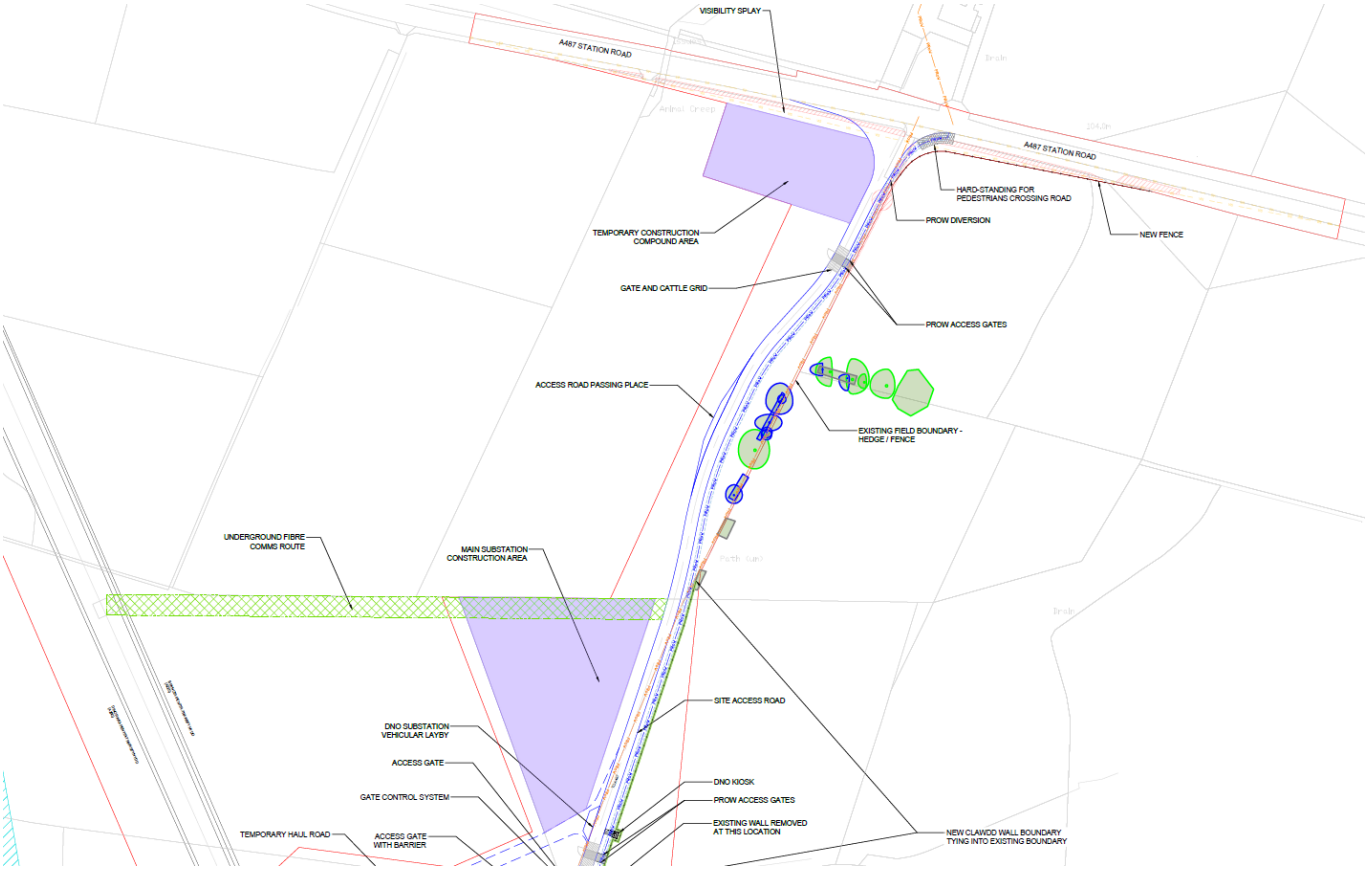


Plate 5-1 – Layout of the Proposed Works – access and compounds

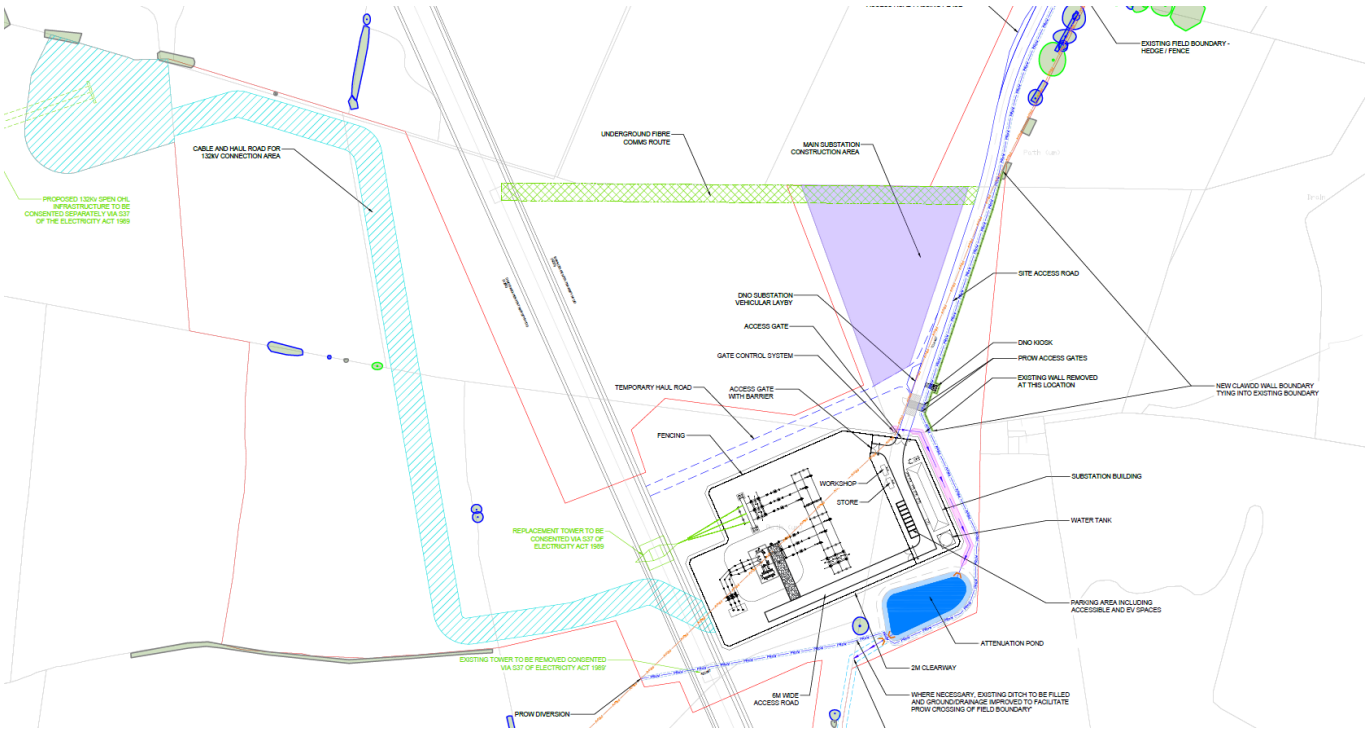


Plate 5-2 – Layout of the Proposed Works – substation and cable routes

5.3 Scale

5.3.1 The 400 kV substation compound footprint would be approximately 100 m x 150 m. There would be a small single storey amenities building and a small single storey building housing the main control systems. The gantry would be up to 10.5 m in height and would be the tallest part of the proposed substation. The proposed substation would be surrounded by 2.4 m high palisade fencing with an electric fence backing of 3.4 m from ground level.

5.3.2 The SPEN DB route connection would partly be underground and partly overhead. The underground section would cross under the proposed substation and then meet the terminal structure. The underground section would be approximately 600 m in length in total. The cables would be installed in either trefoil formation or flat formation.

5.3.3 The PRoW Dolbenmaen No 18 would be diverted initially on an alignment adjacent the proposed substation access track until it reaches the substation at which point it follows the boundary to the south of the proposed drainage pond before connecting back into the existing right of way west of the substation.

5.4 Appearance

5.4.1 The general appearance of the proposed works is mainly determined through its functionality.

5.4.2 The proposed substation would have a standard appearance of a substation. The substation would have busbars which have a similar appearance to scaffolding poles. The substation compound would be surfaced with stone chippings.

5.4.3 The new 132 kV cables would be underground, so their appearance would not be visible from the public realm. All ground would be reinstated after the installation has occurred where the cables would be outside of the proposed substation compound, resulting a limited change in appearance of the proposed works site.

5.5 Landscaping

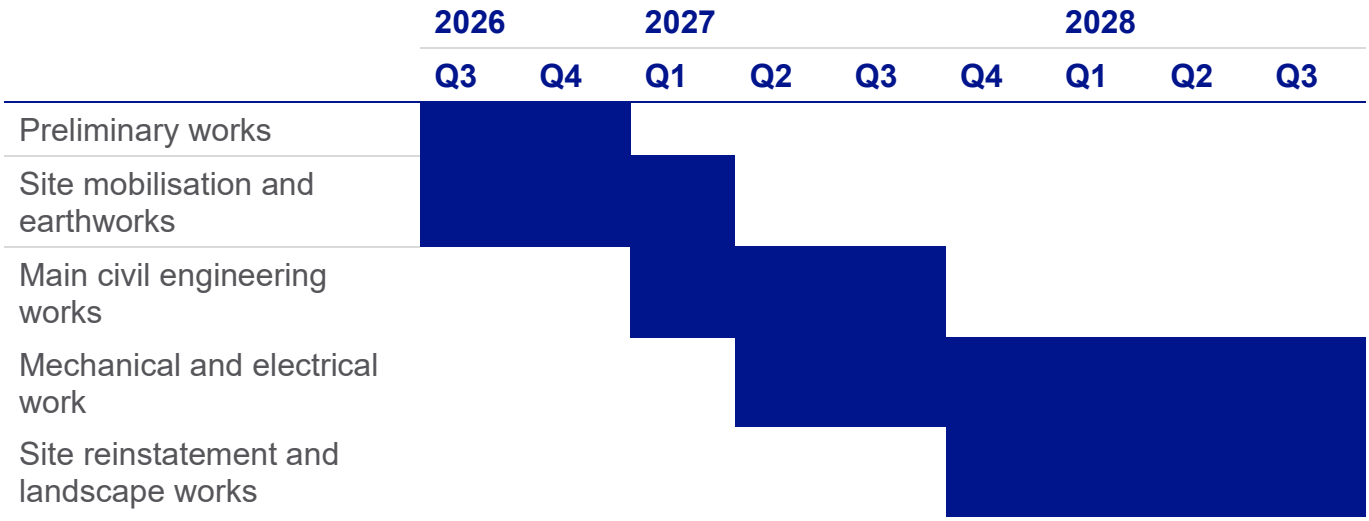
5.5.1 A landscape plan (drawing PTNO-AEC-ZZZZ-ZZZZZZ-DRW-LA-000001) has been prepared to present the proposed landscaping for the proposed works, which includes a combination of landscape reinstatement, enhancement and creation of improved, semi improved and marshy grassland, and species rich meadow, as well as well native tree and hedgerow planting. This proposed landscaping is proportionate to the proposed works and would help to mitigate the impact on the surrounding landscape, accordance with local policy PCYFF 4.

5.6 Proposed Construction

Construction Programme

5.6.1 The proposed works are planned to be undertaken over a period of approximately 18 – 20 months from Q3 2026 to Q3 2028. Construction will occur in phases, which will include the activities summarised in **Table 5-1**.

Table 5-1 – Construction programme



5.6.2 Within the phases outlined above, activities will be undertaken, including:

- Preliminary works – further site investigation preconstruction surveys required to be undertaken in advance of construction.
- Mobilising to site – this will include development of the site access, forming a temporary hardstanding just off the A487. Short term temporary facilities including sites offices, welfare, laydown and plant storage will be in place to enable the construction of the earthworks phase of activities. Liaison with Gwynedd Highways Authority will be required to agree the temporary closure of the Dolbenmaen No 18 footpath and Traffic Management requirements on A487
- Vegetation Clearance and Earthworks – This will include: the diversion of services, de-vegetation and topsoil strip, landowner track construction, new bellmouth construction, access road construction, earthworks drainage, substation platform construction, hardstanding to main temporary site and laydown area.
- Main civil engineering works – all reinforced concrete works (foundations, slabs etc), below ground earthing, drainage, ducts, troughs, permanent buildings (including services), boundary fence, internal roads, footpaths and car parking.
- Mechanical and electrical work – this will include all primary and secondary electrical plant and equipment and all Stage 1 and Stage 2 testing and commissioning.
- Site reinstatement and landscape works – this will include removal of site offices and temporary facilities, land reinstatement and landscape works.
- Fencing – temporary Heras fencing will be used for substation and cable construction works.
- Lighting and CCTV – Low level temporary lighting external lighting will be in place to the site establishment compound and task lighting to specific activities during the works. Permanent external lighting is proposed, but only in use when the site is visited by NGET personnel i.e. hours of darkness.
- Noise – for general construction work, the background noise level should not be exceeding 70 decibels (dB_A), or greater than levels obtained from the main A487

road. No exceedances in the 70 dB threshold are expected, see ES **Volume 3, Chapter 11: Noise and Vibration** for further details.

Construction Access

5.6.3 Prior to the main construction works, access to the site will be required off the A487, in close coordination/liaison with Gwynedd Highways Authority. Partial road closures at off-peak times are envisaged and would be agreed with Gwynedd Highways Authority as part of detailed design.

5.6.4 During construction, access to the proposed works will be provided from the north via a new access road from the A487. The design will accommodate the passage of an abnormal indivisible load (AIL) site will be accessed from the north via a new access road from the A487, which shall be designed to accommodate the passage of an abnormal indivisible load (AIL) load i.e. super grid transformer. The access track will have crossing points to enable landowner access across the track.

General Construction Information

5.6.5 During installation, the appointed Contractor would be required to operate under a detailed site-specific Construction Environmental Management Plan (CEMP). This would implement the mitigation measures identified in the ES and the outline CEMP (**Volume 8, Appendix 3.2.A: Outline Construction Environmental Management Plan**) The CEMP would set out a variety of control measures for managing the potential environmental effects of the proposed works, including control and management of noise, dust, surface water runoff, waste and pollution control.

5.6.6 General low-level lighting for access will be required at the temporary construction compounds and task lighting required as needed for the general works during construction. Permanent lighting will be installed but only used when the proposed Substation is occupied. Typically, the proposed substation would be unmanned.

5.6.7 Subject to geotechnical testing, excavated materials will be reused on site wherever possible. An Earthworks Material Management Plan will identify materials to be reused, and material which will need either importing or exporting off site. Where waste materials are to be disposed of offsite this will be at licenced waste disposal facilities in accordance with a Site Waste Management Plan.

Construction Site Layout

5.6.8 Following pre-construction surveys, initial preparatory works would include earthworks activities including the construction of the access road, bellmouth, substation platform, site compound and laydown areas. These works will be managed from a temporary compound just off the main A487, as shown in **Figure 3.2.2 of ES Volume 3: Bryncir**.

5.6.9 Following detailed design, an Earthworks Material Management Plan would detail the volume of material that can be reused (stockpiled on site), imported (clean stone etc) and exported offsite.

5.6.10 Temporary fencing would be erected around the proposed works site and associated compounds early in the programme to secure the construction area and site security would be in place during non-working hours.

5.6.11 Foundations will be excavated at the substation site and supporting slabs for substation electrical equipment will be made. Ducts and troughs will be constructed to contain the electrical systems, and an earth grid would be installed below the ground to create an 'earth mat' to make the compound electrically safe. Civil works will continue with the completion of roads, footpaths and buildings at the same time as the mechanical and electrical phase of the works start with the installation of steel support structures and electrical equipment, including the delivery and installation of the super grid transformer.

5.6.12 Prior to the substation being brought into service, commissioning tests would be required to individual items of electrical plant (Stage 1 commissioning), culminating with testing the installed system as a whole. Following successful testing, the substation would be connected to the electricity transmission system.

5.6.13 The proposed works will require two compounds (see ES **Volume 3, Figure 3.2.2**). The main compound will be immediately north to north-east of the proposed Bryncir Substation and will contain site offices and welfare facilities, storage and laydown areas and car parking. The secondary compound will be west of the main site entrance, immediately south of the A487 and will be used for the earthworks phase.

5.6.14 The construction site will be securely fenced off during the construction phase. During the construction phase there will be a requirement for a number of temporary facilities including:

- Site offices including offices and meeting rooms
- Staff welfare facilities including toilets, kitchen and mess room;
- Storage areas for construction vehicles, plant, equipment, materials and (where required) for storage of waste items to be removed; and
- Appropriately bunded areas to be used for the storage of oils, other fuels and waste material, where required.

5.7 Operation and Maintenance

5.7.1 The proposed substation would typically be unmanned. Maintenance of the substation would be undertaken approximately every three years, involving electrical isolation of equipment before it is worked on. Visual checks would be undertaken on a monthly inspection visit to the proposed works site. If the substation required refurbishment or replacement works, vehicles would be used to carry works in and out of site and suitable vehicles would be used to bring new materials and equipment to site and remove old equipment.

5.7.2 Permanent lighting will be installed but only used as required when the proposed Bryncir Substation is occupied.

5.7.3 The underground cables will require maintenance and possibly replacement should a fault arise.

6. Conclusion

6.1.1 This Design and Access Statement has been prepared to accompany a planning application by the Applicant for a new substation and a new access road from the A487; 132 kV underground cables from the new substation to their connection with the new 132 kV overhead line to the north-west; upgrading of an access track and the diversion of a footpath. It has considered the proposed works in relation to relevant and local policies.

6.1.2 The proposed works form part of the Pentir to Trawsfynydd Reinforcement Project, which will deliver upgrades to the wider transmission network required to facilitate the connection of 50 GW of offshore wind by 2030.

6.1.3 The proposed works and the Project will increase transmission capacity in North Wales. The works comprised in the planning application are an integral part of the proposed works at Bryncir and the Project.

6.1.4 An iterative design process has been undertaken, including consideration of various options. This process involved:

- Environmental considerations to ensure the Proposed Works would integrate into the Proposed Works site without leading to environmental degradation.
- Technical considerations to ensure the safe and efficient operation of the Proposed Works.
- Adherence to relevant national and local planning policies and design guidance.

6.1.5 The process led to a design that is appropriate for its location and consistent with the principles of sustainable development in accordance with local policy PS 5.

6.1.6 In accordance with the requirements of the Planning (Wales) Act 2015 (Ref. 1-9), the Applicant has undertaken statutory pre-application consultation (PAC) for the proposed works. The purpose of the PAC is to provide statutory consultees, interested parties and members of the public with an opportunity to review and comment on the proposals. The results of the PAC are reported in the PAC Consultation Report which accompanies the planning application.

6.1.7 In summary, the design of the proposed works has been developed following optioneering and technical considerations, while demonstrating compliance with national and local planning policy.

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