



Pennant Walters Ltd

Glanllynfi Garth Wind Farm

Volume 1: Non-Technical Summary



July 2026

Report for

Pennant Walters

Main contributors

Issued by

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Approved by

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WSP UK Limited

Floor 2
Dalton Place
29 John Dalton Street
Manchester M2 6FW
United Kingdom
Tel +44 (0)191 272 6100

Doc Ref.

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Document revisions

No.	Details	Date
1	First Draft	July 2026

1. Introduction

1.1 Overview

- 1.1.1 Pennant Walters Ltd ('the Applicant') is seeking planning permission for the construction and operation of a wind farm of up to eight turbines ('the Proposed Development') on land to the east of Maesteg in South Wales ('the Development Site'). As the installed generating capacity of the Proposed Development would exceed 10 megawatts (MW), it qualifies as a 'Development of National Significance' (DNS) and the application for planning permission will be decided by the Welsh Ministers, with the process administered by Planning and Environment Decisions Wales (PEDW) (or Penderfyniadau Cynllunio ac Amgylchedd Cymru).
- 1.1.2 To accompany the application for planning permission, an Environmental Impact Assessment (EIA) has been undertaken. EIA is a process that identifies the environmental effects of a development and identifies ways that these effects can be reduced and/or managed. An EIA is required by law for large developments that have the potential to cause 'significant' environmental effects. The findings of this process are reported in a document called an Environmental Statement (ES).
- 1.1.3 The DNS process requires the Applicant to submit a Draft ES to enable technical stakeholders such as Natural Resources Wales (NRW), Cadw and the local planning authorities, and the public, to develop an informed view of the likely significant effects of the Proposed Development, and comment on the proposals, prior to submission of the application.
- 1.1.4 The Draft ES for the Glanllynfi Garth Wind Farm is a public document available for anyone to inspect and has been prepared in accordance with *The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017* (the EIA Regulations). It presents the likely environmental effects of the Proposed Development.
- 1.1.5 This document sets out a summary of the findings from the Draft ES in non-technical language.

1.2 Purpose of this Non-Technical Summary

- 1.2.1 The aim of the Non-Technical Summary (NTS) is to enable local communities and other stakeholders to understand the likely environmental effects arising from the Proposed Development in a concise manner which is easily understood and accessible by all. Effects are assessed in terms of how 'significant' they would be, and EIA is primarily concerned with 'likely significant effects' and not those unlikely to be significant.
- 1.2.2 This NTS includes a description of the Proposed Development, a summary of the consultation process and the results of the EIA work undertaken to date.

2. The Development Site

- 2.1.1 The Development Site lies within the Bridgend County Borough Council (BCBC) and comprises two parcels: Pwll-yr-lwrch (Northern Array; Grid Ref. SS 87102 92887) and Cynhordy (Southern Array; Grid Ref. SS 88988 89854). The nearest settlement is Maesteg, located approximately 1 km west of the Northern Array and 1.5 km west of the Southern Array. Several isolated residential properties are located within 1 km of both arrays.
- 2.1.2 The Development Site comprises semi-improved grassland, marshy grassland and heathland. Dunraven Forest and Cwm Ogwr Forest are located immediately adjacent to the eastern boundaries of the Northern Array and Southern Array, respectively, and contain an established network of forestry tracks and trails. These tracks will be utilised to provide connectivity between the two land parcels and access to the wider highway network via the A4061 Rhigos Road. The forestry access track that extends from the public highway to the Northern and Southern Array areas traverses the administrative boundaries of Rhondda Cynon Taf County Borough Council (RCTCBC) and Neath Port Talbot Council (NPTC), as shown on **Figure 2.1**. The surrounding landscape is characterised by upland habitats, including areas of grassland, heathland and commercial forestry plantation.

2.2 The Applicant

- 2.2.1 Pennant Walters Ltd is a Walters Group company with a focus on renewable energy having obtained consent for and/or developed a wide variety of schemes including onshore wind, solar, small-scale hydro and battery storage. The company now operates six onshore wind farms within South Wales.

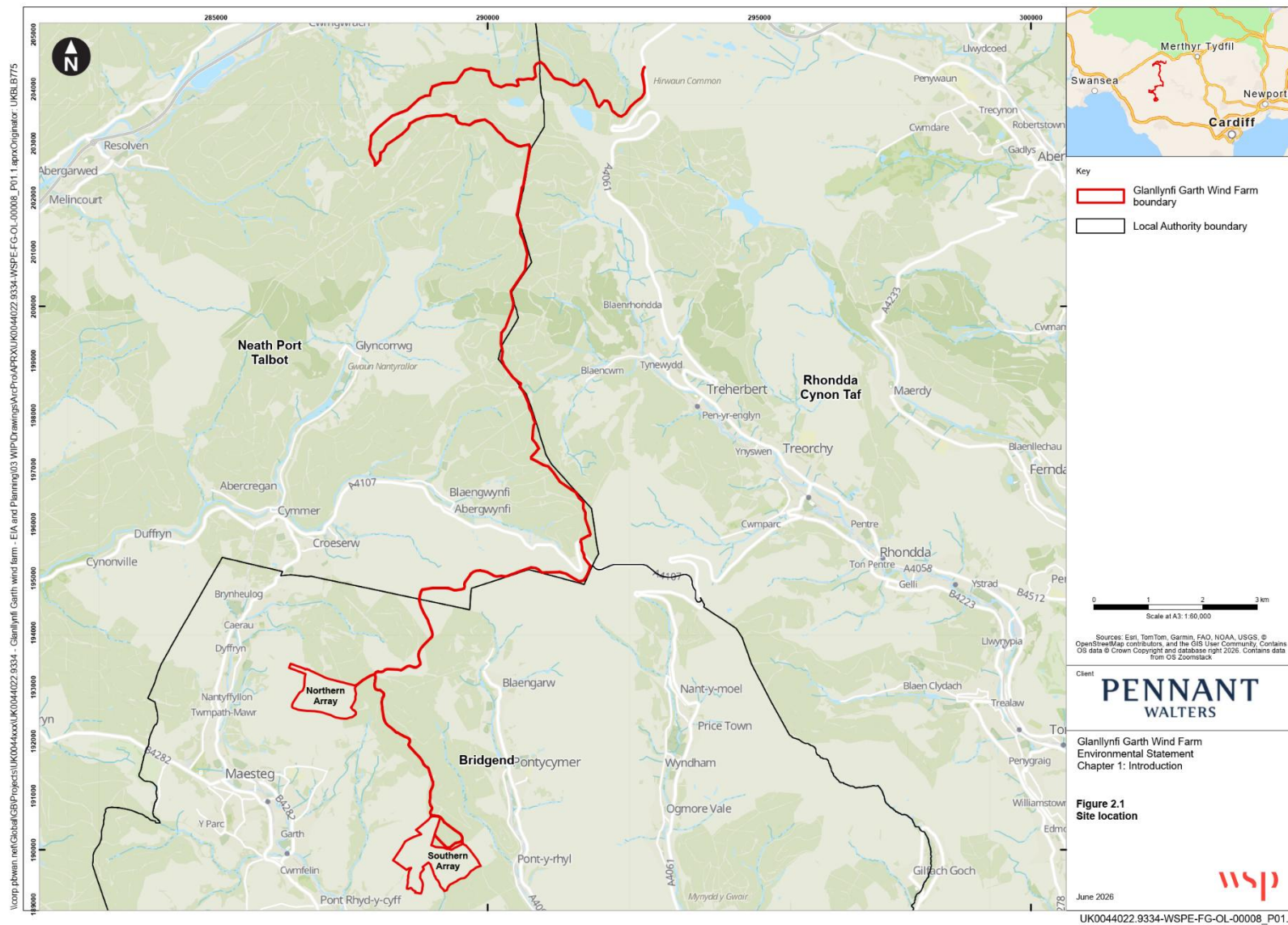


Figure 2.1: Site Location

3. Site Selection and Design Iteration

3.1 Site Selection

- 3.1.1 In 2019, the Applicant undertook a regional site finding exercise to identify areas with the greatest potential for wind energy development in south Wales guided by Future Wales which outlined Pre-Assessed Areas (PAAs) for onshore wind development and for areas outside of PAAs, provided a positive policy framework for large-scale onshore wind energy subject to policy considerations. South Wales was chosen because it has some of the highest wind speeds within Europe and within the UK. Furthermore, south Wales also benefits from an existing, comprehensive electricity distribution network, particularly in the former coal mining valleys, something which is absent from large parts of the more remote areas of Wales. The Applicant's existing presence within south Wales was also a determining factor in this selection process as it has developed and now operates six onshore wind farms.
- 3.1.2 The Development Site identification process included a high-level sieving exercise to identify broad areas of interest and then a more detailed review to identify specific potential sites within or close to PAAs. This was followed by a land ownership investigation. As part of the initial review, wind speed was a key factor. Areas with average wind speeds below 7 metres per second were excluded, as the Applicant considers this to be the minimum wind speed needed for the project to generate enough electricity to operate successfully.
- 3.1.3 There are several areas of south Wales with an average wind speed well above 7m/s. Those areas with wind speeds above 7m/s within the Brecon Beacons National Park, and any other national landscape designations were excluded from the search exercise. Those PAAs that have already been developed for wind farms were also excluded. The eastern limb of PAA 10 resulted in four sites coming forward, Mynydd Carn y Cefn, Mynydd Llanhilleth, Trecelyn and Rhyswg. The area of PAA 9 was also considered as part of the site selection process.
- 3.1.4 Discussions with the land agents of relevant land holders in this region indicated that land at Pwll-yr-Lwrch (Northern Array) and Cynhordy (Southern Array) was available to wind farm developers.
- 3.1.5 The process of choosing possible sites also included a review of technical factors and a high-level assessment of the landscape impact of each development.
- 3.1.6 The Development Site was considered to offer a good combination of the assessment factors:
- Excellent wind resource;
 - Partially within Future Wales PAA 9;
 - Large usable area;
 - Low vulnerability to major accidents and disasters arising from, for example, flooding or sea level rise, due to location on high ground plus an absence of existing infrastructure;
 - Good potential highway access;
 - Nearby wind farm developments where cumulative visual effects could likely be accommodated;

- Available existing electrical infrastructure; and
- Likely low impact on ecology, geology etc. given the baseline conditions, both from the Proposed Development and from potential major accidents and disasters.

3.1.7 The Development Site extends partly outside PAA 9. The applicant considers that the mapping used to identify these areas in Future Wales has limitations because it was based on a broad, national-level assessment and did not take account of all site-specific constraints. Studies carried out by RenewableUK Cymru found that, once detailed environmental and technical constraints are considered, only a small proportion of land within the PAAs is actually suitable for wind energy development. For this reason, the PAAs are regarded as a starting point for identifying potential sites rather than a definitive boundary for projects over 10MW. Potential sites have therefore been assessed using detailed local information and the relevant Future Wales planning policies to determine whether they are a suitable location for the development.

3.2 Design Iteration

3.2.1 The Applicant and its consultants have undertaken a number of discussions with statutory and non-statutory consultees, the local community and the landowners throughout the development process. Feedback from these discussions, and from constraints mapping and environmental assessment, has helped inform the design of the Proposed Development.

3.2.2 The primary design iterations for the Proposed Development are summarised below:

- Layout 1 (September 2025) - The site boundary was refined following early ecological surveys to avoid key environmental constraints. A number of initial layout options were then developed, taking account of factors such as protected sites, existing energy infrastructure, heritage assets, residential amenity, telecommunications equipment, water features and ground conditions.
- Layout 2 (September 2025) - An eight-turbine layout was developed and presented as part of the EIA Scoping Report. The design was updated following further site analysis, including moving one turbine to achieve better alignment with areas identified as suitable for wind energy development.
- Layout 3: Draft ES Design (April 2026) - The layout was further refined through small adjustments to turbine locations. These changes responded to mining-related constraints in the northern part of the site and considerations regarding proximity to existing forestry. This layout forms the design assessed within the Draft ES.

4. The Proposed Development

4.1 Key Components of Proposed Development

Overview

- 4.1.1 The Glanllynfi Garth Wind Farm ('the Proposed Development') consists of the following elements:
- Up to eight wind turbines, with a maximum blade tip height of 180m, located across two land parcels referred to as the 'Northern Array' and 'Southern Array';
 - Two substations including transformer housing;
 - Two temporary construction compounds;
 - Two temporary site offices;
 - Crane pads and cabling;
 - Access track construction; and
 - Overhead line connection (via wooden pole) to agreed Points of Connection (PoC) with National Grid Electricity Distribution (NGED).
- 4.1.2 The proposed wind farm is designed with an operational life of 30 years and permission is sought for this period of operation only. After this period, the Development Site can be fully restored, or future generations can decide how they want to secure their energy needs.
- 4.1.3 The proposed wind farm layout is illustrated in **Figure 4.1** below with a more detailed layouts for the northern array and southern array set out in **Figure 4.4** and **Figure 4.5**. Access to the Development Site for construction traffic and the delivery of turbine components would be via the A465 and A4061 trunk roads before joining the existing forestry access track network which forms part of the Development Site. The forestry access track serves the operational Pen y Cymoedd Wind Farm and Llynfi Afan Wind Farm. Upgrades to sections of the existing access track network would be required to facilitate the movement of Abnormal Indivisible Loads (AILs)¹ and other construction traffic associated with the Proposed Development.
- 4.1.4 Illustrations of a typical wind turbine, and typical substation building are provided in **Figure 4.2** and **Figure 4.3**.

¹ Abnormal Indivisible Loads (AILs) are unusually large components, such as wind turbine blades and tower sections, that cannot be separated into smaller loads for transport. They are typically carried on specialised heavy goods vehicles, including extendable trailers designed to accommodate their size and weight.

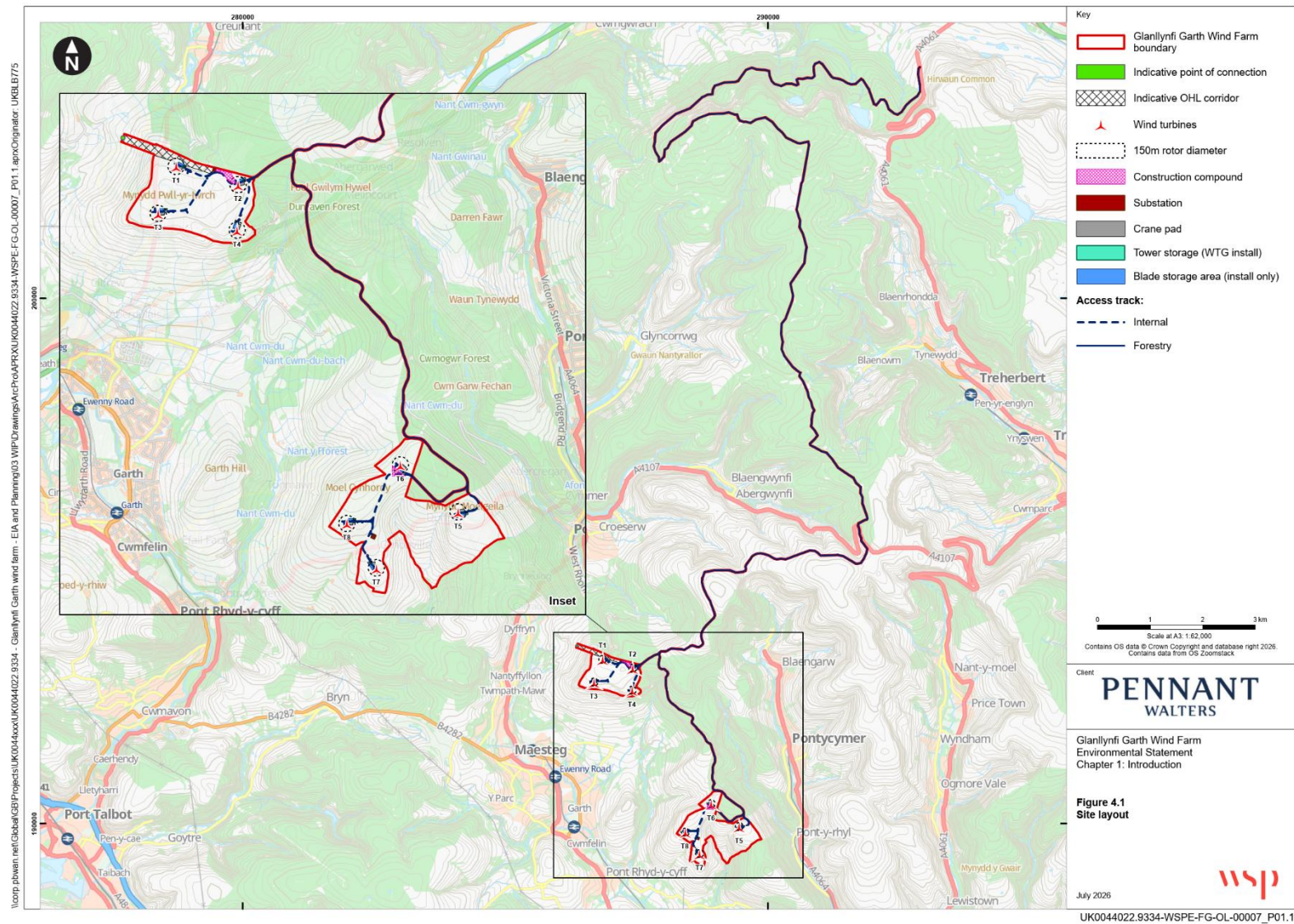


Figure 4.1: Site Layout



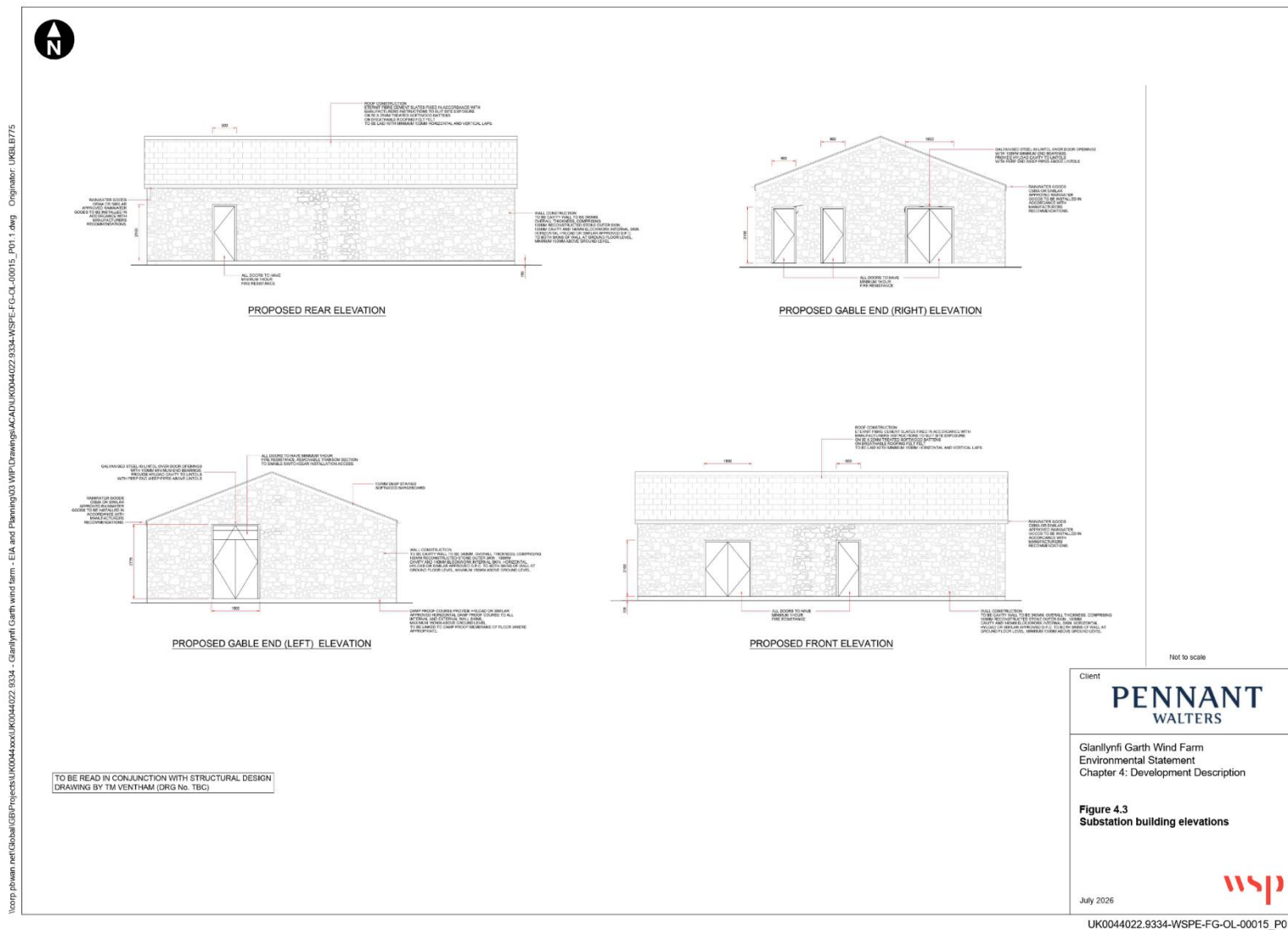


Figure 4.3: Substation Building Elevations

- 4.1.5 The proposed wind farm would be connected to the local electricity network using two existing power lines located nearby. Following discussions with the local network operator, it has been agreed that the Northern Array would connect to the overhead line running along the western edge of the Site, while the Southern Array would connect to the overhead line that crosses the middle of the land parcel. These connections are expected to be made using short sections of overhead power line between the wind farm and the existing network.

Key Parameters

- 4.1.6 A summary of the key elements of the Proposed Development and parameters (i.e. dimensions, heights, etc) are detailed in **Table 4.1**.

Table 4.1: Key parameters

Proposed Development Element	Parameter
Wind Turbines	Number
	8
	Hub Height
	105 m
	Blade Tip Height
	180 m
Wind Turbine Foundations	Number
	8
	Size
	20m diameter x 4m depth
Crane Hardstanding	Number
	8
	Size (permanent)
	2,200 m ²
	Size (temporary, during construction)
	1,500 m ²
Access Tracks	Length of New Access Tracks
	2.7 km (Southern Array); and 2.1 km (Northern Array).
	Length of Upgraded Access Tracks
	4.6 km
	Track dimensions
	Approximately 5m wide, 0.6m deep (dependent of ground conditions), with a 2m grass verge either side.
Underground cables	Trench Dimensions
	750mm deep and 450mm wide
Substations	Number
	2
	Size of substation compound
	Approximately 37.5m x 35m
	Size of substation building
	Approximately 14m x 10m

Micrositing

- 4.1.7 During pre-construction surveys, environmental, geotechnical, health and safety, and wind-related sensitivities may be identified. To accommodate these, flexibility in the siting of infrastructure is proposed. This flexibility is termed the 'micrositing' distance.
- 4.1.8 Micrositing distances are proposed as follows:
- Up to 50m for wind turbines; and
 - Up to 100m for internal access tracks, the substation, and site compound.
- 4.1.9 Micrositing will be subject to locational constraints, for example avoiding movement closer to sensitive features like watercourses. These constraints will be agreed and secured via DNS planning conditions.

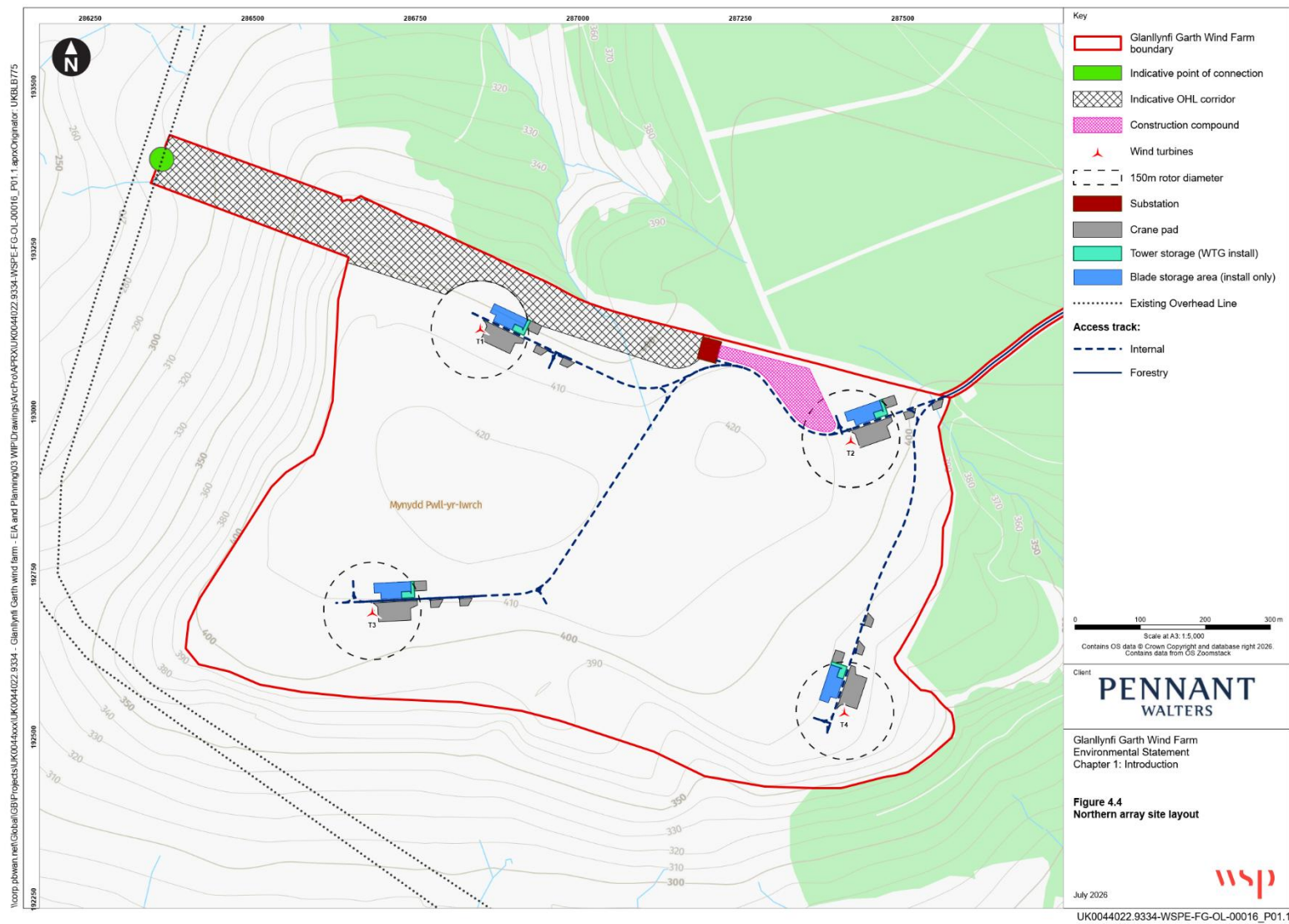


Figure 4.4: Northern Array Site Layout

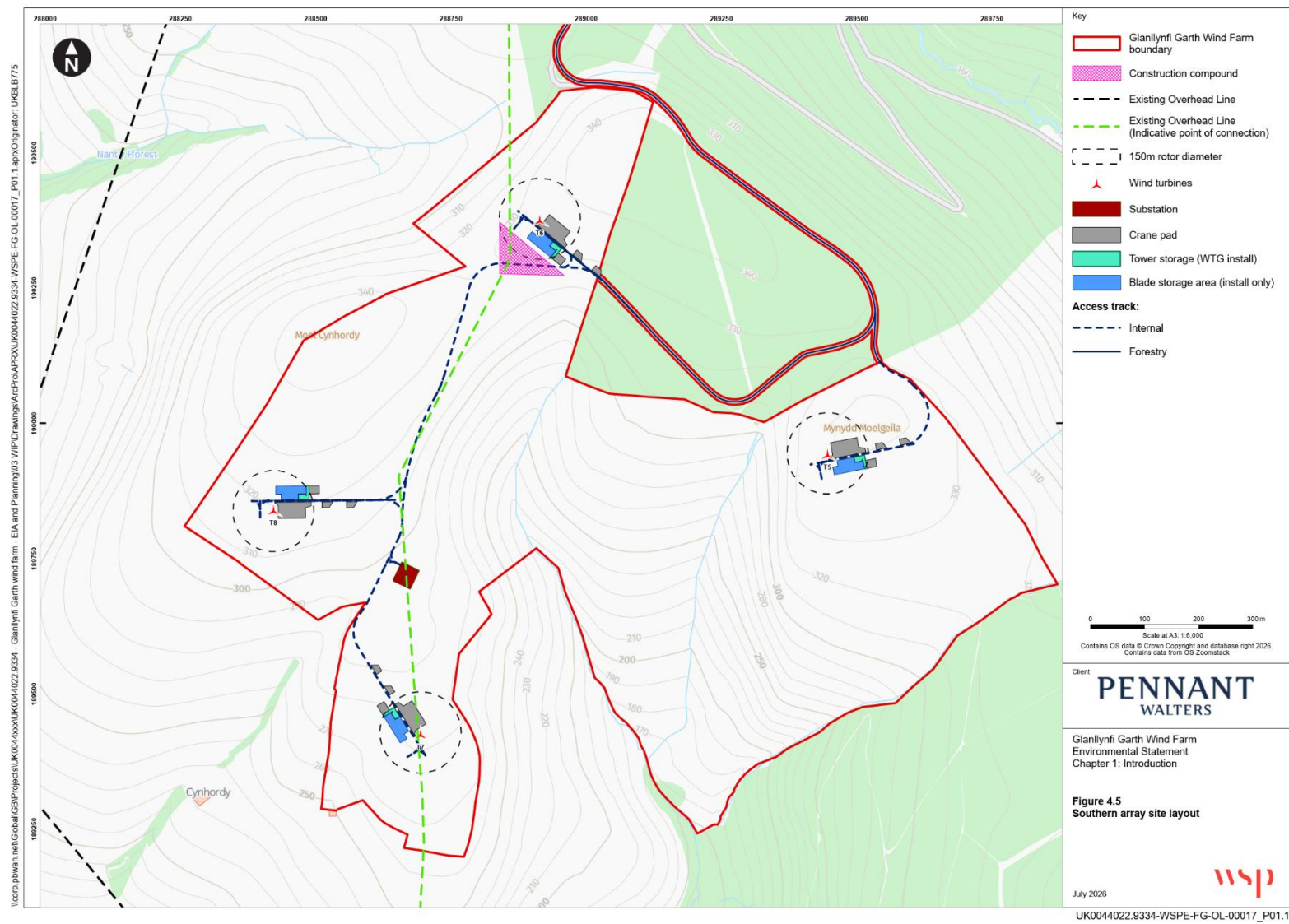


Figure 4.5: Southern Array Site Layout

4.2 Construction Details

Programme

- 4.2.1 It is anticipated that the construction period for the Proposed Development would be approximately 22 months in duration. At the time of writing, it is anticipated that construction would commence in 2029 and finish in 2031.
- 4.2.2 Construction activities would take place between 07:00 to 19:00 hours on weekdays and 07:00 to 13:00 on Saturdays. Quiet on-site working activities such as electrical commissioning have been assumed to extend outside the core working times where required. No working would be undertaken on Sundays.

Temporary Construction Compounds

- 4.2.3 Temporary construction compounds would be established within each parcel, accommodating a site office (portacabin), parking and layby facilities to support construction management and site access control. Construction compounds would be secured and illuminated with inward-facing security lighting to minimise light spill, with access controlled through fencing and locked gates where required.

Construction Deliveries

- 4.2.4 A range of construction materials would be required for development components including access tracks, crane pads, hardstanding areas and turbine foundations. It is anticipated that stone and sand could be sourced from one or more of the local established sources identified below:
- Cornelly Quarry, Porthcawl; and
 - Breedon Gilfach Quarry, Neath.
- 4.2.5 It is anticipated that the Abnormal Indivisible Loads (AILs) [transporting turbine equipment] would travel by road from Swansea which is the closest port in the region capable of handling wind turbine equipment. The Port of Swansea has been used by renewables deliveries in the past for a number of wind farms including, Mynydd y Betws, Pen y Cymoedd and Brechfa Forest. The port has sufficient quay, and storage space is well located for the strategic trunk road agent.

Operation

- 4.2.6 Operation of the Proposed Development is anticipated to commence in 2031 and will be designed with an operational life of 30 years.
- 4.2.7 The main activities during operation would be related to the inspection and maintenance of the key infrastructure, and would include the following:
- Routine maintenance of turbines at 6 monthly internals.
 - Planned maintenance and replacement of turbine components, including gearbox oil changes every 18 months and turbines blades inspected annually.
 - Emergency repair works, including replacement of damaged or failed components.

- Annual maintenance of site access tracks.

Decommissioning

- 4.2.8 The Proposed Development will be designed with an operational life of 30 years. At the end of this period the Applicant has three options, including:
- to decommission the wind farm and dismantle and remove the turbines;
 - to apply for an extension to the operating period using existing equipment; or
 - apply to install new equipment on the Development Site.
- 4.2.9 For the purposes of this assessment, it is assumed that the wind farm would be decommissioned.
- 4.2.10 Decommissioning activities are expected to take approximately six months to complete, and would comprise:
- The dismantling and removal of wind turbines, which would be recycled;
 - Turbine foundations would be removed to below ground level, while underground cables would be cut and left in place to minimise environmental disturbance;
 - The substation and associated equipment would be removed, and the components reused or recycled; and
 - Roads would either be left for use by the landowner or covered with topsoil.
- 4.2.11 Any areas disturbed during decommissioning would be restored and re-vegetated.

5. The Need for Onshore Wind Power and the Policy Context

5.1.1 Renewable energy produces energy without burning fossil fuels that release carbon dioxide and contribute to climate change. Renewable energy also provides a new and alternative energy source to tackle energy security issues. Increased use of renewable energy is therefore a key part of European, UK and Welsh energy strategy.

5.1.2 The introduction of the Welsh Government Net Zero Carbon Budget, 2021² reports the progress to date which the Welsh Government have set in policy to combat climate change and how they plan to battle climate change over the coming decade:

“In the last six years, we have laid the legislative foundations for a cleaner, fairer, stronger Wales, including through the Well-being of Future Generations (Wales) Act 2015 and the Environment (Wales) Act 2016. Wales has consistently followed the science, starting in 2016 with a target for an 80% reduction in our emissions by 2050. In 2019 we accepted the CCC’s recommendation to increase our ambition to 95% shortly after the Senedd became the first Parliament in the world to declare a climate emergency in 2019. On accepting the recommendation, we were clear our ambition should be in line with the spirit of the Paris Agreement in which richer, developed nations should set in law a net zero target by the middle of this century”.

5.1.3 The *Climate Change (Wales) Regulations 2021*³ also reiterates as “climate science continues to demonstrate that human activity is warming the planet and that the resulting effect on weather patterns is having increasingly negative consequences for ecosystems, economies, and people. The Welsh Government is proposing to increase Wales’s climate targets in response to the latest climate science and the recommendations of the Climate Change Committee (CCC)”. This includes the:

- “Carbon Budget 2 (2021-2025): an average of 37% below the baseline with a credit (‘offset’) limit of 0%;
- Carbon Budget 3 (2026-2030): an average of 58% below the baseline;
- 2030 target for an emissions reduction of 63% against the baseline;
- a 2040 target for an emissions reduction of 89% against the baseline; and
- a 2050 target for an emissions reduction of at least 100% against the baseline (‘net zero’)”³.

5.1.4 In 2021, Future Wales: The National Plan 2040 (Future Wales) was introduced as a national development framework to combat the “climate emergency which is actively changing our environment and directly affecting communities”. Future Wales aims to help plan new development and manage land use through enhancing the economic, social, environmental, and cultural well-being of Wales. Future Wales builds on the well-being goals set out in the Future Generations (Wales) Act (2015) to create a Prosperous,

² Welsh Government (2021). Net Zero Wales Carbon Budget 2 (2021 to 2025). (c. 1), pp. 10. [Online]. Available at: <https://gov.wales/sites/default/files/publications/2021-10/net-zero-wales-carbon-budget-2-2021-25.pdf> [Accessed June 2023].

³ Welsh Government (2021). The Climate Change (Wales) Regulations 2021: integrated impact assessment. (c1), pp. 3. [Online]. Available from: <https://gov.wales/sites/default/files/pdf-versions/2021/7/5/1625823413/climate-change-wales-regulations-2021-integrated-impact-assessment.pdf> [Accessed June 2023].

Resilient, Healthier, More Equal, Cohesive, Globally Responsible and Vibrant and Thriving Wales.

5.1.5 Future Wales specifies:

“It is vital that we reduce our emissions to protect our own well-being and to demonstrate our global responsibility. Future Wales together with Planning Policy Wales will ensure the planning system focuses on delivering a decarbonised and resilient Wales through the places we create the energy we generate, the natural resources and materials we use and how we live and travel”.⁴

5.1.6 Future Wales also maintains “Wales can become a world leader in renewable energy technologies. Our wind and tidal resources, our potential for solar generation, our support for both large and community scaled projects and our commitment to ensuring the planning system provides a strong lead for renewable energy development, mean we are well placed to support the renewable sector, attract new investment and reduce carbon emissions”.

5.1.7 The latest version of Planning Policy Wales (Edition 12)⁵ (PPW12) acknowledges Wales has been set a 95% net zero target for 2050 by the CCC and how nationally, the intention is to go beyond this to become fully net zero. PPW12 outlines:

“Climate change is a global challenge, with impacts felt at the local level presenting a significant risk to people, property, infrastructure and natural resources. We need to plan for these impacts, reducing the vulnerability of our natural resources and build an environment which can adapt to climate change. The planning system plays a significant role in managing this risk. Development allowed today will be around for decades to come. The most important decision the planning system makes is to ensure the right developments are built in the right places”.

5.1.8 There is therefore a demonstrable need to tackle climate change, with renewable energy developments seen as a key element in this.

5.1.9 PPW12⁵ states that “Local authorities should facilitate all forms of renewable and low carbon energy development and should seek cross-department co-operation to achieve this. In doing so, planning authorities should seek to ensure their area’s full potential for renewable and low carbon energy generation is maximised and renewable energy targets are achieved. Planning authorities should seek to maximise the potential of renewable energy by linking the development plan with other local authority strategies, including Local Well-being plans and Economic / Regeneration strategies”.

5.1.10 Onshore wind power is recognised as being a deliverable, mature technology. Wind power is one of the few energy technologies that is both low in CO₂ emissions, helping to tackle climate change, yet can also be delivered quickly, affordably and is domestically secure thereby addressing the key energy security challenges. It is this critical ability to address both issues that makes wind power a central feature in Welsh Energy policy.

5.1.11 The proposed Glanllynfi Garth Wind Farm could make a meaningful contribution to meeting the renewable energy targets set by the Welsh Government.

⁴ Welsh Government (2021). Future Wales the National Plan 2040. (c. 2), pp. 45. [Online]. Available at: <https://gov.wales/sites/default/files/publications/2021-02/future-wales-the-national-plan-2040.pdf> [Accessed July 2026].

⁵ Welsh Government (2024). Planning Policy Wales 12th Ed. [Online]. Available at: <https://www.gov.wales/sites/default/files/publications/2024-07/planning-policy-wales-edition-12.pdf> [Accessed July 2026].

6. Environmental Impact Assessment

6.1 EIA Introduction

- 6.1.1 EIA is a process by which information about the environmental effects of a proposed development is collected, evaluated, and taken into account in its design. It considers the people and environmental resources (collectively known as 'receptors') that could be affected by the Proposed Development.
- 6.1.2 If the development is given consent, the EIA process provides a consideration of the most appropriate methods for its construction, operation and decommission.

6.2 Scoping and engagement

Early engagement

- 6.2.1 Engagement has been undertaken with consultees, stakeholders and other interested organisations.
- 6.2.2 A Scoping Report was submitted to the PEDW in March 2026. The Scoping Report identifies the potentially significant effects requiring assessment, determines the subject matter of the assessment and the methodologies for undertaking the assessment. PEDW subsequently provided a Scoping Direction, which included comments from a range of stakeholders, on behalf of the Welsh Ministers, in June 2026. The Scoping Direction and the statutory consultee responses have subsequently informed the assessment work and further design evolution undertaken to date.

Early consultation and engagement

- 6.2.3 The Applicant has undertaken early engagement with key stakeholders, including representatives of the local authority, elected members, community councils and relevant regional and national political representatives. Responses have been received from local elected representatives and community councils, and introductory discussions have been held with stakeholders to introduce the proposals and establish an ongoing dialogue. Further engagement activities are planned with local community representatives as the project progresses.
- 6.2.4 A newsletter will be distributed to nearby properties to provide information on the proposals, consultation events and opportunities for participation. A project website and local publicity materials will also be made available to encourage community feedback.

6.3 Potential environmental effects

- 6.3.1 The following sections provide a brief summary of the main findings of the EIA as set out in the technical chapters of the ES. As required by *The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017*, the ES sets out whether effects on these receptors would be 'significant' or not.

- 6.3.2 Effects which are considered ‘significant’ are deemed important enough to influence the decision to be taken by the competent authority (Welsh Ministers) as to whether planning permission should be granted based on a balance of the effects.

Embedded environmental measures

- 6.3.3 EIA is an iterative process and opportunities for environmental mitigation, referred to as ‘embedded environmental measures’ have been considered throughout the design development of the Proposed Development and in the assessment undertaken for the ES where likely significant effects have been identified. Where possible, these measures have been developed with input from key stakeholders together with appropriate technical standards, policies and guidance. These embedded environmental measures include avoidance, best practice and design commitments.

Topics scoped out of the EIA

- 6.3.4 There are some aspects for which a detailed assessment has not been undertaken because the potential for significant effects from these topics is unlikely. Where appropriate, this has been agreed with PEDW and other technical stakeholders:
- **Climate:** The vulnerability of the Proposed Development to climate change and extreme climate events is considered as part of the scope of other relevant environmental topics (Landscape and Visual, Biodiversity and Water Environment), and where relevant has been designed so that it is not vulnerable to the effects of Climate Change;
 - **Major accidents and disasters:** Measures will be incorporated into the design and risk assessments implemented during construction to ensure the likelihood of major accidents and disasters is very low. The main risks considered for the proposed development include mechanical failure, aviation safety, fire, and flooding.
 - ▶ **Mechanical failure:** Wind turbines would be designed to operate safely in extreme weather conditions and would automatically shut down if wind speeds become too high. Regular inspections and maintenance would be carried out to ensure turbines and electrical equipment remain safe and operate correctly.
 - ▶ **Aviation:** this has been considered in **Chapter 16: Other Issues**.
 - ▶ **Fire Risk:** A range of fire prevention and protection measures would be incorporated into the development, including lightning protection, fire detection systems, and regular equipment maintenance.
 - ▶ **Flooding:** risk of flooding has been assessed and has informed the design of the proposed development.
 - **Population and human health:** Such effects are considered as part of the scope of other relevant environmental topics such as Landscape and Visual Impact Assessment, Traffic, Noise, Shadow Flicker and Socio-economics.

7. Environmental Assessment

7.1 Introduction

7.1.1 This section provides a summary of the assessments of likely significant effects to receptors including:

- Landscape and Visual Impact;
- Historic Environment;
- Biodiversity;
- Ornithology;
- Water Environment;
- Ground Conditions;
- Traffic and Transport;
- Noise;
- Shadow Flicker;
- Socio-economics;
- Inter-related cumulative effects.

7.2 Landscape and Visual

Landscape

7.2.1 Landscape effects can occur as a result of changes in fabric, character and values attached to the landscape arising from the construction and operation of the Proposed Development. This may include changes to the landscape elements and patterns within the development site and effects upon landscape character (as defined nationally by the LANDMAP system), landscape designations such as the Bannau Brycheiniog National Park (BBNP) and Gower National Landscape, and the variety of local landscape designations that exist in this part of South Wales.

7.2.2 Baseline information has been obtained from a desk-based study including review of published landscape character assessments. Computer modelling has generated a Zone of Theoretical Visibility (ZTV) which provides mapping of the areas from where the Proposed Development could theoretically be visible. This has been used as part of the process to select viewpoints which were then checked and refined with a field survey.

7.2.3 The Northern Array is located on the upper slopes of Mynydd Pwll-yr-Lwrch, at elevations of approximately 390m - 410m Above Ordnance Datum (AOD) whilst the Southern Array is located on the slopes of Moel Cynhordy at elevations of approximately 290m – 345m AOD. The land parcels comprise a mix of semi-improved grassland, marshy grassland and heathland.

7.2.4 The Nant Cwmdy valley is located between the two land parcels with coniferous forests located towards the upper parts of the valley and deciduous woodland in the southern part

of the valley. There are also extensive coniferous forests to the north (Caerau Forest) and east (Garw Forest) of the Development Site. To the west lies the Llynfi Valley in which the town of Maesteg is located and to the east, the Garw Valley where the villages of Blaengarw and Pontycymer are located.

- 7.2.5 The forestry access track intersects with several footpaths across the BCBC, NPTC and RCTCBC areas. The PRoW footpaths MAE/4/2 and MAE/59/1 cross the Northern Array. The Southern Array intersects with three additional footpaths, these are the GWV/30/1, GWV/29/1 and footpath GWV/36/2.
- 7.2.6 The landscape assessment considered the potential for effects on landscape features and elements, landscape designations and LANDMAP areas within the 28km study area which has been based on the recommended study area for wind turbines of a height of 180m (to blade tip) within published guidance⁶.
- 7.2.7 The assessment upon 15 Visual and Sensory Aspect Areas (VSAA) found significant effects on the following VSAs:
- CYNONVS811 Garth Hill;
 - CYNONVS813 Garw and Caerau Forest;
 - CYNONVS473 Mynydd Baedan; and
 - CYNONVS622 Mynydd Llangeinwyr
- 7.2.8 There were significant effects found at a Historic Landscape Aspect Area CYNONHL581 H03 Llynfi Valley Agricultural and a Cultural Landscape and Services Aspect Area CYNONCLS099 Garth Hill.
- 7.2.9 The Proposed Development may have a direct effect on the landscape as well as an indirect effect. Landscape effects would be indirect, and the assessment of effects will be included as part of the Final ES. The assessment in the Draft ES concluded that there would be no significant effects upon BBNP, the Gower National Landscape, or the Glamorgan Heritage Coast.
- 7.2.10 A Night-time Assessment which provides an assessment of the landscape, visual and cumulative effects of the aviation warning lights will be included as part of the Final ES. This will be undertaken in accordance with the Guidance on Aviation Lighting Impact Assessment.
- 7.2.11 The Proposed Development has been designed so as to minimise the effects on these designations through the use of non-reflective pale grey on the rotor blades and upper towers.

Visual

- 7.2.12 The assessment of visual effects is concerned with changes to views available to people and to their visual amenity. The assessment considered potential effects on the following group receptors:
- 21 Settlements;
 - 10 Long Distance Footpaths;

⁶ Natural Resources Wales. (2021). *Using LANDMAP in Landscape and Visual Impact Assessments GN46*. [online]. Available at: <https://naturalresourceswales.gov.uk/guidance-and-advice/business-sectors/planning-and-development/evidence-to-inform-development-planning/using-landmap-in-landscape-and-visual-impact-assessments-gn46/?lang=en>

- 5 Sustran cycle routes;
- Open Access Land and PRoWs;
- Notable hill summits and Open Access Land within the Bannau Brycheiniog National Park;
- 5 Outdoor Recreational Facilities;
- 12 Transport Routes; and
- 20 Viewpoints.

7.2.13 Of these, the following receptors were assessed as likely to experience some form of significant effect as a result of the Proposed Development:

- **Settlements:** Maesteg, Pontcymer and Blaengarw, Pont-y-rhyl, Pont Rhyd-y-cyff, Croeserw, Bettws, Llangeinor, Llangynwyd, Valleys Gateway, and Pen-y-fai;
- Long distance recreational routes: NCN Route 885, Birdgend Circular Walk, Celtic Way, Cistercian Way, Coed Morgannwg Way, Glamorgan Ridgeway Walk, Taith Fford Las Ogwr/ Ogwr Ridgeway Walk, Sky to Sea: Over the Bwlch, Sky to Sea: Through the Vale, and St Illyd's Walk;
- Outdoor Recreation Receptors: Public Rights of Way (PRoW) and Open Access Land (OAL) on Site, within 5km and 10km;
- Transport Routes: A4064.

7.2.14 The majority of the above are related to views from the edge or elevated parts of settlement, or certain sections of recreational routes.

Cumulative LVIA

7.2.15 A Cumulative LVIA (CLVIA) has been undertaken as part of the LVIA, considering two scenarios, the Proposed Development and those schemes which are operational and consented (Scenario 1) and Scenario 2, considering the Proposed Development, operational and consented schemes alongside those schemes in planning and scoping.

Scenario 1

7.2.16 In relation to VSAAAs, cumulative landscape effects where the Proposed Development would be a contributing factor are expected across CYNONVS811 Garth Hill, CYNONVS813 Garw and Caerau Forest, and CYNONVS473 Mynydd Baedan.

7.2.17 Significant cumulative landscape effects of which the Proposed Development would be a significant contributing factor would occur across LANDMAP Historic Landscape Aspect Area (HLAA): CYNONHL581 H03 Llynfi Valley Agricultural. The indirect effects on other HLAAAs scoped into the assessment will be assessed as part of the Final ES.

Scenario 2

7.2.18 Further significant landscape effects are expected as a result of planning application and scoping wind energy schemes across the following VSAAAs: St Gwynno, Mynydd Gaer and Mynydd Baedan. The Proposed Development was not found to be the main scheme or lead contributing factor to these cumulative effects that would arise when all other schemes are seen in combination with the Proposed Development.

7.2.19 Under Scenario 2, significant cumulative landscape effects would occur in relation to the Bannau Brycheiniog National Park Special Quality - Special Landscapes: Sweeping

grandeur and outstanding natural beauty because of Carreg Wen scoping wind farm but not the Proposed Development.

7.3 Historic Environment

- 7.3.1 The assessment within **Chapter 7** of the Draft ES considered the likely significant effects of the Proposed Development on the historic environment, which includes archaeological remains, historic buildings and historic landscapes.
- 7.3.2 Information on the existing historic environment was based on the results of a site visit and a site desk study, which involved the collation of data a broad range of standard documentary and cartographic sources, including results from any archaeological investigations in the Development Site and a 1km radius Study Area around it.
- 7.3.3 There is one designated (protected) historic asset recorded within the Development Site, comprising the Clawdd Mawr, Mynydd Caerau scheduled monument (Figure 7A.2B (A11), Cadw GM231), which is crossed by the forestry access track.
- 7.3.4 **There are 53 records** of non-designated historic assets within the Development Site. These non-designated assets include four Historic Landscapes and 27 scheduled Monuments. The historic landscapes comprise a medieval boundary (HER 03550.0m), a disused railway (HER 01491.0m), historical coal workings (HER 08127m) and a former colliery (HER 07375m).
- 7.3.5 Known archaeological remains are recorded within the Development Site from previous archaeological investigations, WSP interpretation of available LiDAR data and from the site walkover survey conducted as part of this assessment. Overall, these remains are considered to be of low heritage significance.
- 7.3.6 The assessment of effects has concluded that there would be negligible or low impacts on the heritage significance of designated heritage assets during the construction phase for the Proposed Development and no effects would arise.
- 7.3.7 During the operational phase of the Proposed Development, there would be a negligible or low magnitude of impact to the identified historic assets and as such the significance of effects is deemed to be non-significant.
- 7.3.8 A cumulative assessment has been undertaken to consider the combined impacts with other developments. The developments which have been included in the cumulative assessment are Y Bryn Wind Farm and Mynydd Ty-talwyn Energy Park.

7.4 Biodiversity

- 7.4.1 **Chapter 8** of the Draft ES assesses the likely significant effects of the Proposed Development with respect to biodiversity (designated sites, terrestrial and freshwater habitats and legally protected and notable species) within the area that the Proposed Development could affect. This area, known as the Zone of Influence (Zoi), differs depending on the type of feature considered and the nature of the potential environmental change that may arise.
- 7.4.2 The assessment methodology has been aligned with the standard industry guidance provided by the Chartered Institute of Ecology and Environmental Management.
- 7.4.3 Information on the current ecological baseline conditions has come from a variety of sources including historical records of flora and fauna, descriptions of wildlife sites gained through desk study, and survey work completed within a Ecological Assessment (PEA) for

the Northern and Southern Arrays. Further survey work will be completed to support the Biodiversity assessment in the Final ES.

- 7.4.4 The ecology assessment considered internationally designated sites within 10km of the Development Site, nationally designated sites within 2km, and locally designated sites within 10km. Surveys also examined protected habitats and species within and around the site, including important woodlands and habitats up to 2km away, watercourses within 500m and known bat roosts within 10km.
- 7.4.5 There are no statutory designated sites within the Development Site. Two statutory designated biodiversity sites of international importance are located within 10km of the Site boundary: Glaswelltiroedd Cefn Cribwr/Cefn Cribwr Grasslands Special Area of Conservation (SAC), and Blackmill Woodlands SAC. Two statutory designated biodiversity sites of national importance were identified within 2km of the Northern and Southern Arrays: Cwm Du Woodlands of Special Scientific Interest (SSSI) and Cwm Cyffog SSSI.
- 7.4.6 There are thirty-four non-statutory nature conservation sites within the study area, all of which are located within the Development Site.
- 7.4.7 The Northern Array is dominated by acidic habitats including acid grassland and heath with occasional scree and flush habitats. The Southern Array is mostly improved grassland with smaller areas of bracken and acid grassland interspersed with scrub, scree, marshy grassland and mixed woodland. In both areas there are small watercourses which could be possible Priority Habitats. There are therefore five Priority Habitats within the Development Site, these include upland heathland, small medium altitude rivers on acidic geology, lowland dry acid grassland, inland rock outcrop and scree habitats, and upland flushes, fens and swamps.
- 7.4.8 Following the PEAs evaluation of protected and notable species desk study records and extended Phase 1 habitat survey, the Development Site was considered suitable to support the following protected and / or notable species:
- Bats (all UK species);
 - Badger *Meles meles*;
 - Environment (Wales) Act 2026 – Section 7 Mammals (including Hedgehog *Erinaceus europaeus* and Brown hare *Lepus europaeus*);
 - Water vole;
 - Birds;
 - Common amphibians (common frog *Rana temporaria* and common toad *Bufo bufo*, palmate newt *Lissotriton helveticus*, and smooth newt *Lissotriton vulgaris*);
 - Great crested newt;
 - Common reptiles (common lizard *Zootoca vivipara*, slow worm *Anguis fragilis* and grass snake *Natrix natrix*);
 - Terrestrial invertebrates (including marsh fritillary);
 - Notable plants (including Chamaemelum nobile and pennyroyal *Mentha pulegium*); and
 - Invasive Non-native Species (INNS) (including Rhododendron *Rhododendron ponticum* and Indian balsam *Impatiens glandulifera*).

- 7.4.9 A range of environmental measures which relate to Biodiversity are embedded as part of the Proposed Development to avoid or reduce significant environmental effects as far as possible. Standard best practice environmental measures would be employed such as the adoption of pollution prevention and dust control techniques, and measures to avoid the spread of invasive species such as Japanese knotweed. Good practice measures are detailed in the Outline Construction Environmental Management Plan (CEMP) which accompanies the Draft ES. Other environmental measures to be adopted include:
- Habitats which would be subject to temporary loss, will be re-vegetated and reinstated as soon as possible after construction;
 - Site lighting will be controlled to prevent incidental spillage on to features that may be used by nocturnal species;
 - The wind farm infrastructure layout has been designed to avoid trees which have been identified as having suitability for use by roosting bats;
 - Turbines have been located to maintain a minimum 200m blade-tip stand-off from features that are known to be favoured by bats (e.g. treelines, woodland and key waterbodies).
- 7.4.10 The assessment of effects within the Biodiversity Draft ES can be summarised as follows:
- Cefn Cribwr Grasslands SAC: With mitigation in place, the assessment found there would be no significant effects;
 - Priority habitats: In the absence of NVC survey data and suitable mitigation proposals an effect of which is not significant could not be ruled out and as such a likely significant effect on Priority habitat has been precautionarily included;
 - Bats commuting and foraging: The assessment has concluded that it would be highly unlikely that commuting and foraging bats will be subject to significant effects from the Proposed Development;
 - Water vole: With mitigation in place, water voles are highly unlikely to be subject to significant effects from the Proposed Development;
 - Marsh Fritillary: With mitigation in place, marsh fritillary are highly unlikely to be subject to significant effects from the Proposed Development;
- 7.4.11 In the absence of bat activity survey data, it is precautionarily assumed that the Proposed Development could impact the Limestone Coast of South Wales SAC population through direct habitat loss, although the likelihood of this is considered to be low. A Habitat Regulations Assessment (HRA) will be completed for the Final ES. This will assess the effect on relevant SACs.
- 7.4.12 Surveys which will be completed for the Final ES include:
- Bat activity surveys;
 - Water vole presence/absence survey;
 - Bat roost surveys;
 - Updated Phase 1 habitat survey;
 - National Vegetation Classification (NVC) survey; and
 - Relevant habitat and species surveys.

7.5 Ornithology

- 7.5.1 **Chapter 9** of the Draft ES reports the findings of an assessment of effects on Ornithology.
- 7.5.2 The ornithological assessment was informed by a desk study and field surveys covering the Study Area. The Study Area for the ornithology assessment can be broadly split into two categories: desk-based assessment, and survey work. The study area considered internationally designated sites for ornithology within 20km, nationally designated sites for ornithology within 10km and locally designated sites within 2km. Surveys also examined bird species and habitats within and around the Development Site.
- 7.5.3 The desk-based assessment involved gathering data for internationally designated statutory sites, nationally designated statutory sites, other statutory and non-statutory sites, and records of protected and/or notable bird species. The organisations where this data was gathered from includes South East Wales Biological Record Centre (SEWBRc), Natural Resources Wales (NRW), Multi-Agency Geographic Information for the Countryside (MAGIC) and the Joint Nature Conservation Committee (JNCC).
- 7.5.4 There are two statutory designations within the Study Area, both sites have a national designation as SSSIs. Two Sites of Importance for Nature Conservation (SINCs) are also found within the Study Area which are non-statutory designated Development Sites.
- 7.5.5 The final bird survey visit was completed in July 2026; full analysis of the data, such as territory mapping has therefore not yet been completed but will be presented in the Final ES. A total of 41 species were recorded in the first five visits, 22 of which are target or secondary species.
- 7.5.6 Permanent and temporary land-take to facilitate the construction of the turbines and associated infrastructure has the potential to reduce the availability of nesting, foraging and/or resting habitats for the breeding bird assemblage of the grassland and grass-heath habitats.
- 7.5.7 A collision risk modelling (CRM) exercise has been undertaken to understand the risk of birds colliding with turbine blades once operational. The model predicts zero mortality for peregrine falcon. The model predicts the highest mortality for golden plover, followed by common kestrel and red kite. Analysis using CRM suggests that for the golden plover, the numbers calculated to collide with the turbines represent a small increase of annual mortality rates.
- 7.5.8 The assessment within the Ornithology Draft ES did not find significant effects during the construction, operation or decommissioning of the Proposed Development.

7.6 Water Environment

- 7.6.1 The assessment provided in **Chapter 10** of the Draft ES has considered the likely significant effects of the Proposed Development on the Water Environment, including the water environment, including hydrology, flood risk and drainage. The effects on water quality, river flows, physical changes to rivers, lakes and other water features have been considered. The assessment is accompanied by a Flood Consequences Assessment (FCA), A Water Framework Directive (WFD) assessment, a Groundwater Dependent Terrestrial Ecosystem (GWDTE), and a Private Water Supply Risk Assessment (PWSRA).
- 7.6.2 Study Areas have been defined for the desk-based assessment within the Water Environment Draft ES these can be defined as follows:
- Hydrology (surface water features, groundwater, flood risk and Designated Sites): the Proposed Development plus a 1 km buffer. Associated receptors downstream within

the Afon Alwen and River Dee are considered for up to 5 km from the Proposed Development;

- Water supplies (public and private): the Proposed Development plus a 3 km buffer; and
- In accordance with SEPA (2024) guidance the 'GWDTE Study Area' comprises a 250 m buffer from the Proposed Development where excavations are likely to be greater than 1 m depth, reduced to a 100 m buffer from excavations less than 1 m depth. To be precautionary, all excavations associated with tracks, turbines and other infrastructure are considered to be >1 m and therefore a 250 m buffer is used.

- 7.6.3 Information on the existing Water Environment is based on a site walkover and a desk study, which involved the collation of data from a range of sources including NRW, the British Geological Survey (BGS) and various local plans from BCBC.
- 7.6.4 Within the Northern Array, the main watercourses are Nant Gwyn Bach and Nant Cwm-du. Within the Southern Array, the main watercourse is Nant Cedfyw, which rises within the central part of the array and flows southwards. There are no statutory main rivers located within the Development Site. The key surface water bodies relevant to the Development Site are Garw, Llynfi – headwaters to Lletty Brongu STW, and Llynfi – Lletty Brongu STW to confluence with Ogmere.
- 7.6.5 The Northern and Southern Array areas overlay the Pennant Sandstone formation and the South Wales Middle Coal Measure formation. The Development Site lies within the Swansea Carboniferous Coal Measures WFD groundwater body. The groundwater body is a large underground water resource formally designated and managed under the WFD and is monitored by NRW to protect regional water quality and regulate borehole abstractions
- 7.6.6 According to DCWW, who are the public water service providers in the area, there are no public sewer assets, drainage constraints or recorded sewer flooding incidents within the Development Site. the location and nature of any Private Water Suppliers (PWSs) that may be present within the Study Area have not yet been confirmed. Information provided by NRW indicates that there are six licensed abstractions or impoundments within 3 km of the Southern Array and four within 3 km of the Northern Array. These abstractions may include water supplies or other licensed water uses and will be reviewed as part of the ongoing assessment process.
- 7.6.7 Pollution prevention measures within the CEMP would be adhered to so that runoff rates, sediment and water quality is controlled before discharge to watercourses. A range of environmental measures which relate to the Water Environment are embedded as part of the design of the Proposed Development to avoid or reduce significant environmental effects as far as possible. Examples of these measures include the following:
- Implementation of pollution prevention measures to ensure that the risk of accidental release of pollutants into the water environment is minimised;
 - An Outline Drainage Statement (ODS) will be implemented and, where appropriate, Sustainable Drainage Systems (SuDS) will be incorporated to minimise runoff from the Site. Discharges would be minimised to 'greenfield' rates such as those from the current undeveloped site;
 - The Proposed Development layout has been developed to avoid watercourses and riparian corridors where practicable, with crossings and works near watercourses minimised;

- The CEMP would include measures to maintain the existing drainage pathways of the Development Site and manage surface water through designed drainage systems during construction; and
- Operational maintenance activities would follow pollution prevention controls, including appropriate storage, handling and spill response procedures.

- 7.6.8 The construction, operation and decommissioning of the Proposed Development is not expected to result in any significant effects on the water environment, provided that all recommended mitigation measures are put in place. No cumulative effects with other developments are anticipated.
- 7.6.9 All potential sources of flooding have been considered, with surface water runoff originating from the Proposed Development, due to increased areas of hardstanding, posing the greatest potential flood risk.
- 7.6.10 The FCA concludes that the Proposed Development, together with the proposed flood risk management measures above, would not be subject to an unacceptable level of risk, nor would there be potential increased flood risk elsewhere.
- 7.6.11 A WFD screening and scoping assessment concluded that further assessment was not required and that with embedded mitigation measures in place, no adverse impacts are expected on WFD water bodies, and the Proposed Glanllynfi Garth Wind Farm is considered compliant with WFD requirements.

7.7 Ground Conditions

- 7.7.1 The assessment within **Chapter 11** of the Draft ES has considered the likely significant effects of the Proposed Development on the Ground Conditions, including geology (geodiversity), minerals, soil receptors (including peat), and land contamination. This assessment is based on risk assessments that consider whether the construction or operation of the Proposed Development could disturb areas of old contaminated ground, or introduce new soil contamination, or cause gas to move out of the ground and affect human health.
- 7.7.2 The study area for Ground Conditions for contaminated land receptors includes the Site and a 250m buffer area beyond the boundary. This is based upon the potential for contaminants to migrate from the site to offsite receptors through the soil or in groundwater, or to migrate onto the site through soil or in groundwater from offsite sources.
- 7.7.3 Baseline conditions were identified through site visits and a desk study, informed by a number of sources which include:
- Information on previous land uses has been obtained from historical mapping.
 - Information on geological and soil conditions has been obtained from maps and other data sets provided by the British Geological Survey (BGS);
 - Mapping data related to peat and agricultural land classification has been obtained from NRW and the Welsh Government; and
 - Information of historic coal mining workings, and coal outcrops and fissures has been obtained from the Coal Authority.
- 7.7.4 The Predictive Agricultural Land Classification (ALC) Map indicates that the Development Site does not pass through any areas of 'best and most versatile' (BMV) land. As such, the potential effects are not considered significant and have therefore been scoped out,

an approach which was agreed with by Land Quality Advisory Service (LQAS) and PEDW.

- 7.7.5 A Phase 1 soil and peat survey was completed at the Northern Array and the Southern Array in July 2026. Phase 1 surveys used a threshold of ≥ 0.3 m to identify potential clusters of peat in probing data. No peat was identified during soil profile analyses (coring). Localised organic rich soils were found at four locations, however peat is defined as greater than 0.3m in thickness and the maximum observed peat thickness at these locations was 0.28m.
- 7.7.6 Preliminary Risk Assessments (PRAs) have been completed for the Northern Array and the Southern Array. At the time of producing the Draft ES, the PRAs are still awaiting site walkover survey information.
- 7.7.7 The Phase 1 Geo-environmental desk study for the Northern Array and the Southern Array have identified potential sources of land contamination on the Proposed Development Site to include: current and historical farming activities; made ground (opencast backfill) associated with potentially infilled quarries, pits, ground workings and dismantled tramways; made ground associated with residual coal mining waste, including refuse heaps; and mine gas associated with worked coal seams, mine entries and former workings.
- 7.7.8 A range of environmental measures which relate to the Ground Conditions are embedded as part of the design of the Proposed Development to remove or reduce significant environmental effects as far as possible. Examples of these measures include the following:
- Adoption of industry standard methods for the handling and storage of soils; based on Defra's current good practice guidelines which describe standard working methods and techniques to protect soil resources. This would be implemented through the CEMP;
 - Temporary storage of excavated materials will be in accordance with a Materials Management Plan (MMP);
 - Measures to avoid soil compaction to avoid damage to soil, and the reuse of permanently displaced soil within the Proposed Development boundary will be reported within a Soils Management Plan (SMP) and Soils Resources Plan (which may be part of the MMP);
 - Intrusive geo-environmental ground investigation will be completed during the pre-construction phase, including soil sampling and chemical testing, to confirm the ground conditions;
 - Contamination if found will be subject to appropriate risk assessment and if necessary, either removed, treated and/or mitigated as part of the Proposed Development. The CEMP will include an unexpected contamination protocol; and
 - Materials selected for the above and below ground wind farm equipment will be suitably resistant to weather and Ground Conditions and have sufficient anticipated lifespan to ensure that they are unlikely to significantly degrade during the operational phase.
- 7.7.9 The construction and operation of the Proposed Development is not expected to result in any significant land contamination effects or effects on soils, provided that all recommended mitigation measures are put in place.
- 7.7.10 There are no cumulative developments within the study area of the Northern or Southern Array, and therefore no potential for cumulative effects. It should be noted that at this

stage, only the Northern and Southern Arrays have been considered in regard to cumulative effects, as a PRA, associated walkovers and peat surveys are yet to be undertaken for the forestry access track.

7.8 Traffic and Transport

- 7.8.1 An assessment has been completed of the likely effects of construction traffic on the local transport network and on road users. This has included a calculation of the likely number of movements of Heavy Goods Vehicles (HGVs) in and out of the development site over the anticipated 22-month construction period. A peak construction month and therefore year within the 22-month construction period was found. The peak construction year was found to be 2029, and this was the year where likely significant traffic and transport impacts from the Proposed Development was assessed.
- 7.8.2 This has been compared to the forecast background traffic numbers for the anticipated year of construction of 2029 when development-related construction traffic movements would be greatest, based on traffic growth models designed by the Department for Transport.
- 7.8.3 Construction HGV traffic will route along the Proposed Development access track by exiting at the A4061 Rhigos Road. Construction HGVs will then need to leave the Proposed Development access track onto the A4107, for approximately 250m to access another access track south of the A4107 which allows construction HGV traffic to reach the Northern Array and Southern Array. These road sections are shown on **Figure 7.1** below.

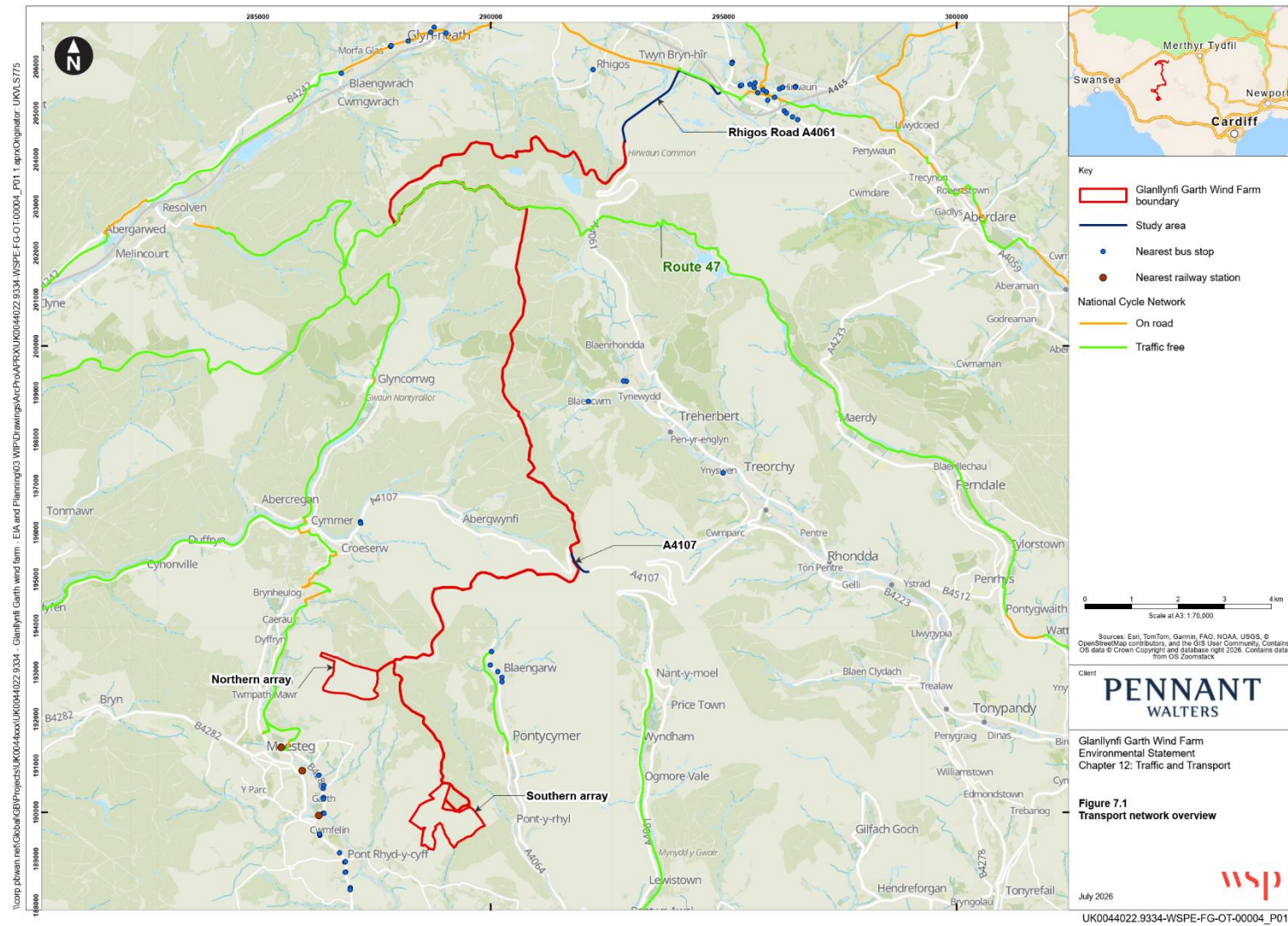


Figure 7.1: Traffic and transport study area

- 7.8.4 To minimise the impact of construction traffic on the road network and local communities surrounding the Proposed Development, a number of mitigation measures would be developed to manage construction traffic.
- A Construction Traffic Management Plan (CTMP) will be implemented to effectively manage the number and route of Heavy Goods Vehicles and ensure safety.
 - A Public Rights of Way Management Plan will include measures for the management of public rights of way during construction and operation.
- 7.8.5 Based on the construction program this construction traffic results in an approximate peak of 73 HGV total movements per 12 hours. This peak is predicted to occur during month 3 of the total 22-month construction programme.
- 7.8.6 Taking account of the environmental considerations of severance, driver and pedestrian delay, pedestrian amenity and intimidation, this increase in traffic during construction would not result in a significant effect. However, it is appropriate to consider some additional management in the form of a CTMP to reduce the potential for effects as far as reasonably possible. An Outline CTMP has therefore been provided as part of the submission documents and will be considered by BCBC, RCTCBC and NPTC.
- 7.8.7 The construction and operation of the Proposed Development is not expected to result in any significant construction traffic effects or effects on PRoWs and PRoW users, provided that all recommended mitigation measures are put in place. Effects of the movement of AILs would be managed in line with highway authority requirements and guidance in legislation and requirements in order to minimise the impact of AIL movements, the highway authority, and other key parties, would be consulted with and notified, as required, relating to the movement of AILs.

7.9 Noise

- 7.9.1 A detailed baseline noise survey will be undertaken to inform the assessment work. This is in preparation. The survey will be completed before Final ES submission and reported in this section and associated appendices.
- 7.9.2 A detailed baseline noise survey will be undertaken to inform the assessment work. This is in preparation. The survey will be completed before Final ES submission. Subject to access approvals, the baseline noise survey will be completed at a sample of the nearest Noise Sensitive Receptor (NSR) properties. Continuous long-term monitoring will be undertaken for a minimum of 2-weeks in line with the Institute of Acoustics Good Practice Guide (IOA GPG) guidance.
- 7.9.3 The current baseline work is under preparation and will be completed before Final ES submission. This section will include the full analysed results of the baseline noise survey. Results from the noise survey will determine assessment criteria and limits.
- 7.9.4 A noise and vibration assessment of construction traffic movements on the existing road network was undertaken. The highest predicted increase in road noise due to construction traffic is +0.7 dB on the A4017, this is classified as a Slight magnitude of impact which is not significant. Following the completion of the Operational Noise assessment set out above, it will be determined if it is necessary to implement any additional mitigation measures.
- 7.9.5 An assessment of operational turbine noise will be undertaken before Final ES upon determination of the Total Noise Assessment Criteria (TNAC) and Site-Specific Noise Limits (SSNLs) from the baseline noise survey work in accordance with latest government guidance (Assessment and Rating of Wind Turbine Noise (AWTN)) and the ETSU-R-97

Guidance 'The Assessment and Rating of Noise from Windfarms' and 'A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise' by the Institute of Acoustics, where still relevant.

7.10 Other Issues: Aviation and Telecommunications

- 7.10.1 Aviation radar, microwave and other electromagnetic signals are transmitted throughout the country by a wide range of operators. There is potential for interference to affect the transmission of these signals from any large structure, including wind turbines. A desk-based assessment, and consultation with authorities and companies working in this field in Wales, has been undertaken to identify any telecommunications or aviation interests that may be affected by the Proposed Development.
- 7.10.2 Technical engagement with consultees in relation to Aviation, Telecommunications and Utilities is ongoing. The desk study and consultation exercise identified a number of microwave links in the wider area, including a link operated by Airwave Solutions and several links operated by the National Grid Energy Distribution. The National Air Traffic Service (NATS) / Cardiff Airport indicated that the Proposed Development would be visible to the Cardiff Airports radar.

Aviation and Radar

- 7.10.3 The Proposed Development lies within unrestricted airspace (Class G) but has radar line of sight to the radar at Cardiff Airport and is within Low Flying Area (LFA) 7, a military low flying training area.
- 7.10.4 An independent assessment was undertaken by an independent aviation consultant, Wind Farm Aviation Safeguarding Ltd. Potential effects on Cardiff International Airport Radar, and the UK Low Flying System have been identified through the radar modelling. However, discussions are ongoing to agree a technical approach and a planning condition that would mitigate radar impacts.

Telecommunications

- 7.10.5 Airwave Solutions Limited have identified a link running through the Southern Array of the Proposed Development. They have initially objected based on their initial screening criteria; therefore, a detailed assessment has been requested that could show that there is no impact. However, if the detailed assessment indicates an impact, then discussions with Airwaves in relation to mitigation options would be held.
- 7.10.6 Existing overhead power lines cross parts of the proposed development site. Discussions with National Grid Energy Distribution are ongoing to agree any necessary measures.
- 7.10.7 It is unlikely that television reception quality will be directly affected by the Proposed Development, partly due to the prevalence of digital television. In the event that television reception is disturbed, this will become apparent during operation. Additional measures to mitigate this effect would be implemented as required.

7.11 Shadow Flicker

- 7.11.1 Shadow flicker is the flickering effect caused when rotating wind turbine blades periodically cast shadows through constrained openings such as the windows of properties.

- 7.11.2 A study has been undertaken to identify whether shadow flicker is likely to occur at residential properties within the spatial scope of assessment as a result of the Proposed Development. These residential properties were taken forward as potential receptors to include within the assessment of shadow flicker effects. The spatial scope extends to 10 rotor diameters plus 50 m from any proposed wind turbine (accounting for micro-siting).
- 7.11.3 Modelling has been carried out to predict the duration of potential shadow flicker effects at residential properties. The number of days per year that each receptor could be affected by shadow flicker have been reported.
- 7.11.4 1,138 residential properties have been identified to have the potential to experience some level of shadow flicker as a result of the operation of the wind farm. Shadow flicker is an effect which will only arise during the operation of the Proposed Development, with no effects during construction or decommissioning.
- 7.11.5 The effect of shadow flicker can be resolved using standard mitigation measures such as a shadow flicker control module which consists of bespoke software, a clock, a timer, a switch, a wind direction sensor and a light sensor. The module can control a specific turbine (or turbines) which would be programmed to shut down on specific dates at specific times when the sun is bright enough, there is sufficient wind to rotate the blades, and the wind direction is such that nuisance shadow flicker could occur.
- 7.11.6 The Applicant will commit to installing a shadow flicker control module, prior to operation, to fully mitigate any unacceptable shadow flicker on nearby properties. With this measure in place there will be no residual shadow flicker effects arising from the Proposed Development.

7.12 Socio-economics (People and Business)

- 7.12.1 The socio-economics assessment has considered the likely significant effects of the Proposed Development on climate change and energy security, tourism and recreation, economy and community, and land use during both the construction and operational stages.
- 7.12.2 The study area for baseline data covered the Development Site together with the wider county borough, regional and national context. Sources of information used to gather baseline data include:
- Department of Business, Energy and Industrial Strategy (BEIS) for the installed capacity of renewable energy for Torfaen County Borough Council and Blaenau Gwent County Borough Council;
 - The Welsh Government for data relating to deprivation, national renewable energy generation statistics and data for spend and visitor trips by region and local authority area; and
 - The Nomisweb and StatsWales websites for data related to demography, occupations, employment/unemployment, out-of-benefits for Torfaen County Borough Council and Blaenau Gwent County Borough and at ward level.
- 7.12.3 The baseline assessment reports benefits of renewable energy generation and specifically onshore wind. These benefits are recognised in consideration of the economic value to be gained in Wales and supporting the Welsh Government to meet certain targets.
- 7.12.4 The Site boundary is within the BCBC, NPTC and RCTCBC area, which had a population of 147,530, 143,249 and 242,844 respectively in 2024. The Northern Array and Southern Array are located solely in BCBC. The working age population of the BCBC, NPTCBC and RCTCBC areas is broadly similar to the Welsh average. Whilst the areas identified have

broadly similar gross weekly pay, RCTCBC has a lower gross weekly pay (£665.50) than Wales (£719.30), BCBC (£737.70) and NPTC (£693.00).

- 7.12.5 The Welsh Government measures active businesses within Wales each year. Between 2021 and 2024 all areas experienced a decrease in business enterprises, with the largest loss being in RCTCBC (-13%), with Wales (-5%) and NPT (-5%) experiencing the same loss in percentage terms.
- 7.12.6 The Welsh Index of Multiple Deprivation (WIMD, 2025) is an official Welsh Government measure of deprivation in Wales. The WIMD includes a number of different measures in small geographic areas called Lower Super Output Areas (LSOA). The WIMD is designed to allow comparison of deprivation across the country with LSOAs ranked from 1 (most deprived) to 1,917 (least deprived). The WIMD identifies the most deprived of the LSOAs as being Llangynwyd 1, which is within the top 20% most deprived LSOAs in Wales alongside other LSOAs within the Study Area.
- 7.12.7 There are a number of PRoWs that cross or are in close proximity to the Site. The Outline PRoW Management Plan states that 18 footpaths, 13 bridleways and one uncategorised PRoW have been identified as interacting with the Proposed Development, of which 17 are located in BCBC, 14 in NPTC and one in RCTCBC. National Cycle Network (NCN) route 47 which runs along the access track within the Development Site north of the A4107.
- 7.12.8 A number of measures will be implemented in relation to these PRoWs, including (where necessary) temporary closure and diversion during construction. Signs warning of ongoing construction works in the area will also be put in place through construction. It is anticipated that PRoWs will remain open, where possible, during construction and that information relating to alternative paths will be made available so as to allow continued use by the public. A PRoWMP will be implemented for the construction phase.
- 7.12.9 The operation of the Proposed Development is expected to result in a beneficial significant effect on climate change and energy security. The construction and operation of the Proposed Development is not expected to result in any significant effects on the economy and community; tourism and recreation; or Land use.

7.13 Inter-related cumulative effects

- 7.13.1 Inter-related cumulative effects consider whether any of the individual environmental topic effects resulting from the Proposed Development could combine to create effects that are significant.
- 7.13.2 The most likely types of receptors where topic effects are likely to combine are those pertaining to the amenity of the relevant human population, for example noise, visual, shadow flicker and traffic. Consideration has also been given to the potential for cumulative effects on other environmental receptors.
- 7.13.3 The assessment focused on those receptors where potential significant effects have been predicted in at least two or more topics and/or where the technical assessments have shown that potential individual effects are nearing the thresholds of established national criteria. No receptors were identified as resulting in more than one inter-related cumulative effect or effect close to the threshold of significance.

8. Looking Forward

8.1 What happens next?

- 8.1.1 Following the end of the Statutory Consultation period, the Applicant will consider all comments received as part of the consultation process. Where appropriate, these responses will inform further design refinements and proposals for environmental measures to reduce impacts from the Proposed Development.
- 8.1.2 Based on consultation feedback, any design refinements and additional information gathered from site visits and surveys will be incorporated into the Final ES. The Final ES will accompany the DNS application, which is expected to be submitted in 2026.

8.2 What if I would like further information?

- 8.2.1 This document is a non-technical summary of the ES for the proposed Glanllynfi Garth Wind Farm project. The full Draft ES, which provides more detailed and technical information, is available to view on the following link: www.glanllynfi-garth.co.uk
- 8.2.2 Further information can also be obtained:
- Via email: info@glanllynfi-garth.co.uk; and
 - Telephone: 0800 699 0081 during normal office hours (Monday to Friday 9am to 5pm excluding public holidays).
- 8.2.3 Public consultation events will also take place as follows:
- Tuesday 15th September 2026, 2pm-7pm at Maesteg Celtic RFC;
 - Wednesday 16th September 2026, 9am-1pm at Maesteg Town Hall; and
 - Wednesday 16th September 2026, 2pm-7pm at Nantyfyllon RFC.

8.3 How Can I Have My Say

- 8.3.1 We want to hear your views on the Proposed Development. You can get in touch in the following ways:
- Completing the feedback questionnaire online via the Project website: www.glanllynfi-garth.co.uk;
 - Providing feedback by email (info@glanllynfi-garth.co.uk); and
 - Completing a hard-copy feedback form, which can be provided on request by calling or emailing using the contact details above or in person at the face-to-face events. The feedback form can be returned free-of-charge using the Freepost address: FREEPOST TC CONSULTATION (please write this in capitals, you do not need a stamp).
- 8.3.2 Consultation responses received via any other method than those listed above, such as through social media, will not be formally recorded as part of the consultation.
- 8.3.3 Responses given orally, such as via telephone (0800 699 0081) or via a meeting, will be recorded and issues raised will be included in the Consultation Report.

- 8.3.4 All responses must be received by Friday 2nd October at 11:59pm. Feedback submissions sent via post will be accepted for up-to five working days after this date.

