



Awel y Môr Offshore Wind Farm

Note on Opportunities for Ecological Enhancement and Connectivity at the OnSS Site

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1 Introduction

- 1 This note sets the policy requirements relating to terrestrial biodiversity enhancement in Wales, and how these requirements are met through the proposed landscape mitigation and ecology mitigation, compensation and enhancement areas around the onshore substation (OnSS) for the Awel y Môr Offshore Wind Farm (AyM). The note provides a written submission setting out the Applicant's oral representations at the Compulsory Acquisition hearing (CAH) held in Llandudno on 28 February 2023. The note also provides further information in relation to Question 3.12 from the Examining Authority's (ExA's) third round of written questions (PD-017) which asks:

'ExQ3.3.12 - OnSS and Biodiversity Enhancement

It is mentioned throughout your submissions, including [REP3a-005], that biodiversity enhancement quantum at the OnSS site would meet relevant policy requirements. Please specify which policy requirements.'

- 2 A recurring objective running through national policy is the need for development to secure 'resilience' through provision of 'net benefits for biodiversity', also referred to as 'biodiversity enhancement' or 'Biodiversity Net Gain'.
- 3 This note identifies relevant policy requirements for infrastructure development in Wales to demonstrate:
 - ▲ Biodiversity compensation for identified adverse ecological impacts;
 - ▲ Biodiversity enhancement to deliver a net gain for biodiversity;
 - ▲ The establishment of resilient ecosystems; and
 - ▲ A resilient network of inter-connected areas of existing ecological value.
- 4 The Applicant has taken an integrated approach to landscape and biodiversity mitigation around the OnSS. Therefore, this note also sets out how these aspects would work together as illustrated on Figure 2 of the Outline Landscape and Ecological Management Plan (oLEMP) (REP7-026).

2 Policy Requirements

- 5 This section sets out the planning policy requirements that the Applicant considers are relevant to the provision of biodiversity compensation and enhancement within the area around the onshore OnSS.

2.1 National Policy Statement (NPS) EN-1

- 6 The need for biodiversity enhancement is set out in National Policy Statement (NPS) EN-1 where paragraph 5.3.4 requires Applicants to:

'show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests.

- 7 The general principle of avoiding significant harm to biodiversity is set out in paragraph 5.3.7 of NPS EN-1, which states that:

'development should aim to avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives; where significant harm cannot be avoided, then appropriate compensation measures should be sought.'

- 8 Paragraph 5.3.15 of NPS EN-1 highlights that:

'Development proposals provide many opportunities for building-in beneficial biodiversity as part of good design.'

- 9 And that:

'When considering proposals, the Secretary of State should maximise such opportunities in and around developments, using requirements or planning obligations where appropriate.'

2.2 Draft NPS EN-1

- 10 This is reiterated in the draft NPS EN-1 which notes that the scope of potential gains is dependent on the type, scale and location of each project.

- 11 The draft NPS goes on to stress the importance of maximising opportunities in paragraph 5.4.17 which states that:

'Proposals should also consider any opportunities to maximise the restoration, creation, and enhancement of wider biodiversity. Consideration should be given to improvements to, and impacts on, habitats and species in, around and beyond developments, for wider ecosystem services and natural capital benefits, beyond those under protection and identified as being of principal importance.'

12 Paragraph 5.4.23 of the draft NPS states that:

'The Secretary of State will need to take account of what mitigation measures may have been agreed between the applicant and the Statutory Nature Conservation Bodies, and whether the Statutory Nature Conservation Bodies has granted or refused or intends to grant or refuse, any relevant licences, including protected species mitigation licences.'

13 The proposals for biodiversity compensation and enhancement around the OnSS have been developed in discussion with Natural Resources Wales (NRW) and Denbighshire County Council (DCC), with a particular focus on compensation and enhancement for Great Crested Newts (GCN) (*Triturus cristatus*).

14 Given that these matters have been the subject of consultation over a number of years through the Environment Act 2021, the Wellbeing of Future Generations (Wales) Act 2015 and related adopted policy and guidance set out below the Applicant considers that its compliance with the requirements of the draft NPS should be given weight in the determination of the AyM application in line with section 1.6 of revised draft NPS EN1.

2.3 Defra Action Plan on NSIPs

15 The Applicant notes the recent Department for Environment, Food and Rural Affairs (Defra) Action Plan on Nationally Significant Infrastructure Projects (NSIPs), which was published in February 2023, proposes to incorporate biodiversity net gain requirements for all (terrestrial) NSIP projects, from November 2025. Defra plans to consult on the detail for the biodiversity net gain proposals later in 2023.

- 16 However, until this comes into force, the position for NSIPs in Wales remains unchanged with no current requirement to quantify losses and gains through use of a metric. This position has been confirmed by both NRW and Welsh Government.
- 17 Instead of a metric, the Welsh Government approachⁱ is to place the *'emphasis on proactive consideration of biodiversity and wider ecosystem benefits within a placemaking context early in the design process. The aim is that the planning system will encourage the use of high calibre ecological expertise and early discussions with planning teams to design developments on a case-by-case basis that will positively impact ecosystem resilience.'*
- 18 It is this qualitative approach, in close consultation with stakeholders, that The Applicant has used in the development of the proposed mitigation, compensation and enhancement proposals that have been developed with input from NRW and DCC.

2.4 Planning Policy Wales (2011)

- 19 Paragraph 6.4.3 of Planning Policy Wales (2021) sets out the requirement to secure enhancement of, and improvements to, ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks:

'Development plan strategies, policies and development proposals must consider the need to:

- ▲ support the conservation of biodiversity, in particular the conservation of wildlife and habitats;*
- ▲ ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats;*
- ▲ ensure statutorily and non-statutorily designated sites are properly protected and managed;*
- ▲ safeguard protected and priority species and existing biodiversity assets from impacts which directly affect their nature conservation interests and compromise the resilience of ecological networks and*

ⁱ Welsh Government's Approach to Net Benefits for Biodiversity and the DECCA Framework in the Terrestrial Planning System', CIEEM Briefing Paper, September 2022

the components which underpin them, such as water and soil, including peat; and

- ▲ *secure enhancement of and improvements to ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks.'*

- 20 This is alongside the requirement to safeguard protected and priority species such as GCN from impacts which would directly affect their nature conservation interests and would compromise the resilience of ecological networks.
- 21 The proposals for the area around the OnSS will improve both biodiversity resilience and the connectivity of existing biodiversity assets through opportunities to maintain and strengthen the linkage between Glascoed Nature Reserve and habitat within Bodelwyddan Park currently used by GCN. There is additional opportunity to connect blocks of ancient woodland in the north of the site to ancient woodland within Bodelwyddan Park.

2.5 Well-Being of Future Generations (Wales) Act 2015

- 22 The objective of achieving Biodiversity Resilience is also a key goal within the **Well-Being of Future Generations (Wales) Act 2015** which aims for:

'A nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change'.

- 23 AyM has sought to minimise effects of the scheme through avoidance of ecological impacts through siting and routing, with mitigation and compensation measures proposed where impacts are predicted to occur. In addition, AyM will provide new benefits for biodiversity, through proposed enhancement measures, that are additional to those provided as part of mitigation or compensation measures, although they can be complementary.

2.6 Future Wales: The National Plan 2040

- 24 Again, it is Biodiversity Resilience that is a fundamental aspect of Policy 9 of '**Future Wales: The National Plan 2040**' which concerns Resilient Ecological Networks and Green Infrastructure

25 Policy 9 – Resilient Ecological Networks (REN) and Green Infrastructure (GI) states that to ensure the enhancement of biodiversity, the resilience of ecosystems and the provision of green infrastructure, the Welsh Government will work with key partners to:

'Identify areas which should be safeguarded and created, to ensure they are not compromised by future development.'

26 And:

'Identify opportunities where existing and potential green infrastructure could be maximised as part of placemaking, requiring the use of nature based solutions as key mechanism for securing sustainable growth, ecological connectivity, social equality and well-being.'

27 Through this policy, Welsh Government aims to work with key partners, including NRW, to ensure the enhancement of biodiversity, the resilience of ecosystems and the provision of green infrastructure by identifying areas which should be safeguarded and created and by identifying opportunities where existing and potential green infrastructure could be maximised.

28 Action towards securing the maintenance and enhancement of biodiversity, the resilience of ecosystems and GI assets must be demonstrated as part of development proposals through innovative, nature based approaches to site planning and the design of built environment.

29 RENs are defined as networks of habitat in good ecological condition linking protected sites and other biodiversity hotspots across the wider landscape, providing maximum benefit for biodiversity and well-being.

30 Such nature networks have existing, or potential for, healthy resilient ecosystems which provide a range of important ecosystem services as well as allowing the movement of species across landscapes in response to climate change.

31 The proposals around the AyM OnSS offer the opportunity to link the biodiversity hotspot within Glascoed Nature Reserve with habitat in Bodelwyddan Park as well as habitat in good ecological condition within the areas of ancient woodland to the north of the OnSS.

2.7 Welsh Govt Natural Resources Policy (2017)

32 The theme of Resilient ecosystems also forms part of Welsh Government Natural Resources Policy (2017). A key principle is:

'through actions such as increasing resource efficiency of reducing pollution, the aim is to build greater resilience into our ecosystems'

2.8 Nature Recovery Action Plan for Wales 2020 – 21

33 Resilient ecosystems is an important aspect to the plan which includes an objective to:

'Increase the resilience of our natural environment by restoring degraded habitats and habitat creation'

2.9 NRW NE Area Statement

34 The NRW North East Wales Area Statement sets out 5 key themes, three of which are met by the proposals for the area around the OnSS. These are:

- ▲ *developing and improve urban/rural green infrastructure*
- ▲ *increasing woodland cover and*
- ▲ *promoting the resilience of ecosystems in maintaining and enhancing biodiversity'*

2.10 Summary

35 The policies summarised above set out consistent objectives to provide:

- ▲ Evidence that it has sought to minimise impacts to ecological receptors;
- ▲ A net benefit for biodiversity;
- ▲ A diverse, extensive and connected ecological network in good condition; and
- ▲ An increasingly resilient ecosystem.

3 Demonstrating policy requirements

36 Nature based principles for the design of the OnSS area were developed from the outset through the pre-application Evidence Plan Process in collaboration with NRW and DCC. Through these discussions the Applicant has agreed the proposals for mitigation/compensation/enhancement at the OnSS. This is recorded in respective Statements of Common Ground (SoCGs) (Document 8.35 of the Applicant's Deadline 8 submission and REP7-049, respectively) and meets the requirements of draft NPS EN-1, paragraph 5.4.23, in relation to the requirement for The Secretary of State *'to take account of what mitigation measures may have been agreed between the applicant and the SNCB'*. This process also meets the requirement within Future Wales: The National Plan 2040 Policy 9 in relation to Resilient Ecological Networks, which asks that:

'actions securing the enhancement of biodiversity must be demonstrated as part of development proposals through innovative nature based approaches'

37 The proposals within the oLEMP (REP7-026) accommodate a number of hard engineering constraints such as the presence of a high-pressure water main (located between the OnSS and OnSS Temporary Construction Compound (TCC)), the need for an operational access road and drainage infrastructure. The outline scheme illustrated in the oLEMP minimises hedgerow and tree loss, and retains all ponds, so as to maintain existing ecological networks as far as possible. This accords with NPS EN1 5.3.7 (as set out in Section 2.1 of this document).

38 In addition to the retention of features within the site, the proposals respond to existing biodiversity assets adjacent to the site and within the surrounding area. This approach corresponds with the Future Wales definition of resilient ecological network (REN), which is:

'These are networks of habitat in good ecological condition linking protected sites and other biodiversity hotspots across the wider landscape, providing maximum benefit for biodiversity and well-being'

39 The following sections discusses the various elements illustrated on the plan included in the oLEMP to better demonstrate how the project has developed the proposals in line with the legislative and policy drivers. Since there remains an appropriate and necessary degree of flexibility in the final scheme design, there is consequential optionality for the type, location and extent of landscape and ecological mitigation, compensation and enhancementⁱⁱ. It is important to note that Figure 2 of the oLEMP is an illustrative example and serves only to show that the project can provide adequate mitigation, compensation and enhancement within the Order Limits.

3.1 A qualitative, rather than quantitative, approach

40 The Applicant is aware of the forthcoming mandatory requirement for 10% measurable biodiversity net gain for NSIPs that will come into force in 2025. However, in Wales, there is currently no requirement to quantify losses and gains, e.g. using a metric. The qualitative approach that the Applicant has taken not to use a metric was agreed with NRW in December 2021 (APP-303).

41 The Welsh Government has confirmed its approach to net benefits for biodiversity ('Welsh Government's Approach to Net Benefits for Biodiversity and the DECCA Framework in the Terrestrial Planning System', CIEEM Briefing Paper, September 2022), which aligns with the qualitative approach the Applicant's assessment has used. The Welsh Government briefing paper states that:

'The net-benefits for biodiversity approach by Welsh Government has the same intent – to deliver an overall improvement in biodiversity - but does not utilise a metric. Instead, it puts the emphasis on proactive consideration of biodiversity and wider ecosystem benefits within a placemaking context early in the design process. The aim is that the planning system will encourage the use of high

ⁱⁱ 8 The project follows the mitigation hierarchy, and uses the following terms:

- Avoidance – if impacts can be designed out, they will be – all ponds have been avoided by the route and the OnSS.
- Mitigation – if impacts cannot be designed but can be reduced, they will be (such as dead hedges in gaps overnight, if needed)
- Compensation – when impacts are unavoidable, then measures to “offset” or compensate for them will be sought – such as habitat loss at the OnSS.
- Enhancement – any measures that are of benefit to biodiversity (over and above mitigation and compensation) are considered enhancement.

calibre ecological expertise and early discussions with planning teams to design developments on a case-by-case basis that positively impact ecosystem resilience.'

42 The approach document goes on to confirm that:

'Ecologists and developers should note that the metric approach is not designed to meet Welsh legislative requirements, for example encompassing ecosystem resilience. A metric can be submitted to provide evidence and a supplementary overview if preferred, but will not necessarily demonstrate compliance with planning requirements. Local planning authorities will be considering whether a net benefit for biodiversity has been secured.'

43 In developing the proposed enhancement measures for AyM, as set out in the oLEMP, the Applicant has employed ecological specialists to undertake baseline ecology surveys, an ecological assessment, whilst engaging closely with NRW and DCC to develop and agree the enhancement proposals.

44 The Applicant considers that net benefits for biodiversity will be achieved through the provision of enhancement measures that provide new benefits for biodiversity in addition to sufficient mitigation (to reduce and/or eliminate the potential for significant effects) and compensation (to offset residual effects resulting in the loss of, or permanent damage to, ecological features despite mitigation). NRW confirmed to the Applicant in December 2021 (APP-303) that:

'the mitigation/ compensation/ biodiversity enhancement quantum for the application is agreed and therefore meets the relevant Policy requirements'.

45 Given lack of legislative or policy requirement for a quantitative style assessment, in addition to the agreement that has been reached to date with NRW and the approach taken by the Welsh Government, the Applicant does not consider a quantitative or metric-based approach is required to demonstrate that AyM would deliver net benefits to biodiversity.

3.2 Biodiversity Compensation

46 Compensation at the OnSS site is required for permanent loss of:

- ▲ Up to eight trees of potential use to roosting bats in OnSS footprint;

- ▲ Potentially up to five further trees in batter slope around OnSS;
 - ▲ Up to 540 m of hedgerow within OnSS footprint.
 - ▲ Potentially up to 130 m of additional hedgerow within batter slope area around OnSS;
 - ▲ Foraging habitat for GCN (potentially up to 5.38 ha);
 - ▲ Habitat for passerine species; and
 - ▲ In the unlikely event that some impacts along the onshore Export Cable Corridor (ECC) cannot be mitigated or compensated for at source, then the OnSS may be used, if appropriate to provide compensation for impacts along the ECC.
- 47 One of the main ecological drivers for compensation is the requirement to reduce impacts to an identified metapopulation of GCN located around St Asaph Business Park (SABP) which is considered to be a nationally important population. The construction and continuing presence of the OnSS would, in the absence of mitigation and compensation, serve to reduce the availability of foraging habitat to the metapopulation and prevent east-west movements between ponds.
- 48 A GCN metapopulation is formed of a group of spatially separated populations which interact across a landscape of breeding ponds and terrestrial habitat. The AyM Ecology assessment has identified that a metapopulation spans the SABP area, based on local records and the results of 2021 field survey. It utilises the following ponds and suitable intervening habitats (refer to Figure 1 for locations):
- ▲ Glascoed Nature Reserve Ponds;
 - ▲ SABP Ponds;
 - ▲ Bodelwyddan Ponds; and
 - ▲ All other ponds within 500m of these.
- 49 The SABP metapopulation may be impacted by the development of AyM via:
- ▲ Temporary loss of terrestrial habitat (either directly, or via barriers to movement) along the route;
 - ▲ Permanent terrestrial habitat loss at the OnSS;
 - ▲ Accidental killing and injury; and/or
 - ▲ Accidental pollution to breeding ponds.

- 50 GCN are protected under the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981. It is also a species of principal importance for the conservation of biodiversity in Wales under Section 7 of the Environment (Wales) Act 2016.
- 51 As a protected species that is of principal importance for the conservation of biodiversity in Wales, there is a requirement for the AyM scheme to provide mitigation and compensation for GCN. The location of compensation for impacts to GCN must be:
- ▲ Contiguous with habitats used by GCN, in order that the local GCN population has access to it;
 - ▲ As close as possible to habitat lost in order to minimise impacts; and
 - ▲ In all cases within 500 m (500 m being the dispersal distance for GCN from breeding ponds).
- 52 To minimise impacts, it is necessary to provide this mitigation prior to/at the commencement of construction in order that the local GCN population retains access to an equivalent terrestrial habitat resource (*i.e.* will experience no net loss of habitat). For that same reason, it will also be necessary to maintain it for the duration of the operational lifetime of the development. It cannot therefore be within the construction footprint.
- 53 During construction this means that there is a need to provide compensatory habitat that is retained and protected. The oLEMP plan therefore identifies approximately 6 ha of compensation habitat outside of the construction footprint (shown coloured orange), which will be enhanced from ecologically poor agricultural grassland to provide more suitable grassland for foraging and sheltering GCN that would otherwise use the areas affected by construction (approximately 21 ha), or areas which prove inaccessible as a result of construction. Culverts will be included beneath operational or permanent access routes to ensure that the ponds on site remain accessible to the GCN metapopulation such that there is no functional loss of potential breeding sites.

- 54 Compensatory hedgerow and woodland planting will also commence in areas unaffected by construction, and in advance of construction where possible. Approximately 670 m of hedgerow (a Section 7 habitat under the Environment Act (Wales) 2016), would be lost as a result of the OnSS and batter slope shown on the oLEMP plan. Compensation for loss of these will also serve to mitigate and compensate for associated impacts to sheltering and foraging GCN, but also to other protected and notable species, including but not limited to: bats, reptiles, breeding birds, hedgehogs, brown hares and polecats.
- 55 NRW have confirmed that the biodiversity compensation, alongside the enhancement proposals set out in Section 3.3, would maintain the Favourable Conservation Status (FCS) of this European Protected Species (EPS).
- 56 In addition to GCN, there is a need to mitigate and compensate for loss of bat roosts, and trees with potential roost features (as stated in the oLEMP paragraph 115, Principle 1: no net loss of potential roosting habitat). Compensation measures for confirmed roost loss would be within the Core Sustainance Zone of the species concerned.
- 57 Construction of the OnSS and need for earthworks to construct the OnSS platform shown on the oLEMP plan could result in the felling of 13 trees with bat potential (based on currently available data). Each of those supports a number of potential roost features for which compensation would be needed in advance of felling. This would include bat boxes installed upon retained trees or poles, re-use of whole felled trunks, or veteranisation of existing mature trees. Since bat boxes are typically installed at no more than 2 or 3 per tree or pole, and as a conservative estimate, most of the trees that could be felled have at least four Potential Roost Features (PRF), then there would be a requirement for at least $(4 \times 13/3)$ 18 mature trees or poles, in suitable locations (close to the tree that has been lost, within or near a flightline, not illuminated) upon which to affix bat boxes.

- 58 In illustrating how and where the hedgerows and woodland planting may be included within a scheme of mitigation and compensation, there are two main factors: the need to provide landscape screening, and the need to re-instate the habitat network. Landscape screening is primarily needed to the north and south of the OnSS in east-west orientations (See Section 3.4 for further details), the habitat network requires links to be reinstated in a north-south direction too.
- 59 This requirement for connection and landscape screening, plus retained mature trees for bat mitigation/compensation, is part of the reason that simply a like for like replacement between the extent of the scheme footprint and the extent of the mitigation/compensation and enhancement areas at the OnSS is not appropriate.
- 60 The project is following the mitigation hierarchy and the aim is for all impacts along the ECC to be mitigated or compensated close to the source of impact. However, in the unlikely event that some impacts along the ECC cannot be mitigated or compensated for at source, then the OnSS may be used, if appropriate to provide compensation for impacts along the ECC.

3.3 Biodiversity Enhancement

- 61 As noted in Section 2, different aspects of national planning policy all share a consistent objective for development to provide enhancement to achieve an overall net benefit for biodiversity.
- 62 Biodiversity enhancements have been considered from the outset as complementary and additive to the mitigation and compensation already outlined and agreed with DCC and NRW. The review of relevant policy in Section 2 shows that enhancement measures are necessary for the scheme to be compliant with key policy objectives.

- 63 Ecological enhancements are located in areas where they will bring most ecological benefit. In general, this means linking into existing habitat networks, joining together or expanding important species populations, to create a larger, more resilient system. Enhancements will also require management and monitoring for the life of the development (in line with the principles set out in the oLEMP with final details to be agreed via the final LEMP under DCO Requirement 13). This also has a bearing on location, particularly given the Applicant intends to take freehold possession of the OnSS site and surrounding land, compared with the ECC which will be temporarily affected and no such rights sought.
- 64 On that basis, enhancements for the scheme as a whole were considered best located at the OnSS site where they could build upon the planned landscape and ecology mitigation and ecology compensation measures already described for AyM, on a site that is contiguous to an area of similar purpose for SABP (Glascoed Nature Reserve). In so doing, the value of the whole ends up being greater than the sum of its parts and greater ecosystem resilience can be achieved.
- 65 Ecological measures illustrated in the oLEMP and in Figure 2 of the oLEMP below have been located in areas where they will bring most ecological benefit, whilst also meeting other specific requirements such as for EPSL, landscape and hydrology. The design accords with the “rules of thumb” related to the diversity, extent, condition and connectivity referenced in NRW’s report, Terrestrial and Freshwater Resilient Ecological Networks: a guide for practitioners in Wales (2021).
- 66 Hedgerows, woodlands and ponds are proposed at locations which link to the existing green and blue infrastructure. The plan shown in the oLEMP provides one potential illustration, Figure 2 of this document provides another, showing conceptually the principles that would be applied when developing the layout. Both demonstrate the opportunity to deliver the mitigation, compensation and enhancement that may be required, and which would be determined as part of final design. Enhancements include:

- ▲ Creation of five additional ponds located to the south east of the OnSS and ongoing management of the new ponds plus two existing ponds; helping to sustain the nationally important GCN metapopulation. This move has been confirmed by NRW (through bilateral discussion on 26 November 2021 and confirmed via subsequent agreement on minutes as well as Relevant Representations, Written Representations and the SoCG) as assisting to move the SABP GCN population toward favourable conservation status (noting that Gwynt y Môr and Burbo bank both included creation of 3 ponds). NRW confirmed (also via meeting on 26 November and minutes) that SUDs ponds cannot be considered as part of GCN enhancement;
- ▲ Creation of five reptile/amphibian hibernacula each measuring at least 1 m³ and constructed from on-site materials including soil, logs, brash and stone;
- ▲ Creation of twenty reptile/amphibian refugia, each comprising brash piles or log stacks, at least 0.25 m³;
- ▲ Erection of ten bat boxes (additional to those required as compensation for potential roost features (PRFs) to be lost) and ten bird boxes, including two pole mounted barn owl boxes;
- ▲ Scrub management to promote structurally diverse grassland habitat and benefit reptiles and amphibians;
- ▲ Creation of species-rich, lowland meadow Priority Habitat (Section 7) and 6.05 ha of diverse neutral grassland, plus management thereafter to ensure its nature conservation interest is maintained; and
- ▲ Creation of predominantly locally native broadleaved woodland, including locally sourced black poplar *Populus nigra*.

67 NRW has confirmed (RR-015) that it agrees with the proposed principles for mitigation of protected species in the oLEMP.

68 Figure 1 (below) seeks to demonstrate the important ecological features and networks that are present in the vicinity of the OnSS, how they may be disrupted by construction or operational presence of AyM.

3.4 Landscape Mitigation

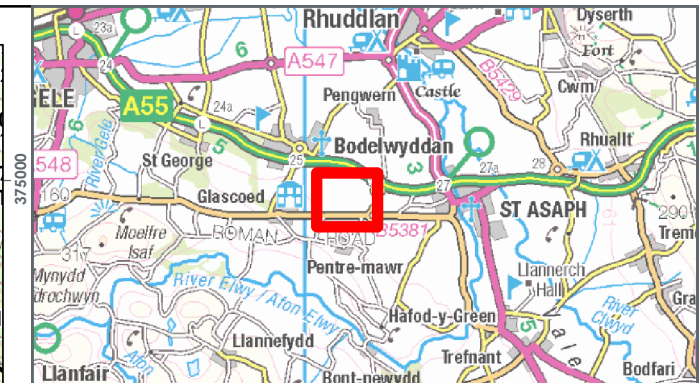
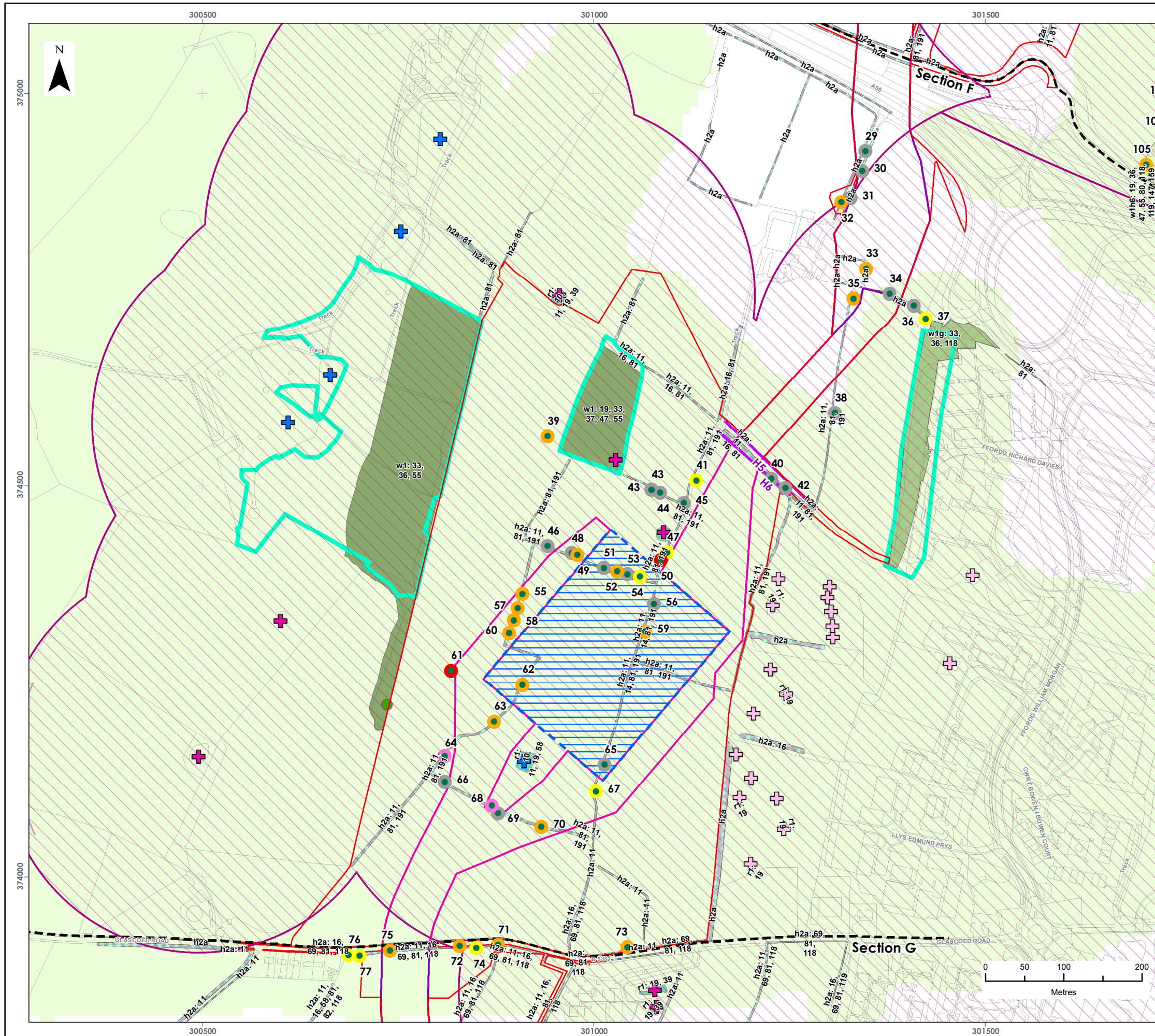
- 69 There is a requirement to provide landscape planting around the OnSS as visual mitigation for surrounding receptors. The provision of permanent landscape and ecological mitigation in the same location represents a more efficient mitigation proposal that reduces the overall long-term land-take of the project. As such, it is relevant to include consideration of proposed landscape and visual mitigation in the development of measures for biodiversity compensation, enhancement and connectivity with surrounding features.
- 70 The oLEMP sets out the mitigation principles and outline planting principles relating to mitigation of landscape and visual effects.
- 71 Figure 2 of the oLEMP is an illustrative arrangement that shows where landscape proposals could be located to achieve the mitigation set out and assessed in the landscape and visual impact assessment (AS-029). As part of the detailed design stage the layout and the landscape and visual mitigation provided by the landscape proposals will be the subject of consultation with interested parties as well as requiring agreement from DCC and NRW.
- 72 The OnSS has been located centrally within the identified land for a variety of reasons as set out in the Site Selection and Alternatives chapter of the ES (APP-044). This ensures there is sufficient space to the north and south to accommodate the necessary landscape and visual mitigation and ecological compensation, mitigation and enhancement. These areas also allow for the provision of landscape and biodiversity to link and provide connectivity of habitats around the OnSS area and also ensure that landscape screening is provided for residential and other receptors, particularly to the north and south. In addition, the retained open areas of habitat between the woodland and hedgerow structure ensures that the character of these parts of the landscape is maintained.

- 73 The woodland areas shown to the north of Glascoed Road on Figure 2 of the oLEMP have a purpose of screening views of the proposed OnSS from the properties and crematorium business as well as users of Glascoed Road. Planting in close proximity to the properties and other receptors ensures that screening of the OnSS can occur more quickly than would be the case if the woodland areas were located further away.
- 74 As set out in response to ExQ2.10.2 consideration will be given to how the views from the properties would be affected by the planting. At the detailed design stage further consideration would be given to the ultimate height and location of the planting in order to achieve screening of the proposed OnSS whilst also retaining as much of the view towards the sea and Clwydian Range hills as possible from the properties where such views currently exist.
- 75 The woodland shown to the south of the Bridleway in the north-western corner of the Onss site is located with the purpose of screening views of the OnSS from residential properties and other receptors to the north.
- 76 The Applicant will consult with local people, who would be affected by changes to close range views from their homes, regarding the proposals, as set out in the Design Principles Document (REP7-028).
- 77 Woodland shown located in closer proximity to the OnSS provides further screening in views from the properties located to the south at slightly higher elevations, the A55 to the north, Bodelwyddan Park and Garden to the west and from within the Glascoed Nature Reserve and SABP located to the east.
- 78 The woodland areas follow or link landscape and ecological features and generally create opportunities for habitat connections that are important for biodiversity (as set out in Section 3.5).
- 79 The area defined as the OnSS TCC offers the potential for provision of planting and landscape areas for potential screening, connectivity and reinstatement of historic hedgerow boundaries. Such proposals would come forward as part of the detailed design and final LEMP.

- 80 Plot 416 includes the bridleway to the north of Plot 417. The screening and biodiversity benefits provided by the hedgerow and hedgerow trees are important. The ownership and responsibility for management of the existing hedgerows and trees and proposed replacement hedgerows along the bridleway (and including areas that lie within their root protection areas) is required to ensure the integrity and long-term screening effect of this landscape feature is maintained.
- 81 The illustrative layout in Figure 2 of the oLEMP shows how landscape and habitat features can combine to ensure landscape and biodiversity mitigation can occur whilst also creating a scheme that fits in with and reinforces the broader landscape character, which is composed of woodland blocks, hedgerows and hedgerow trees surrounded by pockets of open grassland.

3.5 A resilient network of inter-connected areas

- 82 This section sets out how the proposals outlined for the area around the OnSS provide opportunity for restoring and enhancing ecosystem resilience through a network of interconnected areas. Figure 1 shows important existing ecological features that have been identified and considered within the scheme proposals. Figure 2 of this document provides a schematic plan showing where there are opportunities for restoring and enhancing ecosystem resilience alongside landscape mitigation considerations.



LEGEND

- Order Limits
- Onshore Cable Route Section Breaks
- Proposed Onshore Export Cable Corridor
- Proposed Substation Cable Corridor Zone

Great Crested Newts

- GCN Present
- GCN Present (Pre-Existing Data from Cofnod/NRW)
- GCN Present (Pond within 250m of Another with GCN Present)
- GCN Absent

Ponds 250 m Buffer

Trees with Bat Roost Potential

- Confirmed Bat Roost
- High Potential
- Moderate Potential
- Low Potential
- Negligible Potential
- Veteran Tree Location

Important Habitats

- Important Hedgerow
- Ancient Semi Natural Woodland Site
- Wood Focal Network

Priority Habitats

Heathland and Shrub - Hedgerows

- h2a - Hedgerow (Priority Habitat)

Woodland and Forest - Broadleaved Mixed and Yew Woodland

- w1 - Broadleaved Mixed and Yew Woodland
- w1g - Other Woodland; Broadleaved
- w1h6 - Other Woodland; Mixed; mainly Conifer

Rivers and Lakes - Standing Open Water and Canals

- r1 - Standing Open Water and Canal

Note:
Refer to habitat report for full legend of habitats
Data Source:
© Crown copyright [and database rights] (2022) OS OpenData.

PROJECT TITLE:
*AWEL Y MÔR OFFSHORE WINDFARM
COMPULSORY ACQUISITION HEARING*

FIGURE TITLE:
ECOLOGY NOTES

VER	DATE	REMARKS	Drawn	Checked
1	02/03/2023	CAH Issue	JRS	JC
2	14/03/2023	CAH Issue	SH	JC

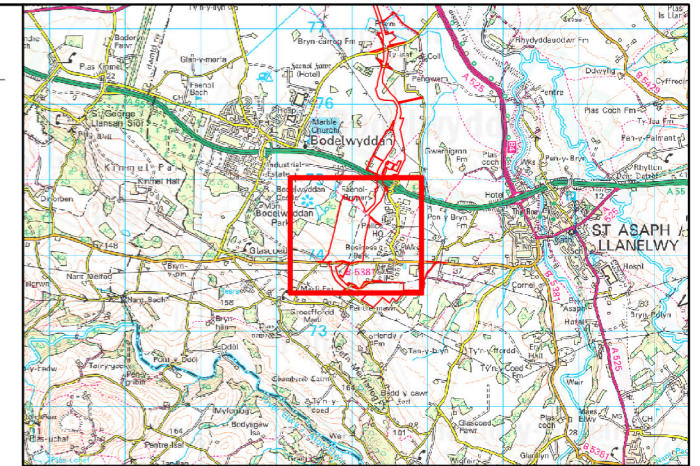
FIGURE NUMBER:
FIGURE 1

SCALE: 1:5,000	PLOT SIZE: A3	DATUM: ODN	COORDINATE SYSTEM: British National Grid
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Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



LEGEND

- Ancient semi-natural woodland (ASNW).
- Post-construction ecological enhancement.
- Pre- and post- construction ecological compensation and enhancement.
- Glascoed Nature Reserve.
- Consider existing views to north-east.
- Connectivity for GCN during and after construction.
- GCN connectivity after construction.
- Preserving and strengthening links between ASNW and other broadleaved woodland.
- Proposed woodland.
- Hedgerow.
- Ponds

Data Source:
 Contains OS data © Crown copyright and database right (2021), © Crown copyright, All rights reserved. (2021), Ordnance Survey Licence 0100031673. Contains public sector information licensed under the terms of the Open Government Licence v.3.0.

PROJECT TITLE:
AWEL Y MÔR OFFSHORE WINDFARM

FIGURE TITLE:
Opportunities for Restoring and Enhancing Ecosystem Resilience

VER	DATE	REMARKS	Drawn	Checked
1	14/03/2023	For Issue	NK	LT

FIGURE NUMBER:
Figure 2

SCALE: NTS	PLOT SIZE: A3	DATUM: OSGB 1936	PROJECTION: BNG
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83 As indicated in Figure 1, the OnSS area is within the NRW Woodland Network Focal Area. NRW states in section 4.3 of “A Handbook on Habitat Networks, 2019, that these network maps should be used to (amongst other things):

‘guide the location of habitat restoration, creation and management to improve ecological connectivity and ecosystem resilience’.

84 There are policy requirements in respect of connectivity, such as (but not limited to) PPW 11 2011 Section 6.4.3 which includes a bullet point that specifically requires development proposals to consider the need to:

‘secure enhancement of and improvements to ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks’.

85 As required by Future Wales: The National Plan 2040 – Policy 9 (refer to Section 2 of this document) the proposed scheme has identified existing and potential green infrastructure (see Figures 1 and 2) and has sought to maximise them. This is achieved via:

- ▲ Extending and increasing the pond network through pond creation; and
- ▲ Extending and increasing the amount of woodland and hedgerow, and the connections between these.

86 Figure 2 of this document shows where opportunities have been/will be sought to increase ecological resilience through the application of the DECCA principlesⁱⁱⁱ outlined in the NRW practitioners guide and handbook to creating resilient ecological networks^{iv}. To summarise:

- ▲ Diversity: has been sought at many scales, from species up to landscape. The proposed meadows and hedges will be species rich, the range of habitats present will be increased from that which is currently present.

ⁱⁱⁱ Diversity, extent, condition, connectivity and aspects of ecosystem resilience

^{iv} NRW (2021) NRW Evidence Report 483 Terrestrial and freshwater Resilient Ecological Networks: a guide for practitioners in Wales

NRW (2019) NRW Evidence Report 275: A Handbook on Habitat Networks Practical Application for Improving Connectivity and Building Ecosystem Resilience

- ▲ Extent; larger systems have greater capacity to adapt. The proposals therefore seek to build from existing pond, woodland and hedgerow networks and to expand them, such that they are more resilient.
- ▲ Condition; the areas covered by the oLEMP will be subject to a long term management plan. The objectives of the plan will include a commitment to maintain and/or enhance the condition of all habitat on site for the benefit of biodiversity.
- ▲ Connectivity; this has been sought within and between habitats, linking hedgerows and woods, and providing ponds as “stepping stones” through the landscape.
- ▲ Adaptability, recovery, resilience; Ecosystem resilience is regarded as a product of the above four attributes and is considered to be achieved by the measures set out in the oLEMP.

87 Figure 2 of this document illustrates that the outline design serves to increase and to protect links between Glascoed Nature Reserve, Ancient Semi Natural Woodland (ASNW) to the north and west (thick green line on Figure 2).

88 Figure 2 includes accessible areas for GCN during construction (shown orange), where the grassland will be managed for the benefit of GCN, to compensate for terrestrial habitat loss. These areas will also be enhanced to include ponds, hibernacula and refugia; thereby increasing the resilience of the local amphibian and reptile populations via increased availability of connected, suitable habitats for use throughout the year.

89 Figure 2 of this document also shows areas that will be enhanced after construction is complete (shown yellow), to provide species-rich meadows, surrounded by a network of species-rich hedgerows and trees. The meadows will assist both in terms of buffering the nearby ASNW (and associated soil fauna and fungi) from disturbance, but also facilitate a more diverse and abundant invertebrate assemblage. This in turn will help to support the bats, birds, reptiles and mammals that occur locally.

- 90 As part of the hedgerow planting (and depending on factors such as the siting of the access and the final footprint of the OnSS and the OnSS TCC, as well as the results of pre-construction surveys), then it may be possible to reinstate historic field boundaries (as identified on OS 6 inch 1888-1913 maps, available via National Library of Scotland web-viewer^v by creating hedgerows east-west through the TCC area as shown on Figure 2.
- 91 Creating a more joined up hedgerow and woodland network and managing them for the benefit of biodiversity will ensure that there are more opportunities (*i.e.* a greater diversity and extent of habitat, that is connected and in good condition) for the known important ecological features locally, such as breeding birds, bats, reptiles, amphibians, hares, polecats, hedgehogs, as well as other more common species.
- 92 The bands of screening woodland that also serve to substantiate the biodiversity links across the OnSS site are generally over 20m wide. Broad areas of woodland provide greater resilience and potential for sustained screening effects in the long term when compared with narrow strips of woodland.

^v Since web links are not permitted as part of submitted documents, it is not possible to reproduce the corresponding maps due to copyright reasons.

4 Conclusion

93 There is a need for the Applicant to secure the land around the OnSS in order to avoid, reduce, mitigate or compensate for likely impacts on landscape and biodiversity resources arising from AyM as well as measures intended to provide biodiversity enhancements as required by planning policy. This note provides a summary of relevant policy and identifies the following requirements for development to provide:

- ▲ Evidence that it has sought to minimise impacts to ecological receptors;
- ▲ A net benefit for biodiversity;
- ▲ A diverse, extensive and connected ecological network in good condition; and
- ▲ An increasingly resilient ecosystem.

94 The area around the OnSS will provide:

- ▲ Ecological compensation for the temporary loss of habitat arising from the OnSS TCC, cable and access works during construction;
- ▲ Ecological compensation for the permanent loss of habitat due to the OnSS and operational access road;
- ▲ Ecological enhancement for the onshore aspects of the project;
- ▲ Opportunities for restoring and enhancing ecosystem resilience through a network of interconnected areas; and
- ▲ Landscape and visual mitigation in the form of landscape planting.

95 The area provides compensation for permanent loss of foraging habitat for great crested newts as a result of development of the OnSS (up to 5 ha), and access road to the OnSS. This is required so that the proposals would not be detrimental to the favourable conservation status of this nationally important population of a European protected species. There is also a need for compensation for loss of bat roosts as a result of the OnSS. Compensation measures for confirmed roost loss would be within the Core Sustainance Zone of the species concerned.

96 Enhancement measures represent the provision of new benefits for biodiversity that are additional to those provided as part of mitigation or compensation measures, although they can be complementary.

- 97 The biodiversity enhancements are located in areas where they will bring most ecological benefit. For AyM, this will be achieved by linking into existing habitat networks, joining together or expanding important species populations, to create a larger, more resilient system. Enhancements will also require management and monitoring for the life of the development (in line with the principles set out in the oLEMP with final details to be agreed via the final LEMP under DCO Requirement 13) requiring AyM to secure freehold possession of the OnSS site and surrounding land.
- 98 The proposals will enable the restoration and enhancement of ecosystem resilience through a network of interconnected areas. Hedgerows, woodlands and ponds are proposed at locations which link to the existing green and blue infrastructure. The outline design serves to increase links to Glascoed Nature Reserve, ASNW to the north and west.
- 99 The proposals have been developed in consultation with NRW and DCC who have both stated agreement within their respective SoCGs.
- 100 The area around the OnSS needs to deliver a number of functions for AyM to operate effectively whilst meeting policy objectives which have influenced the quantum of land sought by the Applicant. There is a need for AyM to provide permanent and temporary areas to locate biodiversity mitigation and compensation measures. Alongside this there is a requirement for land to provide a net benefit for biodiversity through ecological enhancement and resilient network of inter-connected areas of ecological value. The OnSS area must also accommodate the operational requirement for a substation, substation platform, operational access and drainage infrastructure. This area also needs to provide landscape planting around the OnSS as visual mitigation for surrounding receptors. The provision of landscape mitigation and ecological mitigation/ compensation/ enhancement in the same location reduces the overall permanent land-take of the project. Through these considerations the Applicant considers that it has correctly balanced the quantum of operational and environmental land requirements whilst also minimising the land subject to potential compulsory acquisition.



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