

Swansea GREENER GRID PARK EXTENSION

784-B070706

Preliminary Ecological Appraisal

Statkraft UK Ltd

April 2025

**Document prepared on behalf of Tetra Tech Limited. Registered in England number:
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APPENDICES

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EXECUTIVE SUMMARY

Contents	Summary
Site Location	The site is located south of Swansea North 400 kV GIS substation and is centred at Ordnance Survey National Grid Reference SN 65374 00903 (Figure 1).
Proposals	The development proposal is the installation of a 100MW Battery Energy Storage System (BESS) to the immediate south of the Swansea Greener Grid Park.
Scope of this Survey(s)	<ul style="list-style-type: none"> • Desk study to obtain existing information on statutory and non-statutory sites of nature conservation interest and of protected/notable species. • UK Habitat Classification (UKHab) survey to record habitats and evidence of protected flora and fauna. • Evaluation of potential ecological receptors on site and any potential constraints to development with recommendations for further surveys, mitigation or enhancement (where appropriate). • To provide guidance on potential biodiversity benefits of the development.
Results and Evaluation	<p><u>Protected sites</u></p> <p>Nant y Crimp Site of Special Scientific Interest (SSSI) is located approximately 1.5 km north-west of the site and is designated for its habitats and plants species. Due to its distance from the site and the scale and localised nature of the development, it is considered unlikely to be impacted by the scheme.</p> <p>The proposed development is not anticipated to have significant impacts on Llety-Morfil Site of Importance for Nature Conservation (SINC), Felindre Grasslands SINC and Waun Garn Wen SINC. However, there are potential pathways via hydrological links.</p> <p><u>Habitats</u></p> <p>The habitat onsite is predominantly other neutral grassland, with hedges, ecologically valuable lines of trees and scrub, a ditch and a stream located along the boundaries. All these habitats are of Local importance.</p> <p><u>Protected species</u></p> <p>The site has the potential to support a number of protected and notable species including badger, hazel dormouse, bats, birds, reptiles and hedgehog.</p>
Recommendations	<p><u>Further Surveys / Assessment</u></p> <ul style="list-style-type: none"> • Further aerial assessment (tree climbing) of trees (with PRFs (TNs 13, 14, 15 & 16); • Ecological Clerk of Works (ECoW) checks for badger prior to the works; • Further invasive non-native plant species (INNPS) survey in June -July. <p><u>Avoidance Measures</u></p> <ul style="list-style-type: none"> • All SINC's to be protected during the works;

- Due to the distance to the SINCs, noise, vibration and dust impacts must also be considered. Precautionary avoidance measures are to be implemented to protect these SINCs in accordance with best practice guidance for pollution (GPP5 (Natural Resources Wales (NRW)), 2017).
- Protection of adjacent habitats during the works;
- Existing habitats (including hedgerows / line of trees / mature trees retained where possible; trees with the potential to support roosting bats are recommended to be retained and protected);
- ECoW for birds - works undertaken during the nesting bird season (March to September inclusive) risks disturbing bird nests. Vegetation clearance and groundwork must be preceded by a nesting bird check; if nesting birds are found, active nests must remain undisturbed in situ until young have fledged and confirmation is obtained from a suitably experienced ecologist;
- ECoW for reptiles and hedgehogs - refugia on site including brash piles and debris are to be hand searched prior to clearance and sheltering wildlife such as hedgehogs moved to a safe location away from the works area. It is recommended that clearance of refugia is undertaken at a time of year when sheltering hedgehogs are most likely to be active, i.e. April to October and reptiles where habitats are being removed;
- Hazel dormouse habitat removal under Non-Licence method Statement (NLMS);
- Good practice measures (such as covering excavations or providing means of escape) are to be implemented to prevent entrapment of wildlife;
- A sensitive lighting scheme has been developed for the site that minimises disturbance to sensitive ecological receptors (e.g. hedgerows, trees and bat boxes) (see 784-B070706 100MW Swansea BESS lighting plan review 250403) issue; and
- General precautionary measures to prevent the introduction and spread of INNPS must be undertaken due to INNS Himalayan balsam and Japanese knotweed in the vicinity.

Enhancements

- Retained areas of 1.91ha of other neutral grassland reseeded with wildflower meadow mix to improve species diversity;
- Restoration of defunct hedgerows along boundaries of the site;
- New 560m of species rich native hedgerow planting;
- 0.631ha of new lowland mixed deciduous woodland planting;
- Planting of 56 new native standard trees;
- Bat boxes;
- Bird boxes;
- Hibernacula for common amphibians and reptiles; and
- Insect hotel for invertebrates.

Retained, enhanced and created habitats will be managed in accordance with a long term ecological management.

Conclusion	Provided the recommendations within this report for further survey and mitigation can be adopted, it is anticipated that a design could be brought forward for this site that would be compliant with current local and national biodiversity planning policy.
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1.0 INTRODUCTION

1.1 BACKGROUND

Tetra Tech Limited (Tetra Tech) was commissioned by Statkraft UK Ltd in December 2024 to undertake a Preliminary Ecological Appraisal (PEA) of the land south of Swansea Greener Grid Park, hereafter referred to as “the site”.

Statutory Pre-Application Consultation was undertaken with NRW and a response received on 18th March 2025 (ref. CAS-275550-Y0T6), this document stated that a condition of the application should include the requirement for a Construction Environmental Management Plan (CEMP), the wording of which is as follows:

No development including site clearance, shall commence until a site wide Construction Environmental Management Plan (CEMP) has been submitted to and approved in writing by the Local Planning Authority. The CEMP should include:

- *Construction methods: details of materials, how waste generated will be managed;*
- *General Site Management: details of the construction programme including timetable, details of site clearance; details of site construction drainage, containments areas, appropriately sized buffer zones between storage areas (of spoil, oils, fuels, concrete mixing and washing areas) and any watercourse or surface drain, identification of nearby watercourses that may be at risk from pollution.*
- *Biodiversity Management: details of tree and hedgerow protection; species and habitats protection, avoidance and mitigation measures.*
- *Soil Management: details of topsoil strip, storage and amelioration for re-use.*
- *CEMP Masterplan: details of the extent and phasing of development; location of landscape and environmental resources; design proposals and objectives for integration and mitigation measures.*
- *Control of Nuisances: details of restrictions to be applied during construction including timing, duration and frequency of works; details of dust control measures.*
- *Resource Management: details of fuel and chemical storage and containment; details of waste generation and its management; details of water consumption, wastewater and energy use.*
- *Traffic Management: plant on site, wheel wash facilities.*

- *Pollution Prevention: demonstrate how relevant Guidelines for Pollution Prevention and best practice will be implemented, including details of emergency spill procedures and incident response plan.*
- *Details of the persons and bodies responsible for activities associated with the CEMP and emergency contact details*

This report has been prepared by Project Ecologist Laura Grice BSc (Hons) MBA PGDip ACIEEM and Graduate Ecologist Ellie Burrows BSc (Hons) and the conditions pertinent to it are in Appendix A.

1.2 SITE DESCRIPTION

The site is located southeast of Swansea North 400kV GIS substation and is centred at Ordnance Survey National Grid Reference SN 65374 00903 (Figure 1). It comprises grazed other neutral grassland divided by lines of trees, including oak standards, newly formed banks, and banks of species rich native hedgerow. There is bramble scrub, a stream and a ditch along site boundaries. The wider environment comprises sheep and horse grazed pastures divided by hedges and farm buildings. A house and plantation (Maes Eglwys) are also located to the south of the site.

1.3 DEVELOPMENT PROPOSALS

The proposal is for the installation of a 100MW Battery Energy Storage System (BESS) to the immediate southeast of Swansea North 400kV GIS substation.

The current proposed Landscape Mitigation Plan 2242 (dated 17/02/2025) Swansea BESS (TGP Landscape Architects) is included in Appendix B.

1.4 PURPOSE OF REPORT

The purpose of this report is to:

- Undertake a desk study to obtain existing information on statutory and non-statutory sites of nature conservation interest and relevant records of protected / notable species within the site and its zone of influence.
- Present the results of an extended Habitat Classification Survey, involving a walkover of the site to record habitat types and dominant vegetation, including any invasive species and evidence of protected flora, fauna or habitats capable of supporting such species.
- Evaluate potential ecological receptors on site and within the zone of influence.
- Identify any constraints to the site's development and make any recommendations for further surveys, mitigation and enhancement.

Scientific names are provided at the first mention of each species and common names (where appropriate) are then used throughout the rest of the report for ease of reading.

1.5 QUALITY

Project Ecologist Laura Grice BSc (Hons) MBA PGDip has Associate membership of CIEEM. Graduate Ecologist Ellie Burrows BSc (Hons) has Qualifying membership of the Chartered Institute of Ecology and Environmental Management (CIEEM).

Our Ecologists follow CIEEM's Code of Professional Conduct (CIEEM, 2024), with all surveys completed in accordance with Tetra Tech's Biosecurity Policy (Tetra Tech, 2023).

All staff have completed Health and Safety training. Risk Assessment Method Statements have been completed and verified prior to the site visit, with Dynamic Risk Assessments completed by all site staff upon arrival at site.

1.6 VALIDITY

This report will remain valid for a period of 18 months (i.e., until 13th July 2026), in accordance with CIEEM's guidelines (CIEEM, 2019). After this time, an Ecologist must be consulted to confirm if an update assessment is required. The recommendations within this report must be reviewed (and reassessed if necessary) should there be any changes to the habitats present, red line boundary or development proposals upon which this report was based.

2.0 METHODOLOGY

2.1 HISTORIC SURVEYS

Previous reports relevant to the site have been reviewed and discussed within Section 3.1. These reports were undertaken in support of the wider Swansea GGP including:

- Reptile Report (Arcus, 2021a);
- Reptile Method Statement (Arcus, 2021b);
- Hazel Dormouse Method Statement (Arcus, 2021c);
- Preliminary Ecological Appraisal (Wardell Armstrong, 2022a);
- Preliminary Biodiversity Impact Assessment (Wardell Armstrong, 2022b);
- Hazel Dormouse Survey Report (Tetra Tech, 2024); and
- Hazel Dormouse EPSML (ref. S093147-1) Method Statement v2. (Tetra Tech, 2024a).

2.2 DESK STUDY

The desktop study comprised two elements:

- A data search obtained from South East Wales Biodiversity Records Centre (SEWBRc) in November 2022 and in April 2024 for the previous PEAs of the wider site (Wardell Armstrong, 2022a) and Tetra Tech, 2024)) with biological records limited to the last 10 years accordingly.
- An online element including a search using MAGIC Maps, Defra's interactive, web-based database for statutory designations (<https://magic.defra.gov.uk>) and Ordnance Survey (OS) and Aerial Imagery (<https://www.bing.com/maps>).

The geographical extent of the search area was related to the significance of sites and species and potential zones of influence. For this site, the following search areas were considered appropriate:

- 10 km for sites of International Importance (e.g. Special Areas of Conservation (SAC), Special Protection Area (SPA), Ramsar sites);
- 2 km for sites of National or Regional Importance (e.g. Sites of Special Scientific Interest (SSSI), protected or otherwise notable species and non-statutory designated sites of County Importance (e.g. Site for Importance for Nature Conservation (SINCs));
- In addition, any Impact Risk Zones (for identifying likely impacts on SSSIs / SACs / SPAs & Ramsar sites) overlapping the site were identified;
- 2 km for biological records; and
- 1 km for ancient woodland and mapped priority habitats.

The data search did not cover Tree Preservation Orders (TPOs); or Conservation Areas designated for their special architectural and historic interest.

Further information on relevant species / environmental legislation and planning policy can be found in Appendix C.

2.3 FIELD SURVEYS

The following methodologies have been used to identify the ecological receptors present on or near the site and which are relevant to the proposed development. The survey extended beyond the site to a distance of 50 m where accessible.

2.3.1 Habitats

An extended Habitat Classification Survey was undertaken on the site on 13th January 2025 by Tetra Tech Consultant Ecologist Laura Grice ACIEEM BSc (Hons) MBA PGDip ACIEEM and Graduate Ecologist Ellie Burrows BSc (Hons). The weather conditions were 6°C, 100% cloud cover, with no rain and a gentle breeze.

The habitats present on site were mapped in accordance with the UK Habitat Classification Professional Edition – Version 2.0 (UK Hab Ltd., 2023), hereafter referred to as 'UKHab'. The habitats have been classified to a minimum of 'Level 3' (in accordance with UKHab). Where habitats occur in multiple areas of the site or are of different condition, additional polygons of the same habitat have been mapped so that their condition could be assessed independently.

The minimum recording unit used for habitats was 25 m² and 5 m length for linear habitats (such as hedgerows or watercourses). Dominant plant species were recorded for each habitat present using standard nomenclature (Stace, 2019). Target notes, including list of all plants seen was also compiled using estimates of frequency by eye using the DAFOR scale (D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare) and is provided in Appendix D.

Habitat condition

The condition of each habitat is assessed using the methods set out in the Statutory Biodiversity Metric - The Statutory Biodiversity Metric - Technical Annex 1: Condition Assessment Sheets and Methodology November 2023 (Department for Environment Food & Rural Affairs (DEFRA), 2024b).

The baseline condition assessment data for each habitat can be found in Appendix E.

2.3.2 Protected and Notable Species

The site was inspected for evidence of, and its potential to support, protected or notable species, especially those listed under the Schedule 2 of the Habitat Regulations 2017 (as amended), Schedule 5 of the Wildlife and Countryside Act (W&CA) 1981 (as amended), the Countryside Rights of Way (CROW) Act 2000, those given extra protection under the Environment (Wales) Act 2016, and species included in the Swansea Local Biodiversity Action Plan (LBAP).

The presence of some species was determined using standard best practice guidance and are listed below.

Badger

The site was surveyed for evidence of badger *Meles meles* setts or other badger activity such as paths, latrines or signs of foraging. Methodologies used and any setts recorded were classified according to published criteria (Harris, et al., 1989).

Hazel Dormouse

The site was surveyed for its suitability to support hazel dormouse *Muscardinus avellanarius* based on best practice guidance (Bright, Morris, & Mitchell-Jones, 2006).

Bats

Roosting Bats – Trees

Any suitable buildings, structures or trees on site were assessed from the ground for their suitability to support breeding, resting and hibernating bats using survey methods based on the BCT Good Practice Guidelines (Collins, 2023), hereafter referred to as the ‘BCT Guidelines’.

Categorisation of Trees

A preliminary assessment of trees was undertaken, and trees were categorised to highlight whether additional assessment is required referring to the categories in Table below. Professional judgement was used to identify trees where features could be obscured by foliage or other branches. If a feature was identified on the tree the tree was categorised as PRF as the tree had at least 1 potential roost feature (PRF) present.

Table 1. Categorisation of Trees

Suitability	Description
None	Either no PRFs in the tree or highly unlikely to be any.
FAR	Further assessment required (FAR) to establish if PRFs are present in the tree.
PRF	A tree with at least one potential roost feature (PRF) present.

Birds

Bird species identified at the time of survey were noted, however, nesting birds were not recorded (apart from pigeons) due to the time of the survey. An assessment of habitats was undertaken to determine the likely value to breeding and foraging birds.

Great Crested Newt & Common Amphibians

The site was appraised for its suitability to support great crested newt (GCN) *Triturus cristatus* based on guidance outlined in the Herpetofauna Workers’ Manual (Gent & Gibson, 2003) and the *Great Crested Newt Conservation Handbook* (Langton, et al., 2001). This appraisal also considered waterbodies within 500 m of the site and their potential to be used for breeding newts.

Habitat suitability and evidence of other common amphibians was recorded on site where relevant.

Reptiles

The site was appraised for its suitability to support reptiles using guidance outlined in the Herpetofauna Workers’ Manual (Gent & Gibson, 2003).

Invertebrates

The site’s habitats were appraised for suitability to support assemblages of invertebrates and commented on in the report as appropriate.

Other Species

The site was also appraised for its suitability to support other protected or notable flora and fauna (e.g. hedgehogs *Erinaceus europaeus*) with regard to the Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017) and BS42020:2013 Biodiversity – Code of Practice for Planning and Development (BSI, 2013). Evidence of any current or historical presence of such species was recorded.

Invasive Species

Evidence of species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), and the Invasive Alien Species (Enforcement and Permitting) Order 2019 (as amended) were recorded as seen.

Scoped Out

Otter *Lutra lutra* and water vole *Arvicola amphibius* were scoped out of the survey and are not discussed further in the report. This is due to the lack of suitable habitats recorded on site. The site is also heavily grazed by sheep, and therefore lacks suitable habitat structure to provide shelter or otherwise significantly suitable habitat for these species.

2.4 LIMITATIONS

Any absence of desk study records cannot be relied upon to infer absence of a species/habitat as the absence of records may be a result of under-recording within the given search area.

The optimal period to undertake an extended UKHab survey is April-September, inclusive. The survey was undertaken in January, which is outside of the optimal survey window, however the dominant species of the respective vegetation types were visible and identifiable at the time of the survey. The grassland has been classified to a minimum of 'Level 3'. The small area within the site and nearby habitats were also surveyed for the other projects in the wider area during summer and they were recorded as being of the same character. Therefore, this is not considered to be a significant limitation for habitat classification.

A 50 m buffer area was not fully assessed during the walkover due to access. Construction works have been carried to the north of the site during the site visit. This is due to the nature of the development which seeks to restore green infrastructure connectivity within the wider site boundary of the Swansea GGP project. The area has been inspected from the distance, where possible, and this is not considered to be a limitation as soil has been already partially or fully removed and lots of disturbance has been to the ground.

One waterbody was located c. 0.11 m north-east of the site, however, no access was available due to thick vegetation. This is not considered to be a limitation as the SEWBReC desk study and the previous PEA (Wardell Armstrong, 2022a) reported no records of GCN within 2 km of the site. Furthermore, the GCN Habitat Suitability Index (HSI) (Oldham R. S., Keeble, Swan, & Jeffcote, 2000) puts the site in Zone C (i.e. GCN are rare or absent from that geographic location).

The invasive non-native plant species (INNPS) are difficult to survey out of season as they die out and are not always visible. This is considered to be a limitation to the accurate assessment of INNPS on site and a further survey is required during April to September, inclusive.

To determine presence or likely absence of protected species usually requires multiple visits at suitable times of the year. This survey focuses on assessing the potential of the site to support species of note,

which are considered to be of principal importance for the conservation of biodiversity with reference to those given protection under UK or European wildlife legislation, from only a single visit. This report cannot, therefore, be considered a comprehensive assessment of the ecological interest of the site. However, it does provide an assessment of the ecological interest present on the day the site was visited and highlights areas where further survey work may be recommended.

3.0 RESULTS & EVALUATION

3.1 PROTECTED SITES

European and National designated sites identified within 10 km of the proposed development are presented in Table with the designation, qualifying features and proximity from the development site also indicated. Details of local non-designated sites within 2 km and obtained from the SEWBRc are also included.

Table 2. Statutory and Non-Statutory Designated Sites Identified During the Desk Study

Site Name	Distance and Direction from Site		Reasons for Designation
Statutory Designated Sites:			
Nant y Crimp	SSSI	c. 1.5 km NW	Special interest for its wet pastures, species-rich neutral grasslands, and semi-natural woodland and scrub hosting several uncommon plant species. Site habitats are scarce in the Welsh lowlands as most has been lost to agricultural improvement.
Crymlyn Bog	Ramsar	c. 6.5 km SE	One of the largest valley floodplain mires in Wales and forms part of an extensive inter-estuarine complex. A mosaic of habitats owing from nutrient-poor and nutrient-rich conditions. Notable for its plant communities and rich invertebrate fauna.
Carmarthen Bay and Estuaries / Bae Caerfyrddin ac Aberoedd	SAC	c. 6.5 km W	Annex I habitats that are a primary reason for selection of this site: <ul style="list-style-type: none">Transition mires and quaking bogs;Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>. Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site: <ul style="list-style-type: none">Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i>.
Burry Inlet	Ramsar	c. 8.5 km SW	The large estuarine complex of the Burry Inlet includes extensive areas of intertidal sand and mud-flats and the largest continuous area of salt-marsh in Wales (22 square kilometres). Burry Inlet regularly supports internationally important numbers of overwintering wildfowl and waders that feed in the saltmarshes and on the intertidal areas.
	SPA		Burry Inlet SPA was designated for supporting internationally import assemblages of overwintering birds including duck pintail <i>Anas acuta</i> , northern shoveler <i>Anas clypeata</i> , Eurasian teal <i>Anas crecca</i> , wigeon <i>Anas penelope</i> , dunlin

			<i>Calidris alpina alpina</i> , red knot <i>Calidris canutus</i> , oystercatcher <i>Haematopus ostralegus</i> , curlew <i>Numenius arquata</i> , grey plover <i>Pluvialis squatarola</i> , redshank <i>Tringa tetanus</i> , and shelduck <i>Tadorna tadorna</i> .
Gower Commons / Tiroedd Comin Gwyr	SAC	c. 9.8 km SW	Area covering around 70 km ² supporting several extensive tracts of lowland vegetation of wet heath. The site comprises strong populations of whorled caraway <i>Carum verticillatum</i> and the Annex II butterfly 1065 Marsh fritillary <i>Euphydryas aurinia</i> . Gower commons also represents lowland European dry heaths in south Wales and supports Annex II species in Wales southern damselfly <i>Coenagrion mercurial</i> .
<i>Non-statutory designated sites:</i>			
Llety-Morfil	SINC	c. < 0.01 km S and N	The presence of the moth, wall brown <i>Lasioommata megera</i> , patches of ancient woodland, wet woodland and purple moor grass and rush pasture was the purpose behind the designation of Llety-Morfil.
Felindre Grasslands	SINC	c. < 0.02 km SW	The common linnet <i>Carduelis cannabina</i> , red kite <i>Milvus milvus</i> , common redstart <i>Phoenicurus phoenicurus</i> , wood warbler <i>Phylloscopus sibilatrix</i> and common starling <i>Sturnus vulgaris</i> are present within Felindre Grasslands. Large amounts of bracken and assemblages of ancient woodland indicator species are significant on this site.
Waun Garn Wen	SINC	c. 0.02 km N	This site, dominated by purple moor-grass and rush pasture and wet woodlands, supports a large variety of bird including herring gull <i>Larus argentatus</i> , lesser black-backed gull <i>Larus fuscus</i> , house sparrow <i>Passer domesticus</i> , stonechat <i>Saxicola torquatus</i> , common starling and song thrush <i>Turdus philomelos</i> .
Pant Lasau	SINC	c. 0.03 km S	Wet woodland with purple moor- grass and rush pasture. Designated for birds and insects, including lesser redpoll, common bullfinch, song thrush, cinnabar moth and small heath.
Middle Llan	SINC	c. 0.03 km SE	No citation available for designation from SEWBRc data search.
Middle Lliw	SINC	c. 0.05 km W	Four bird species, reed bunting <i>Emberiza schoeniclus</i> , house sparrow, common starling and song thrush are all found within Middle Lliw and are partially responsible for the SINC designation. In addition, assemblages of ancient woodland indicator species, purple moor-grass and rush pasture and species-rich neutral grassland contribute to its designation.

Rhyd-Y-Pandy Valley and Grasslands	SINC	c. 0.05 km E	Populations of red kite and barn owl, along with other significant bird species, present within the Rhyd-Y-Pandy Valley and Grasslands, and the purple moor-grass and rush pasture, wet woodland, AWI assemblages and scrub encompassed the reasons for the SINC designation.
Penllergaer Forest	SINC	c. 0.5 km NW	Penllergaer forests SINC supports a wide variety of bird, plant and invertebrate assemblages but the main species that are protected under the Section 1 of the Wildlife and Countryside Act 1981 include the northern goshawk <i>Accipiter gentilis</i> , common kingfisher <i>Alcedo atthis</i> , common crossbill <i>Loxia curvirostra</i> and red kite. This large 201-ha site contains 98-ha of ancient woodland indicator species with the rest of the site supporting scrub, mixed deciduous woodland and purple moor-grass and rush pasture.
Cefn Forest Stream	SINC	c. 0.5 km NW	This relatively small SINC hosts a wide variety of invertebrate, plant and bird assemblages within a 56-ha area but the most ecologically significant species include the barn owl <i>Tyto alba</i> , sky lark <i>Alauda arvensis</i> , common linnet, wall brown and royal fern. The dominant habitat present is the purple moor-grass and rush pasture but there are fragments of mixed ash woodland, assemblages of ancient woodland indicator species and neutral grassland.
Cilfaen	SINC	c. 1.0 km N	The citation implies no species were involved in the designation of Cilfaen but the wet woodland, purple moor-grass and rush pasture and assemblages of ancient woodland indicator species directly justified the designation.
Rhos Fawr	SINC	c. 1.0 km N	Although the site contains and dominated by similar habitats to other SINC, purple moor-grass and rush pasture and scrub, only two species of significance were identified, the tree pipit <i>Anthus trivialis</i> and common cuckoo <i>Cuculus canorus</i> .
Coed Barcud	Wildlife trust reserve	c. 1.0 km N	Coed Barcud supports communities of lesser redpoll <i>Carduelis cabaret</i> , reed bunting, common bullfinch <i>Pyrrhula pyrrhula</i> and song thrush.
Llangyfelach Common	SINC	c. 1.0 km S	Llangyfelach Common was designated because of the bird species present; Common kestrel <i>Falco tinnuculus</i> , house sparrow and common starling, while also hosting habitats of purple moor and rush pasture, deciduous and wet woodland and land dominant in scrub.
Llangyfelach Common	SINC	c. 1.0 km S	Llangyfelach Common was designated because of the bird species present; Common kestrel <i>Falco tinnuculus</i> , house sparrow and common starling,

			while also hosting habitats of purple moor and rush pasture, deciduous and wet woodland and land dominant in scrub.
Lower Lliw Reservoir	SINC	c. 1.5 km N	No citation available for designation from SEWBRc data search.
Cwm Nant-Ddu	SINC	c. 1.5 km NE	Ancient semi-natural woodland, gorse, scrub and species-rich purple moor- grass and rush pasture designated for birds -common linnet, red kite, common redstart, wood warbler and common starling.

Ancient Woodland and Priority Habitats

There are eight parcels of restored ancient woodland within 1 km of the site, both to the north-west and south. A parcel of ancient semi-natural woodland is also located c. 0.27 km north-west of the site. The area of woodland around Swansea North substation, designated as ancient woodland site of unknown category, is c. 0.11 km west of the site. There is limited connectivity to these remnant ancient woodlands through defunct hedges on site.

Four parcels of semi-natural broadleaved woodland are also located in the vicinity and Maes Eglwys woodland plantation c.017 km south of the site.

There are two parcels of lowland dry acid grassland approximately 0.85 km north-east of the site, however, connectivity is low and it is unlikely to be impacted by proposals directly or indirectly, so this is not discussed further.

3.2 HABITATS

The following habitats (Table 3) have been identified through the field assessment. A UKHab map can be found in Figure 2, with detailed Target Notes (TNs) and Photographic Plates included in Appendix F. Condition assessments for each habitat are provided in Appendix E.

Table 3. Habitats

Habitat (UKHab Code)	Result	Importance Assessment	Size / length of habitat within site	Condition assessment
h2a6 – other native hedgerows	Defunct overgrown hedge (TN10) with oak, ash <i>Fraxinus excelsior</i> and hawthorn, understory of bramble; 3-5 m high, 2.5-3 m wide.	Local – common in the area.	0.13km	Moderate
h2a5 – species-rich native hedgerow	Defunct species rich hedgerow (Target note 1 (TN1) on 0.5 m bank; height 3-5 m, width 2.5-3 m, with obvious gaps, understory of bramble, dominated by hazel <i>Corylus avellana</i> . For full species list see Appendix C.	Local – species rich hedge on earth bank.	0.145km.	Moderate

Habitat (UKHab Code)	Result	Importance Assessment	Size / length of habitat within site	Condition assessment
W1f – Lowland mixed deciduous woodland <u>Secondary codes:</u> Ecologically valuable line of trees (34) w1f 34	Ecologically valuable line of trees (TN2 & TN5) on 1 m bank with pedunculate oak <i>Quercus robur</i> standards. Classifies as Ecologically valuable due to presence of mature pedunculate oak standards.	Local – established mature and younger trees.	0.04ha	Good
g3c - Other neutral grassland <u>Secondary codes:</u> Grazed (102) Bare ground (510)	The site comprises large areas of other neutral grassland (TN3); sward height 2-7 cm, moderately species diverse, dominated by Yorkshire fog <i>Holcus lanatus</i> , creeping bent <i>Agrostis stolonifera</i> and common mouse-ear <i>Cerastium fontanum</i> , grazed by sheep at the time of walkover. For full species list see Appendix C.	Local – moderately species diverse grassland.	5.35ha	Poor
u1e – Built linear feature <u>Secondary codes:</u> Mid-field bund (605)	Fenced in bank in between fields with sown grasses (TN4).	Negligible - of limited ecological value.	0.047km	n/a
h3d – Bramble scrub	Bramble <i>Rubus fruticosus</i> agg. scrub (TN6) with occasional hawthorn <i>Crataegus monogyna</i> .	Local – established habitat; common in the area.	0.01ha	n/a
r1g – Other standing water Ditch (50)	Ditch (TN9) with willow and defunct overgrown hedge next to it, depth 5-10 cm.	Local – common in the area.	0.23km	Poor
Rural trees	Mature pedunculate oak standards (TN 11-16) on small area of remaining earth banks around them.	Local - trees, particularly those of mature status have intrinsic ecological value and may support protected	11 individuals	Good

Habitat (UKHab Code)	Result	Importance Assessment	Size / length of habitat within site	Condition assessment
		species (see Section 4).		
g3c - Other neutral grassland <u>Secondary codes:</u> 510	Bare ground (TN17), topsoil removed.	Negligible - of limited ecological value.	0.77ha	Poor
u1c – Artificial unvegetated; unsealed surface	Construction compound with car park (TN18), compacted ground with stones.	Negligible - of limited ecological value and easily replaceable in the short term.	0.39ha	N/a
u1e – Developed land; sealed surface	The access route (TN19) extending past the area that was visible and accessible during site walkover.	Negligible - of limited ecological value and easily replaceable in the short term.	0.047km	N/a

3.3 PROTECTED AND NOTABLE SPECIES

Data obtained from SEWBrEC and data from the previous PEA (Wardell Armstrong, 2022a) confirmed the presence of a number of protected and notable species within 2 km of the site. Protected and notable species identified as a receptor for the site are detailed in Table . Further information on relevant species / environmental legislation and planning policy can be found in Appendix D.

Table 4. Species Desk and Field Survey Results and Importance Assessment

Species	Legal Protection	Result	Importance Assessment
Badger	Protection of Badgers Act 1992; Wildlife and Countryside Act 1981 (as amended) Schedule 6.	<p>Desk Study</p> <p>SEWBrEC returned eight records of badger within 2 km of the site boundary in the last 10 years. The closest badger record was approximately 1.5 km south-east. The woodland to the surrounding of the site has suitability for sett creation and foraging badgers.</p> <p>The previous PEA (Wardell Armstrong, 2022a) reported 102 records of badger in the wider area.</p> <p>Field Survey</p> <p>No evidence of badger setts or associated badger field signs were recorded on site. The hedgerows and earth banks may provide some suitable sett building habitat, however, due to lack of significant cover, waterlogged habitat nearby and the use of fields for regular sheep dog training, the site was assessed as having limited suitability for badger sett building. However, the site has some suitability for badger commuting and foraging.</p> <p>The site is connected to the wider area, which has more suitable habitat for badger foraging and sett building.</p>	Site – suitable for badger commuting and foraging within the grasslands onsite.; limited suitability for sett building.
Hazel Dormouse	Conservation of Habitats and Species Regulations 2017 Schedule 2; Wildlife and Countryside Act 1981 (as amended) Schedules 5 & 6; Section 7 of Environment (Wales) Act 2016.	<p>Desk Study</p> <p>The SEWBrEC data search returned no records of hazel dormice within 2 km of the site over the last 10 years.</p> <p>The previous PEA for the GGP development in the wider area concluded that woodlands could support hazel dormouse and recommended a precautionary method statement for the removal of scrub and woodland (Wardell Armstrong, 2022a).</p>	<p>Negligible – the site has negligible suitability for dormouse foraging and nest building due to lack of suitable habitat onsite.</p> <p>Dense scrub, woodlands and hedges adjacent to the site are</p>

Species	Legal Protection	Result	Importance Assessment
		<p>Tetra Tech deployed dormouse tubes and boxes in the woodland to the south-west of the site in 2023 and found evidence of dormouse. An EPS mitigation licence S093147-1 was granted from NRW for this species (Tetra Tech, 2023)).</p> <p>Field Survey</p> <p>The site itself has been assessed as having negligible suitability for dormouse foraging and nest building within the hedges due to their gappy nature and lack of structure, but there is suitable habitat for dormouse within woodlands, hedges and dense scrub in the wider area. However, connectivity to those areas is poor.</p>	<p>suitable for dormouse nest building and foraging and dormouse populations are known to exist in woodlands within the wider landscape.</p>
Bats	<p>Conservation of Habitats and Species Regulations 2017 (as amended) Schedule 2; Wildlife and Countryside Act 1981 (as amended); Section 7 of Environment (Wales) Act 2016.</p>	<p>Desk Study</p> <p>SeWBREC returned 10 records of six species of bats within the vicinity of the site. Species included brown long eared bat <i>Plecotus auritus</i>, common pipistrelle <i>Pipistrellus pipistrellus</i>, Daubenton's bat <i>Myotis daubentonii</i>, greater horseshoe bat <i>Rhinolophus ferrumequinum</i>, lesser horseshoe bat <i>Rhinolophus hipposideros</i> and soprano pipistrelle <i>Pipistrellus pygmaeus</i>. The closest record was of a Daubenton's roost approximately 0.5 km south.</p> <p>The previous PEA (Wardell Armstrong, 2022a) reported a variety of bat species from SEWBReC. This included brown long eared bat, common pipistrelle, Daubenton's bat, greater horseshoe bat, lesser horseshoe bat, Natterer's bat <i>Myotis nattereri</i>, noctule <i>Nyctalus noctula</i> and soprano pipistrelle.</p> <p>Field Survey</p> <p>The defunct hedgerow and lines of trees provide some suitable foraging and commuting habitat for bats, however, the large gaps in the hedgerow may reduce the suitability of this habitat. The grasslands provide suitable foraging habitat, with large mature trees and farm buildings likely to support roosting bats.</p> <p>Four mature pedunculate oak trees positioned in the field and on the eastern boundary have potential roosting features (PRFs) for bats.</p> <p>There is also suitable habitat for bat commuting and foraging in the wider area.</p> <p>The site has been assessed as being suitable for bat commuting and foraging. Further assessment required (FAR) to establish presence or absence of roosting bats.</p>	<p>Local –suitable habitat for foraging and commuting bats (grasslands, tree lines & hedges).</p> <p>Unknown - roosting habitat; likely potential bat roosting features for individual bats (PRF-I) recorded in the oaks (in the tree (TNs 13, 14, 15 &16);</p>

Species	Legal Protection	Result	Importance Assessment
Birds	Wildlife and Countryside Act 1981 (as amended).	<p>Desk Study</p> <p>Numerous bird records within 2 km search area including WCA Schedule 1 listed species, and RSPB UK Red and amber listed birds of conservation concern.</p> <p>Field Survey</p> <p>Trees and shrubs which form parts of the defunct hedgerow are to support common nesting bird species. Seven skylark <i>Alauda arvensis</i> records are provided within 2 km of site (the nearest record for skylark is 1.74 km north-west of the site). However, the grasslands are not likely to be used by ground nesting birds due to disturbance, as the grasslands are regularly used to train sheep dogs.</p> <p>During the walkover, linnet <i>Linaria cannabina</i>, European robin <i>Eritacus rubecula</i>, song thrush <i>Turdus philomelos</i>, black bird <i>Turdus merula</i>, and wren <i>Troglodytes troglodytes</i> were observed on site.</p>	Local – suitable habitats present for bird foraging and nesting in the hedges, bramble scrub and trees; unlikely to be used by ground nesting birds.
GCN and Common Amphibians	<p>GCN: Conservation of Habitats and Species Regulations 2017 (as amended) Schedule 2; Wildlife and Countryside Act 1981 (as amended) Schedules 5; Section 7 of Environment (Wales) Act 2016.</p> <p><i>Other amphibians:</i> Wildlife and Countryside Act 1981 (as amended); Section 7 of Environment (Wales) Act 2016.</p>	<p>Desk Study</p> <p>The SEWBReC data search returned no records of GCN within 2 km of the site boundary in the last 10 years. However, nine records of common toad <i>Bufo bufo</i> (a Section 7 species), eight records of common frog <i>Rana temporaria</i>, and five records of palmate newt <i>Lissotriton helveticus</i> were recorded within 2 km of the site.</p> <p>The previous PEA (Wardell Armstrong, 2022a) reported no records of GCN within 2 km of the site.</p> <p>The GCN Habitat Suitability Index (HSI) (Oldham R. S., Keeble, Swan, & Jeffcote, 2000) puts the site in Zone C (location is unsuitable).</p> <p>Field study</p> <p>One waterbody was located on aerial maps c. 0.11 m north-east of the site with unbroken habitat connectivity to the site. However, its suitability for breeding GCN is unknown due to no access during the site visit. Aerial maps show that it is within densely vegetated area in the woodland.</p> <p>Although there may be suitable terrestrial habitat between this pond and the site, it is considered that, if GCN were present in that pond, there is no suitable refugia</p>	Negligible – no suitable GCN & common amphibian habitat present onsite.

Species	Legal Protection	Result	Importance Assessment
		present within the site that could support this species, i.e. grassland is heavily grazed by sheep, lack of tussocky grassland structure and hedgerows are open. The stream adjacent to the site does not provide suitable habitat for common amphibians, and the flow would not be slow enough to support a breeding population of GCN. The ditch is likely to dry out in spring and is not suitable for common amphibian breeding.	
Reptiles	<i>Adder, grass snake, slow worm and common lizard:</i> Wildlife and Countryside Act 1981 (as amended) Schedule 5; Section 7 of Environment (Wales) Act 2016.	<p>Desk Study</p> <p>SEWBREC returned 35 records of adder <i>Vipera berus</i>, 10 records of common lizard <i>Zootoca vivipara</i>, eight records of grass snake <i>Natrix helvetica</i>, and nine records of slow-worm <i>Anguis fragilis</i> from within 2 km of the site.</p> <p>Arcus undertook reptile surveys in 2020 of a section of land within the site boundary which found a low population of common lizard (Arcus, 2021a). Tetra Tech also undertook reptile surveys in 2023 of land to the north-west of site where the approved (21/0034/PP) access road is proposed. Tetra Tech also carried out reptile surveys in 2023. A low population of common lizard was recorded on site.</p> <p>Field study</p> <p>The vegetated earth banks provide some suitable cover for reptiles as well as basking habitat, however no hibernation features (log piles, rubble etc.) were noted during the survey. The grasslands are heavily grazed, have a lack of tussocky grassland structure, and are not suitable for reptile foraging.</p>	Local – some suitable habitat within hedgerows and bramble scrub.
Invertebrates	Some invertebrates are protected under Conservation of Habitats and Species Regulations 2017 (as amended) and Wildlife and Countryside Act 1981 (as amended); Section 7 of Environment (Wales) Act 2016.	<p>Desk Study</p> <p>There were 28 records of invertebrates identified within 2 km of site over the last 10 years. Of these, 25 records consisted of species within the Lepidoptera family and 10 of these were of the marsh fritillary <i>Euphydryas aurinia</i>. The other three records were singular records of the long-horned bee <i>Eucera longicornis</i>, brown-banded carder bee <i>Bombus humilis</i> and the oxbow diving beetle <i>Hydroporus rufifrons</i>.</p> <p>Numerous records of common invertebrates were reported in the previous PEA including marsh fritillary, and small heath <i>Coenonympha pamphilus</i>, both Section 7 priority species (Wardell Armstrong, 2022a).</p>	Local - habitats on site have the potential to support common and widespread invertebrate species.

Species	Legal Protection	Result	Importance Assessment
		Field study Habitats including scrub, hedgerows and trees are considered suitable to support invertebrates. However, the lack of significant vegetation assemblage to support priority species indicates that significant populations of invertebrates are unlikely to occur on site. The site has been assessed as suitable for common invertebrates.	
Invasive species	Wildlife and Countryside Act 1981 (as amended) Schedule 9; The Invasive Alien Species (Enforcement and Permitting) Order 2019 (as amended); Environmental Protection Act 1990.	Desk Study There were 11 records of invasive plant species returned within 2 km of the site over the last 10 years. Six species were identified, Himalayan balsam <i>Impatiens glandulifera</i> , Japanese knotweed <i>Reynoutria japonica</i> , hollyberry cotoneaster <i>Cotoneaster bullatus</i> , wall cotoneaster <i>Cotoneaster horizontalis</i> , Himalayan cotoneaster <i>Cotoneaster simonsii</i> and rhododendron ponticum <i>Rhododendron ponticum</i> . Japanese knotweed, rhododendron, wall cotoneaster and Himalayan balsam were identified as being present within the wider area of the site during the previous PEA (Wardell Armstrong, 2022a; Tetra Tech, 2023). Field study No invasive species were noted on site at the time survey, however, due to the time of year, invasive flora (Himalayan balsam & Japanese knotweed) may have died back for winter and was not readily identified by the ecologist. Himalayan balsam and Japanese knotweed are known to be present in local area.	Not applicable
Other mammals (including European hedgehogs)	Wildlife and Countryside Act 1981 (as amended); Environment (Wales) Act Section 7.	Desk Study The SEWBRcC desk study returned one record of hedgehog within 2 km of the site over the last 10 years, c. 0.18 km north-east. Field study There is better, more suitable habitat within the wider area, however, grasslands onsite could have some feeding potential and the site could be used for commuting. The vegetated earth banks has some potential for small mammals burrowing and foraging.	Site – some suitability for hedgehog feeding or commuting.

4.0 RECOMMENDATIONS

4.1 MITIGATION AND FURTHER SURVEY

All of the works outlined in Table should be assumed as likely requirements for the pre-planning stage to inform a planning application, unless otherwise stated. An assessment of the ecosystem reliance evaluation in line with DECCA Framework: Diversity, Extent, Condition, Connectivity and Aspects of ecosystem resilience (CIEEM 2022) has been included as appropriate. The main habitats present onsite include other neutral grassland, scrub, hedgerows, line of trees, bare ground and artificial unvegetated unsealed surface. Each of the semi-natural habitats have an important function in climate regulation through sequestration and storage of carbon as well as a role in managing air pollution, noise alleviation and surface water regulation.

Statutory Pre-Application Consultation was undertaken with NRW and a response received on 18th March 2025 (ref. CAS-275550-Y0T6), this document stated that a condition of the application should include the requirement for a Construction Environmental Management Plan (CEMP), this document will therefore be produced in accordance with the following:

No development including site clearance, shall commence until a site wide Construction Environmental Management Plan (CEMP) has been submitted to and approved in writing by the Local Planning Authority. The CEMP should include:

- *Construction methods: details of materials, how waste generated will be managed;*
- *General Site Management: details of the construction programme including timetable, details of site clearance; details of site construction drainage, containments areas, appropriately sized buffer zones between storage areas (of spoil, oils, fuels, concrete mixing and washing areas) and any watercourse or surface drain, identification of nearby watercourses that may be at risk from pollution.*
- *Biodiversity Management: details of tree and hedgerow protection; species and habitats protection, avoidance and mitigation measures.*
- *Soil Management: details of topsoil strip, storage and amelioration for re-use.*
- *CEMP Masterplan: details of the extent and phasing of development; location of landscape and environmental resources; design proposals and objectives for integration and mitigation measures.*
- *Control of Nuisances: details of restrictions to be applied during construction including timing, duration and frequency of works; details of dust control measures.*
- *Resource Management: details of fuel and chemical storage and containment; details of waste generation and its management; details of water consumption, wastewater and energy use.*

- *Traffic Management: plant on site, wheel wash facilities.*
- *Pollution Prevention: demonstrate how relevant Guidelines for Pollution Prevention and best practice will be implemented, including details of emergency spill procedures and incident response plan.*
- *Details of the persons and bodies responsible for activities associated with the CEMP and emergency contact details.*

The net-benefits for biodiversity approach by Welsh Government (that includes the DECCA framework noted above) has the intent to deliver an overall improvement in biodiversity. It puts the emphasis on proactive consideration of biodiversity and wider ecosystem benefits within a placemaking context early in the design process. There is no mandatory length of time that management is required for in Wales.

It is likely the proposed development will have relatively small-scale impacts on the ecosystems as the semi-natural habitats will largely be retained or enhanced / created. In addition, the aim will be to maintain and enhance the overall diversity and condition of the habitat and species components found on site, as detailed in Table 4. Specific Key Performance Indicators will be included in the PEA report which will be monitored to target an increased resilience of the retained habitats and wider landscape through quantifiable improvements to their condition and diversity. In addition, maintaining the connectivity of semi-natural habitats is key to increasing resilience, allowing the continued movement of species as a result of changing site conditions. The proposed development will retain connectivity throughout its boundaries, allowing foraging and commuting of species across a larger area.

Table 5. Mitigation and Further Survey / Assessment

Ecological Receptor	Further Survey / Assessment	Mitigation Required	Opportunity for Enhancement
Designated sites	<p>Nant y Crimp SSSI is located approximately 1.5 km north-west of the site and is designated for its habitats and plants species. Due to its distance from the site and the scale and localised nature of the development is considered unlikely to be impacted by the scheme.</p> <p>Llety-Morfil SINC is located c. 0.01 km south and north, Felindre Grasslands SINC c. 0.02 km south-west and Waun Garn Wen SINC c. 0.02 km north of the site. There are potential impacts via dust and pollution and in the absence of mitigation could have negative impacts to these SINCs during the Construction phase.</p>	<p>The designated sites will need to be protected throughout the duration of the works.</p> <p>Best practice pollution prevention measures listed below will be adopted:</p> <ul style="list-style-type: none"> Measures to minimise dust arising, when necessary, including the use of dust control machinery and wet machinery; Measures to prevent pollution / contamination events through surface run-off; and Measures to minimise other pollution events such as noise, vibration and wind-blown litter. 	No enhancement required for designated sites.
Habitats	<p>The proposed development will result in the loss of an area of other neutral grassland in the north of site and trees within the hedges and grassland.</p>	<p>It is recommended that grassland, all mature trees, and hedgerows are retained where possible, together with suitable buffers / root protection zones.</p> <p>The retained habitats will need to be protected throughout the duration of the works.</p> <p>Best practice pollution prevention measures (GPP5 (NRW, 2017)) and PPG6 (Environment Agency, 2012) listed below must be adopted:</p>	<p>The Environment (Wales) Act focuses on the sustainable management of natural resources and building resilience in line with the DECCA Framework. There are opportunities to enhance the site for biodiversity and manage the habitats for a wide range of species.</p> <p>The following enhancement measures are proposed as per Indicative Landscape Mitigation Plan 2242 (dated 17/02/2025) Swansea BESS (TGP Landscape Architects):</p> <ul style="list-style-type: none"> 1.84ha of other neutral grassland reseeding with wildflower meadow mix and appropriate management to bring to 'good' condition;

Ecological Receptor	Further Survey / Assessment	Mitigation Required	Opportunity for Enhancement
		<ul style="list-style-type: none"> Measures to minimise dust arising, when necessary, including the use of dust control machinery and wet machinery; Measures to prevent pollution / contamination events through surface run-off; and Measures to minimise other pollution events such as noise, vibration and wind-blown litter. 	<ul style="list-style-type: none"> Restoration of defunct 0.145km of hedgerows along with boundaries of the site; 0.56km of new hedge species rich hedgerow planting; Planting of 56 native standard trees; and Planting and subsequent management of 0.631ha of new lowland mixed deciduous woodland. <p>The connectivity of semi-natural habitats along the hedgerow network will increase habitat resilience allowing the movement of species (such as bats and hazel dormouse) as a result of changing site conditions. Connectivity on site and to the wider landscape is associated with the hedges and lines of trees. Some of the grassland and trees will be lost and replaced by additional area of woodland and in the form of standard hedgerow trees. The loss of these trees will not impact the connectivity across the site and to the wider landscape.</p> <p>The reestablishment of species rich lowland neutral grassland will be secured through reseedling / plug planting with wildflower meadow mix followed by subsequent management over the long term will benefit a wide range of species including small mammals and pollinators.</p> <p>An ecological management plan will be produced to specify how all enhanced and created habitats will be created and manage in short and long term management of. This document will specify cutting and / or grazing regimes as well as detailing the requirement for appropriate monitoring and remediation.</p>
Badger	The ECoW will undertake checks for badger at the beginning of the works, to confirm that badger setts	It is recommended appropriate precautionary working measures are included as part of the Construction Phase. Any materials or	Restoration of hedgerows as well as planting of new woodlands and hedgerows will provide commuting routes

Ecological Receptor	Further Survey / Assessment	Mitigation Required	Opportunity for Enhancement
	remain absent from within 30 m from the proposed development area. Should a badger sett be found, a licence to disturb or remove a sett will be required from NRW.	chemicals must be stored within site compounds, and these must be fenced to ensure that no badgers can obtain access. It is also recommended that any holes or trenches dug as part of the proposed development are either covered at night or else a plank of wood or similar is placed in them in such a manner as to afford a ready escape route must a badger or any other animal fall in.	and the area of woodland will likely create opportunities for badger sett building.
Hazel Dormouse	Hazel dormouse are known to be present in the local environment, however, the site currently offers negligible potential to support dormouse. No further survey necessary.	Avoiding additional lighting along the access road and directional lighting onto dormouse habitat during construction and operation phases. Lights must be controlled with movement sensors and timers. Any areas of hedgerows, trees and scrub require clearance, the works to be undertaken under ECoW as per NLMS.	Restoration of hedgerows, new hedge planting and the establishment of new woodlands will provide and enhanced and extended woodland resource suitable for dormouse populations within the wider landscape.
Bats	Roosting Trees within the site offer bat roosting potential. Bats are fully protected under the Habitats Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended). <u>Further aerial tree assessment is required for trees (TN 13, 14, 15 & 16) that are marked for removal</u>	Roosting Mitigation measures and any licensing requirements to be determined following further aerial assessment for the trees in the grassland (TNs 13, 14, 15 & 16) and will be specified within a bat survey report. If roosting bats are found, a European Protected Species (EPS) mitigation licence will be required. The applicant may apply to the Natural Resources Wales with the assistance of an Ecologist for an EPS mitigation Licence.	The inclusion of native nectar producing plants (to attract insects) within the final landscaping plans in the enhanced grassland will provide opportunity for foraging bats. Additionally the newly planted and restored hedgerow and woodland as part of the development. Additionally, bat boxes, such as the Vivara Pro WoodStone Bat Box and Vincent Pro Bat Box (or equivalents), could also be installed on the retained mature trees to provide additional roosting opportunities for bats.

Ecological Receptor	Further Survey / Assessment	Mitigation Required	Opportunity for Enhancement
	<p>to inform the proposals and any licensing requirements.</p> <p>Foraging And Commuting</p> <p>The site was assessed as offering some foraging suitability over the grasslands, lines of trees, and hedges.</p>	<p>It is recommended that all trees with the potential to support roosting bats are retained and protected on site.</p> <p>Foraging and Commuting</p> <p>The works must take place during daylight hours. If night work is unavoidable then any construction lighting will need to be agreed with an ecologist and will need to be directional, avoiding lighting important foraging/commuting habitats such as hedges and the access road, which bats might use as commuting corridor.</p> <p>A sensitive lighting scheme has been devised for the development, that avoids lighting sensitive receptors (mature trees and vegetated corridors). Technology such as cowls and hoods that limit light spill, timers and sensors must be used to minimise disturbance where lighting cannot be avoided, this must be designed in conjunction with (ILP, 2023).</p>	
Birds	No further surveys required.	<p>Hedgerows, scrub, and trees to be retained within the development, wherever possible.</p> <p>To avoid committing an offence by damaging or destroying an active nest or destroying eggs or killing / injuring the young whilst in their nest, suitable for bird habitat clearance works must be undertaken outside of the nesting bird season, i.e. clearance must take place between October to February inclusive. If clearance during this time is not possible, a</p>	Enhancements can be implemented on site by erecting four bird boxes, such as the Vivara Pro Seville 32mm WoodStone Nest Box (or similar), on existing mature trees.

Ecological Receptor	Further Survey / Assessment	Mitigation Required	Opportunity for Enhancement
		<p>check for nesting birds will need to be undertaken within 48 hours prior to clearance of vegetation / buildings by an ecologist. If an active bird nest is found, a buffer (typically around 5 m, but more for some species) will need to be established. Active nests must remain undisturbed in situ until young have fledged and confirmation is obtained from a suitably experienced ecologist.</p> <p>It is important to recognise that, if nesting birds are found, this may result in a substantial adjustment to the proposed works timetable.</p>	
GCN and Common Amphibians	No further surveys required.	<p>Mitigation is likely to be limited to sensitive clearance of habitats under supervision of an ECoW who will give a detailed Toolbox Talk prior to the start of each working day. This will likely include fingertip search prior to habitat clearance, appropriate timings and safeguarding of retained habitats.</p> <p>Any existing soil / brash piles acting as potential hibernacula must be removed under supervision of the ecologist.</p> <p>In the unlikely event a GCN is identified at any point during the works, all activities must cease, and a suitably licenced ecologist contacted for further advice.</p> <p>This precautionary method of works will also seek to ensure that common amphibians are not harmed during the works.</p>	Hibernacula could be created on site to provide additional habitat resource for common amphibians.

Ecological Receptor	Further Survey / Assessment	Mitigation Required	Opportunity for Enhancement
Reptiles	No further surveys required.	<p>Mitigation is likely to be limited to sensitive clearance of habitats under supervision of an ECoW, appropriate timings and safeguarding of retained habitats.</p> <p>Any existing soil / brash piles acting as potential hibernacula must be removed under supervision of the ecologist.</p> <p>In order to further reduce risks, it is recommended that vegetation clearance is undertaken following a precautionary method of works (PMW).</p> <p>Precautionary working measures to safeguard any reptiles which must include:</p> <ul style="list-style-type: none"> • a toolbox talk with details of reptile identification; • identification of any areas of higher suitability for reptiles; • working measures to be followed during activities with potential to harm reptiles e.g., vegetation clearance; and • appropriate actions to take must reptiles be identified during the works. <p>During the works period contractors must adhere to precautionary methods such as storing materials off the ground and capping any open excavations and dismantling any piles of rubble by hand.</p> <p>If any reptiles are found during the works period, they must be allowed to escape</p>	Hibernacula could be created on site to provide additional habitat resource for reptiles.

Ecological Receptor	Further Survey / Assessment	Mitigation Required	Opportunity for Enhancement
		unharmful, and an ecologist contacted for advice. If numerous reptiles are found works must cease and methodology be re-evaluated.	
Invertebrates	No further survey required.	The retention of grassland, hedgerows and trees where possible is recommended; and works must not impact offsite habitats e.g., through runoff, dust deposition, etc.	Two insect hotels should be erected within grassland area. Increasing botanical and physical diversity of the site (e.g., wildflower planting within grassland, increasing number of woody species within hedgerows, basking banks) can also increase the site's suitability for notable invertebrate species.
Invasive non-native plant species (INNPS)	INNPS survey is required during the optimal survey period (June-July) due to the large number of records close to the site. The site must also be regularly monitored for INNPS due to Himalayan balsam presence in the area during and post construction in order to prevent spread (and therefore an offence under the Wildlife and Countryside Act).	General precautionary measures to prevent the introduction and spread of INNPS must be undertaken (such as clean, check, dry policy for tools and machinery before entering site). In the event an invasive species is identified at any point during the works, findings must be reported to a suitably licenced Ecologist.	Not applicable.
Other mammals (including European hedgehogs)	No additional survey is required.	General precautionary measures to be applied for the site. To avoid harm to hedgehogs during the construction phase of the development, it is recommended that a search by hand for hedgehogs is carried out immediately prior to removing any dense vegetation and brash piles. This can be completed by site staff but is recommended to be restricted to periods where hedgehogs	The inclusion of native trees and shrubs with a diverse structure within the landscape design, and retention of cut vegetation in brash piles at the site's peripheries will contribute to the resource available to hedgehogs for sheltering and hibernation (operational phase, when risks of harm from construction activities have ceased).

Ecological Receptor	Further Survey / Assessment	Mitigation Required	Opportunity for Enhancement
		<p>are likely to be active if possible (April-October). If any hedgehogs are found, they must be moved to a safe area away from the development works, or, if hibernating, taken to a local hedgehog rescue centre.</p> <p>During construction, good practice working methods are recommended, including back-filling or coverage of excavations when not in use and checking the site / stored materials at the beginning of each day. Alternatively, means of escape (such as a wooden ramp) could be provided. Similarly open pipe works are recommended to be capped when not in use, to prevent entry of wildlife.</p>	

5.0 CONCLUSIONS & RECOMMENDATIONS

Nant y Crimp SSSI is located approximately 1.5 km north-west of the site and is designated for its habitats and plants species. Due to its distance from the site and the scale and localised nature of the development is considered unlikely to be impacted by the scheme.

The proposed development is not anticipated to have significant impacts on Llety-Morfil SINC, Felindre Grasslands SINC and Waun Garn Wen SINC, however, there are potential pathways via hydrological links. Therefore, best practice pollution prevention measures to prevent pollution / contamination events through surface run-off must be adopted. In the absence of mitigation, the works could have negative impacts to these SINC's during the Construction and Operational phases.

Due to the distance to the SINC's noise, vibration and dust must also be considered. Without appropriate mitigation measures, these factors could negatively influence the integrity of the SINC's. Prior to the ECoW, precautionary avoidance measures to be implemented to protect these SINC's in accordance with best practice guidance for pollution (GPP5 (Natural Resources Wales (NRW)), 2017).

The habitat onsite is predominantly other neutral grassland, with hedges, ecologically valuable lines of trees, scrub, and a ditch and a stream located along the boundaries. All these habitats are of Local importance.

To achieve **biodiversity benefit** in accordance with the Environment (Wales) Act 2016 a Landscape and Ecological Management Plan will be produced specifying how existing habitats (grassland, hedgerows) will be enhanced and how new habitats (woodland, hedgerows) will be created as well as how these habitats will be managed in the long term.

The site has the potential to support a number of protected and notable species including badger, hazel dormouse, bats, birds, reptiles and hedgehog.

Key recommendations for further survey:

- Aerial assessment of trees with PRF-Is (TNs 13, 14, 15 & 16).

Key recommendation for mitigations:

- Construction Environment Management Plan should be produced to specify how the following will be protected:
 - all SINC's;
 - adjacent habitats; and
 - existing habitats on site to be retained and enhanced.
- Existing habitats (hedgerows / lines of trees / mature trees) retained where possible; trees with the potential to support roosting bats are recommended to be retained and protected;
- Invasive non-native plant species (INNPS) survey is required during the optimal survey period (June-July) due to the large number of records close to the site. General precautionary measures to prevent the introduction and spread of INNPS must also be undertaken due to INNPS Himalayan balsam and Japanese knotweed in the vicinity;
- ECoW checks for badger prior the works;

- ECoW supervision for birds -works undertaken during the nesting bird season (usually considered to be March to September inclusive) risks disturbing bird nests. Vegetation clearance and groundwork must be preceded by a nesting bird check; if nesting birds are found, active nests must remain undisturbed in situ;
- ECoW supervision for reptiles and hedgehogs - refugia on site including brash piles, log piles and debris (bricks, fence panels) are to be hand searched prior to clearance and sheltering wildlife such as hedgehogs moved to a safe location away from the works area. It is recommended that clearance of refugia is undertaken at a time of year when sheltering hedgehogs are most likely to be active, i.e. April to October and reptiles where habitats are being removed;
- Hazel dormouse habitat removal under NLMS and if necessary under ECoW supervision;
- Good practice measures (such as covering excavations or providing means of escape) are recommended to prevent entrapment of wildlife; and
- A sensitive lighting scheme (ref. 784-B070706 100MW Swansea BESS lighting plan review 250404 issue) has been submitted with the application that will minimise disturbance to sensitive ecological receptors (e.g. hazel dormouse, bats).

The above measures will be detailed within the the CEMP as per the condition recommendation made by NRW.

The following enhancement for site are recommended:

- The enhancement of 1.9ha of neutral grassland reseeding and plug planting with wildflower meadow species;
- Restoration of 0.145ha of defunct hedgerow along with boundaries of the site the condition of the grassland to good;
- 0.56km of new species rich native hedgerow planting;
- 0.632ha of new lowland mixed deciduous woodland planting;
- Planting of 56 standard native trees;
- Bat boxes;
- Bird boxes;
- Hibernacula for common amphibians and reptiles; and
- Insect hotel for invertebrates.

The long term management of the above should be specified within an Ecological Management Plan for the site.

Provided the measures within this report for further survey and mitigation can be adopted, it is anticipated that a design could be brought forward for in a manner that provides a net benefit for the ecology within the context of the local and wider landscape. This site would therefore be compliant with current local and national biodiversity planning policy.

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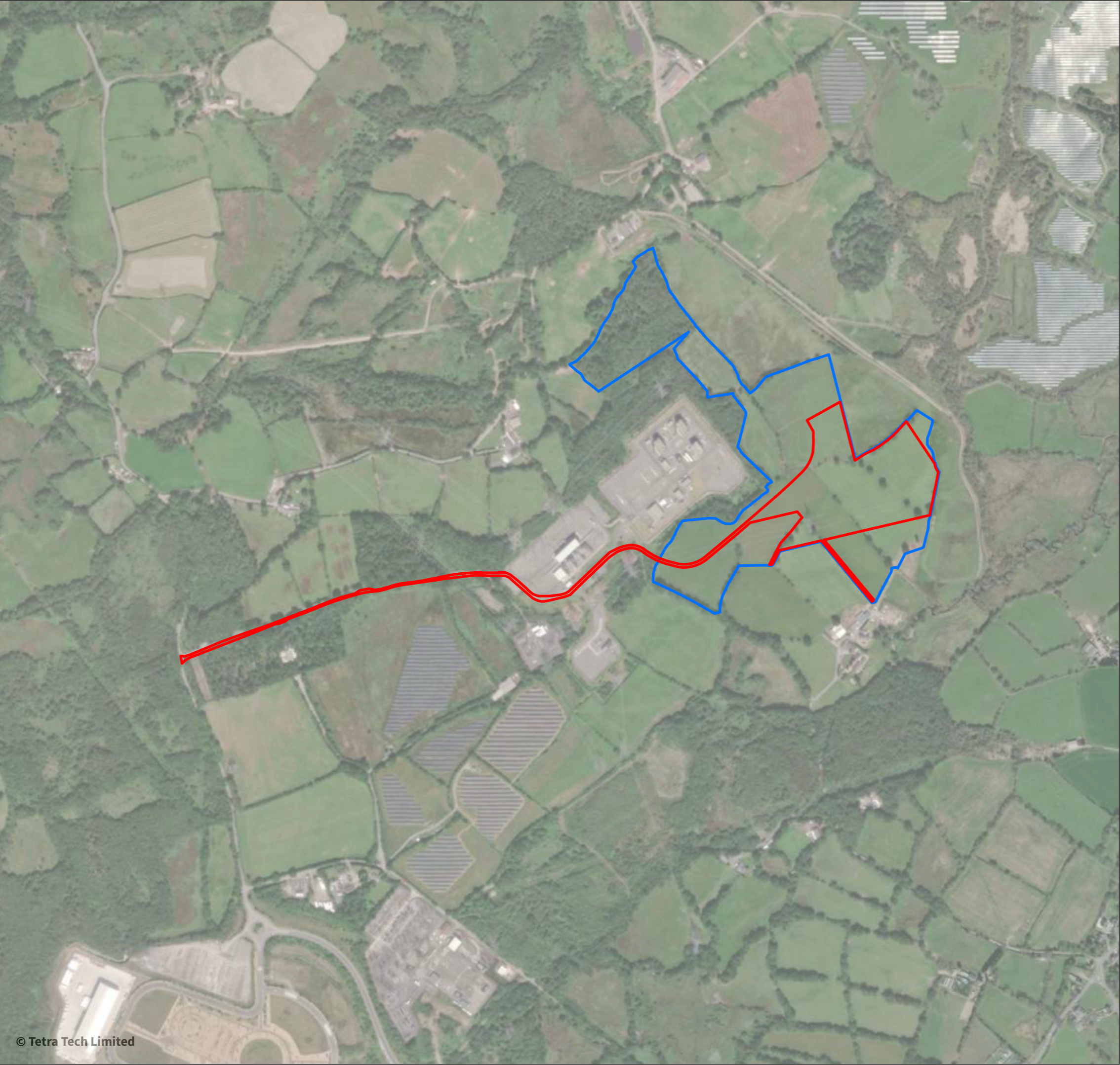
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Wardell Armstrong, 2022b. Preliminary Biodiversity Impact Assessment. Cardiff: Wardell Armstrong.

FIGURES

Figure 1 – Site Location Plan

Figure 2 – UKHab Map



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Site Location Plan

100MW Swansea BESS



Statkraft

Legend

- Site boundary
- Survey area

Notes:

Drawn by: lily.dunwell
Checked by: Sean Flynn

Figure No. 1
Revision No. B
26 March 2025

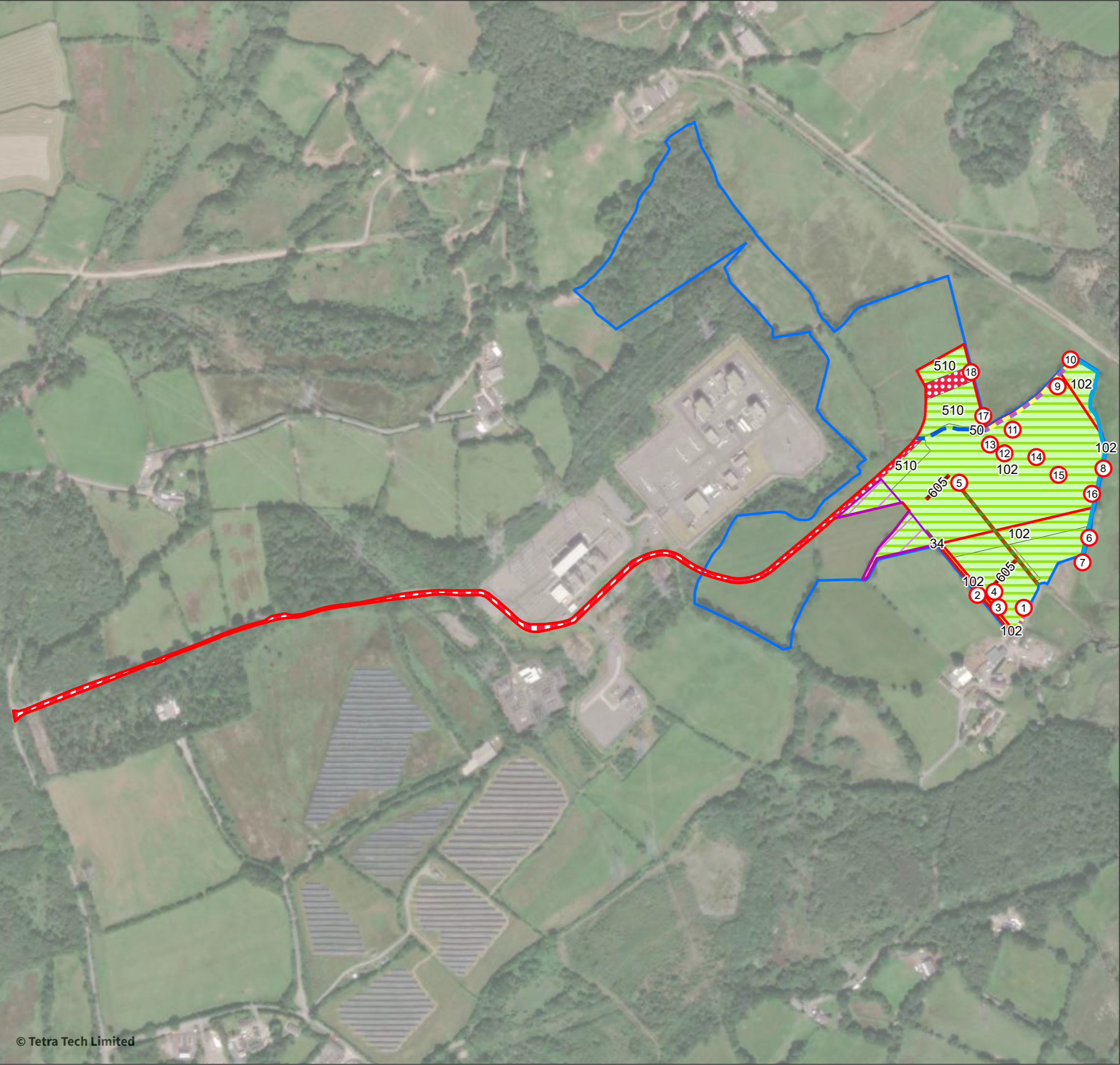
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Scale 1:7,500 @A3
NGR: 264835E 200899N

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UK Hab Habitat Plan

100MW Swansea BESS



Statkraft

Legend

- Site boundary
- Survey area
- Unsurveyed area
- g3c - Other neutral grassland
- h3d - Bramble scrub
- u1b - Developed land, sealed surface
- u1c - Artificial unvegetated unsealed surface
- w1f - Lowland mixed deciduous woodland
- h2a5 - Species-rich native hedgerow
- h2a6 - Other native hedgerows
- r1g - Other Standing Water
- r2 - Rivers and streams
- u1e - Built linear feature
- w1g - Other woodland broadleaved
- Target Notes

Secondary Codes:
34 - Ecologically valuable line of trees
50 - Ditch
102- Sheep grazed
510 - Bare ground
605 - Mid-field bund

Symbology defined by UK Habs. <https://ukhab.org/ukhab-documentation/>

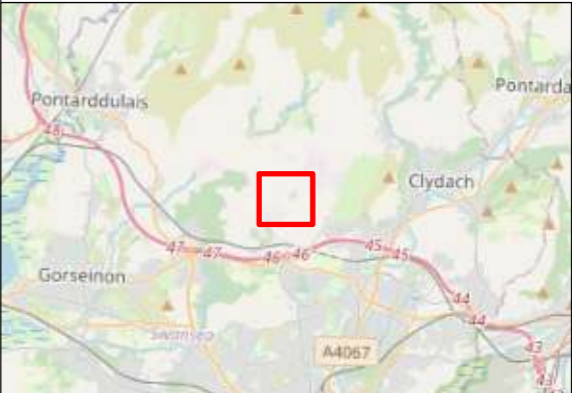
Drawn by: lily.dunwell
Checked by: Sean Flynn

Figure No. 2
Revision No. B
26 March 2025

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Scale 1:5,200 @A3

British National Grid
NGR: 264835E 200899N

© OpenStreetMap (and) contributors, CC-BY-SA, Maxar, Microsoft

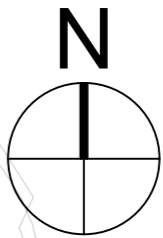


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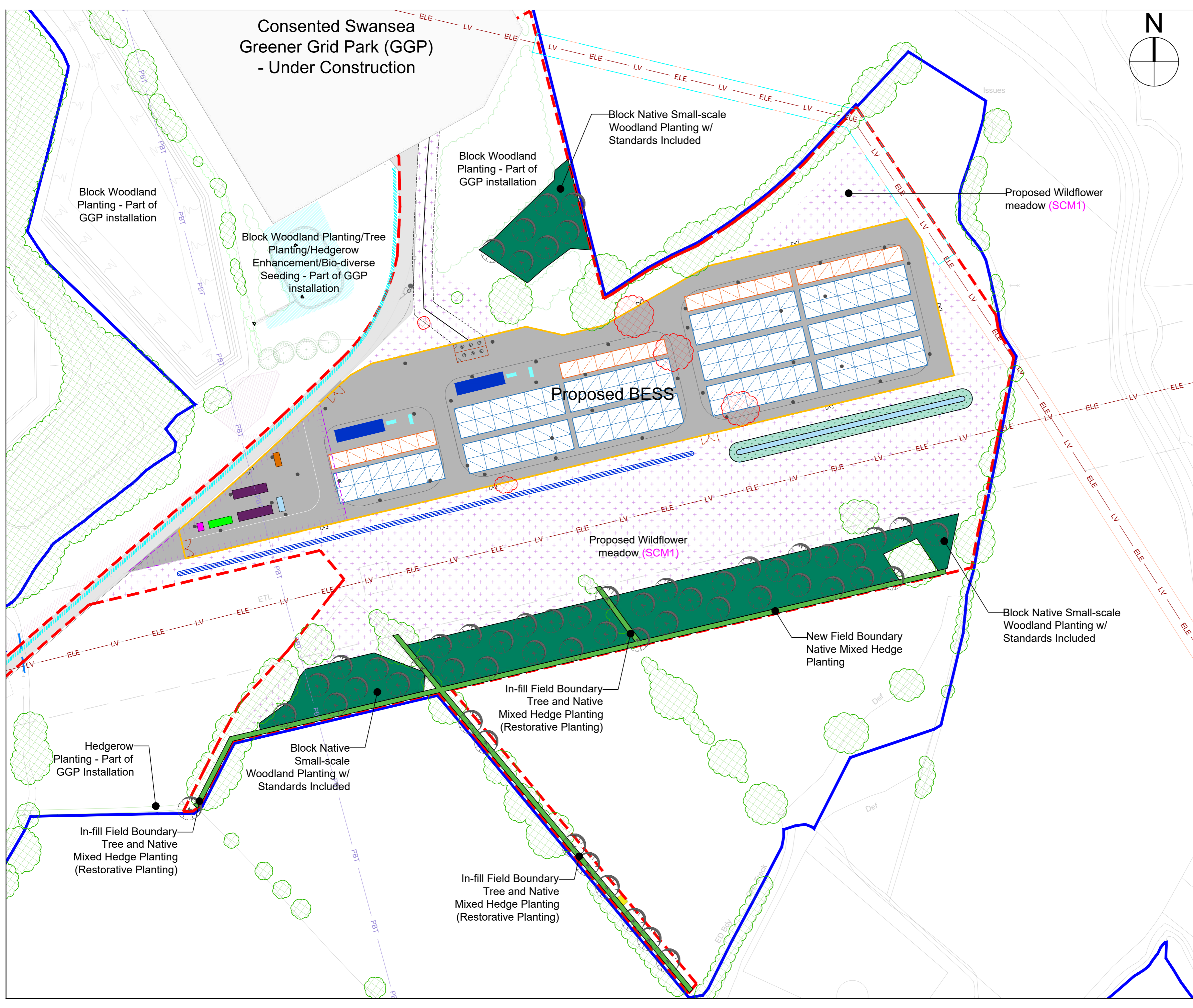
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APPENDICES

Consented Swansea
Greener Grid Park (GGP)
- Under Construction



- Legend**
- Site Boundary
 - Ownership Boundary
 - Existing Overhead Cable Route
 - Existing Telecom Route
 - Watercourse
 - Proposed Security Fence
 - Existing Woodland/Tree retained and maintained
 - Removed Tree Material
 - Proposed Native Woodland Mix planting (W1) with Woodland Meadow Mix seeding underneath (SCM3)
 - Proposed Native Wildflower Meadow (SCM1)
 - Proposed hedge/in-fill planting
 - Corylus avellana
 - Crataegus monogyna
 - Ilex aquifolium
 - Lonicera periclymenum
 - Prunus spinosa
 - Sambucus nigra
 - Proposed SuDS
 - Proposed Native Wetland Meadow (SCM2)



Rev D 27.03.2025 - Hedge spec. /Update areas per Ecol.
Rev C 25.03.2025 - Insert Site Plan w/ moved BESS and new RLB
Rev B 24.02.2025 - Alter base map/GGP site; Reinforce NMA Hedge.
Rev A 17.02.2025 - Alter base map/GGP site; Remove access wayleave; Alter plan colours/legend; Add plan notation (GGP landscape).

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Also in Edinburgh & Newcastle

Project Swansea BESS					
Title Landscape Mitigation Masterplan					
Date	Scale	Drawn	Checked		
17/02/25	1:1000 @ A2	CL/RPD	NH		
Job	Suitability	No.	Issue	Revision	
2242	-	L01	-	B	
LI WORKSTAGE: 0/1 2 3 4 5 6					
<div><input type="checkbox"/></div> <div><input type="checkbox"/></div> <div><input checked="" type="checkbox"/></div> <div><input type="checkbox"/></div> <div><input type="checkbox"/></div> <div><input type="checkbox"/></div>					

DISCLAIMER:
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All dimensions to be verified on site prior to commencement of works.
Drawing to be read in conjunction with related TGP drawings, consultants drawings and any other relevant information.
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APPENDIX B: LANDSCAPE MITIGATION PLAN




APPENDIX C: TARGET NOTES & SURVEY DATA



Project Number	784-B070706
Project Name	Swansea Bess
Date of Survey	13 January 2025
Surveyor	Laura Grice
Temperature	6°C
Cloud Cover	100%
Wind	3 - Gentle breeze
Precipitation	No precipitation
General Notes	




Target Note	Description	Photos																					
TN1	<p>Defunct native sp. Hedge. Defunct hedge on a bank c.0.5 m, height 3-5m, width 2.5-3m, with obvious gaps, understory of bramble</p> <p>Species List:</p> <table> <tr> <th>Common Name</th><th>Latin Name</th><th>Dafor</th></tr> <tr> <td>Hazel</td><td><i>Corylus avellana</i></td><td>1 – Dominant (d)</td></tr> <tr> <td>Hawthorn</td><td><i>Crataegus monogyna</i></td><td>2 – Abundant (a)</td></tr> <tr> <td>Bramble</td><td><i>Rubus fruticosus agg.</i></td><td>4 – Occasional (o)</td></tr> <tr> <td>Common ivy</td><td><i>Hedera helix</i></td><td>4 - Occasional</td></tr> <tr> <td>Holly</td><td><i>Ilex aquifolium</i></td><td>5 – Rare (r)</td></tr> <tr> <td>Wild privet</td><td><i>Ligustrum vulgare</i></td><td>5 - Rare</td></tr> </table> <p>British National Grid (m): 265481E, 200793N WGS84 (Lat/Long): 51.6897°N, -3.9475°E</p>	Common Name	Latin Name	Dafor	Hazel	<i>Corylus avellana</i>	1 – Dominant (d)	Hawthorn	<i>Crataegus monogyna</i>	2 – Abundant (a)	Bramble	<i>Rubus fruticosus agg.</i>	4 – Occasional (o)	Common ivy	<i>Hedera helix</i>	4 - Occasional	Holly	<i>Ilex aquifolium</i>	5 – Rare (r)	Wild privet	<i>Ligustrum vulgare</i>	5 - Rare	
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Holly	<i>Ilex aquifolium</i>	5 – Rare (r)																					
Wild privet	<i>Ligustrum vulgare</i>	5 - Rare																					
TN2	<p>Line of trees of hawthorn (d), ash (r), ivy (o), English oak (r), Blackthorn (o), Holly(o), sycamore (r), on a bank c.1 m high</p>																						



	<p>Ground flora of foxglove, hard rush, common knapweed, bracken, ox eye daisy, sheep sorer, bramble, dandelion.</p> <p>British National Grid (m): 265405E, 200824N</p> <p>WGS84 (Lat/Long): 51.69°N, -3.9486°E</p>																																					
TN3	<p>Sheep grazed other neutral grassland sward height 2-7cm, heavily grazed by sheep, no tussocky structure visible.</p> <p>Species List:</p> <table border="1"> <thead> <tr> <th>Common Name</th><th>Latin Name</th><th>Dafor</th></tr> </thead> <tbody> <tr> <td>Creeping bent</td><td><i>Agrostis stolonifera</i></td><td>2 - Abundant</td></tr> <tr> <td>Yorkshire-fog</td><td><i>Holcus lanatus</i></td><td>2 - Abundant</td></tr> <tr> <td>Common mouse-ear</td><td><i>Cerastium fontanum</i></td><td>3 - Frequent</td></tr> <tr> <td>Cock's-foot</td><td><i>Dactylis glomerata</i></td><td>4 - Occasional</td></tr> <tr> <td>Creeping buttercup</td><td><i>Ranunculus repens</i></td><td>4 - Occasional</td></tr> <tr> <td>Dandelion</td><td><i>Taraxacum agg.</i></td><td>4 - Occasional</td></tr> <tr> <td>Ribwort plantain</td><td><i>Plantago lanceolata</i></td><td>4 - Occasional</td></tr> <tr> <td>Timothy</td><td><i>Phleum pratense</i></td><td>4 - Occasional</td></tr> <tr> <td>White clover</td><td><i>Trifolium repens</i></td><td>4 - Occasional</td></tr> <tr> <td>Common sorrel</td><td><i>Rumex acetosa</i></td><td>5 - Rare</td></tr> <tr> <td>Yarrow</td><td><i>Achillea millefolium</i></td><td>5 - Rare</td></tr> </tbody> </table> <p>British National Grid (m): 265441E, 200802N</p> <p>WGS84 (Lat/Long): 51.6898°N, -3.9481°E</p>	Common Name	Latin Name	Dafor	Creeping bent	<i>Agrostis stolonifera</i>	2 - Abundant	Yorkshire-fog	<i>Holcus lanatus</i>	2 - Abundant	Common mouse-ear	<i>Cerastium fontanum</i>	3 - Frequent	Cock's-foot	<i>Dactylis glomerata</i>	4 - Occasional	Creeping buttercup	<i>Ranunculus repens</i>	4 - Occasional	Dandelion	<i>Taraxacum agg.</i>	4 - Occasional	Ribwort plantain	<i>Plantago lanceolata</i>	4 - Occasional	Timothy	<i>Phleum pratense</i>	4 - Occasional	White clover	<i>Trifolium repens</i>	4 - Occasional	Common sorrel	<i>Rumex acetosa</i>	5 - Rare	Yarrow	<i>Achillea millefolium</i>	5 - Rare	 
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Yarrow	<i>Achillea millefolium</i>	5 - Rare																																				


		 <p>The third column contains three photographs. The top photograph shows several plant samples, including grasses and small green seedlings, laid out on a dark, flat surface. The middle photograph is a wide shot of a green field under a cloudy sky, with a power line tower visible in the distance. The bottom photograph shows a closer view of the same field, with a blue rectangular frame marked on the grass in the foreground and a large tree on the right side.</p>
--	--	--



		
TN4	<p>Fenced in bank in between fields with sown grasses (d), sow thistle (r) and creeping thistle (o)</p> <p>British National Grid (m): 265440E, 200810N</p> <p>WGS84 (Lat/Long): 51.6899°N, -3.9481°E</p>	
TN5	<p>Ecologically valuable line of trees on a bank c.1m high, comprised of English oak frequent (f), Holly (f), hawthorn (f), ivy (r), ground flora as in TN2.</p> <p>British National Grid (m): 265392E, 200968N</p> <p>WGS84 (Lat/Long): 51.6913°N, -3.9489°E</p>	
TN6	<p>Bramble scrub with occasional hawthorn (o) and English oak saplings (o).</p> <p>British National Grid (m): 265554E, 200836N</p> <p>WGS84 (Lat/Long): 51.6901°N, -3.9465°E</p>	



		
TN7	<p>Stream, 5-10cm deep overgrown with brambles (a) on both sides with occ hawthorn</p> <p>British National Grid (m): 265564E, 200857N</p> <p>WGS84 (Lat/Long): 51.6903°N, -3.9463°E</p>	
TN8	<p>Rabbit burrow by the stream</p> <p>British National Grid (m): 265592E, 200988N</p> <p>WGS84 (Lat/Long): 51.6915°N, -3.946°E</p>	




		
TN9	<p>Ditch with willow and defunct overgrown hedge next to it, depth 5-10cm</p> <p>British National Grid (m): 265538E, 201124N</p> <p>WGS84 (Lat/Long): 51.6927°N, -3.9468°E</p>	
TN10	<p>Defunct hedge of pedunculate oak (o), holly (r), ash (r), hawthorn (o) and goat willow (f), understory of bramble not well established.</p> <p>British National Grid (m): 265541E, 201129N</p> <p>WGS84 (Lat/Long): 51.6928°N, -3.9468°E</p>	


<p>TN11</p>	<p>Standard pedunculate oak tree on a former earth bank</p> <p>British National Grid (m): 265459E, 201028N</p> <p>WGS84 (Lat/Long): 51.6918°N, -3.9479°E</p>	
<p>TN12</p>	<p>Rabbit hole</p> <p>British National Grid (m): 265458E, 201021N</p> <p>WGS84 (Lat/Long): 51.6918°N, -3.9479°E</p>	
<p>TN13</p>	<p>Multiple holes 2-4m high on different aspects south, north, west of an oak tree and a split branch on eastern aspect c. 4m high, suitable for individual bat roosting.</p> <p>British National Grid (m): 265458E, 201021N</p>	

	WGS84 (Lat/Long): 51.6918°N, -3.9479°E	
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TN14	<p>3 potential holes for individual bat roosting on oak</p> <p>British National Grid (m): 265488E, 201003N</p> <p>WGS84 (Lat/Long): 51.6916°N, -3.9475°E</p>	

		
TN15	<p>3 holes</p> <p>British National Grid (m): 265529E, 200965N</p> <p>WGS84 (Lat/Long): 51.6913°N, -3.9469°E</p>	
TN16	<p>1 hole potentially</p> <p>British National Grid (m): 265579E, 200948N</p> <p>WGS84 (Lat/Long): 51.6911°N, -3.9461°E</p>	

		 
TN17	<p>Bare ground, topsoil removed</p> <p>British National Grid (m): 265425E, 201061N</p> <p>WGS84 (Lat/Long): 51.6922°N, -3.9489°E</p>	
TN18	<p>Construction compound with car park, compacted ground with stones</p>	

	<p>British National Grid (m): 265444E, 201136N</p> <p>WGS84 (Lat/Long): 51.6928°N, -3.9494°E</p>	
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APPENDIX D: KEY LEGISLATION

Habitats Directive

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, or the 'Habitats Directive', is a European Union directive adopted in 1992 in response to the Bern Convention. Its aims are to protect approximately 220 habitats and 1,000 species listed in its several Annexes.

In the UK, the Habitats Directive is transposed into national law via the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales, and via the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland.

Birds Directive

The EC Directive on the Conservation of Wild Birds (79/409/EEC) or 'Birds Directive' was introduced to achieve favourable conservation status of all wild bird species across their distribution range. In this context, the most important provision is the identification and classification of Special Protection Areas (SPAs) for rare or vulnerable species listed in Annex 1 of the Directive, as well as for all regularly occurring migratory species, paying particular attention to the protection of wetlands of international importance.

Conservation of Habitats and Species Regulations 2017 (as amended)

Regulations place a duty on the Secretary of State to propose a list of sites which are important for either habitats or species (listed in Annexes I or II of the Habitats Directive respectively) to the European Commission. These sites, if ratified by Ministers, are then designated as Special Protection Areas (SPAs) within six years. Public bodies must also help preserve, maintain and re-establish habitats for wild birds.

The 2018 amendments mainly related to the impact of the *People Over Wind* decision and some implications arising for neighbourhood plan development and a range of other planning tools including Local Development Orders and Permission in Principle – see here for full details:

<https://www.legislation.gov.uk/uksi/2018/1307/note/made>

The 2019 amendments related to the EU exit. Most of these changes involved transferring functions from the European Commission to the appropriate authorities in England and Wales. All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant. The obligations of a competent authority in the 2017 Regulations for the protection of sites or species do not change – see here for full details:

<https://www.legislation.gov.uk/ukdsi/2019/9780111176573>

The Regulations make it an offence to deliberately capture, kill, disturb or trade in the animals listed in Schedule 2, or pick, uproot, destroy, or trade in the plants listed in Schedule 5.

Wildlife & Countryside Act 1981 (as amended)

This is the principal mechanism for the legislative protection of wildlife in the UK. This legislation is the chief means by which the 'Bern Convention' and the Birds Directive are implemented in the UK. Since it was first introduced, the Act has been amended several times.

The Act makes it an offence to (with exception to species listed in Schedule 2) intentionally:

- kill, injure, or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use; or
- take or destroy an egg of any wild bird.

Or to intentionally do the following to a wild bird listed in Schedule 1:

- disturbs any wild bird while it is building a nest or is in, on or near a nest containing eggs or young; or
- disturbs dependent young of such a bird.

In addition, the Act makes it an offence (subject to exceptions) to:

- intentionally or recklessly kill, injure or take any wild animal listed on Schedule 5;
- interfere with places used for shelter or protection, or intentionally disturbing animals occupying such places; and
- The Act also prohibits certain methods of killing, injuring, or taking wild animals.

Finally, the Act also makes it an offence (subject to exceptions) to: intentionally pick, uproot or destroy any wild plant listed in Schedule 8, or any seed or spore attached to any such wild plant; unless an authorised person, intentionally uproot any wild plant not included in Schedule 8; or sell, offer or expose for sale, or possess (for the purposes of trade), any live or dead wild plant included in Schedule 8, or any part of, or anything derived from, such a plant.

Following all amendments to the Act, Schedule 5 'Animals which are Protected' contains a total of 154 species of animal, including several mammals, reptiles, amphibians, fish and invertebrates. Schedule 8 'Plants which are Protected' of the Act, contains 185 species, including higher plants, bryophytes and fungi and lichens. A comprehensive and up-to-date list of these species can be obtained from the JNCC website.

Part 14 of the Act makes unlawful to plant or otherwise cause to grow in the wild any plant which is listed in Part II of Schedule 9.

It is recommended that plant material of these species is disposed of as bio-hazardous waste, and these plants should not be used in planting schemes.

Environment Protection Act 1990

The Act imposes a classification of soil and other waste containing viable propagules of invasive non-native plant species as controlled waste. This has been applied to Japanese Knotweed *Reynoutria japonica*, with the result that waste containing this species must be disposed of in accordance with the duty of care set out in section 34 of the Act.

Protection of Badgers Act 1992

The main legislation protecting badgers in England and Wales is the Protection of Badgers Act 1992 (the 1992 Act). Under the 1992 Act it is an offence to: wilfully kill, injure, take or attempt to kill, injure or take a badger; dig for a badger; interfere with a badger sett by, damaging a sett or any part thereof, destroying a sett, obstructing access to a sett, causing a dog to enter a sett or disturbing a badger while occupying a sett. The 1992 Act defines a badger sett as: "any structure or place which displays signs indicating current use by a badger".

Hedgerow Regulations 1997

The Hedgerow Regulations were made under Section 97 of the Environment Act 1995 and came into force in 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification. Important hedgerows are defined by complex assessment criteria, which draw on biodiversity features, historical context and the landscape value of the hedgerow.

The Invasive Alien Species (Enforcement and Permitting) Order 2019 (as amended)

This Order is concerned with the prevention and management of the introduction and spread of invasive alien species.

Birds of Conservation Concern

This is a review of the status of all birds occurring regularly in the United Kingdom. It is regularly updated and is prepared by leading bird conservation organisations, including the British Trust for Ornithology (BTO), Joint Nature Conservation Committee (JNCC) and The Royal Society for the Protection of Birds (RSPB).

The latest report was produced in 2021 (Eaton *et al*, 2021) and identified 70 red list species, 103 amber species, and 72 green species. The criteria are complex, but generally:

Red list species are those that have shown a decline of the breeding population, non-breeding population or breeding range of more than 50% in the last 25 years.

Amber list species are those that have shown a decline of the breeding population, non-breeding population or breeding range of between 25% and 50% in the last 25 years. Species that have a UK breeding population of less than 300 or a non-breeding population of less than 900 individuals are also included, together with those whose 50% of the population is localised in 10 sites or fewer and those whose 20% of the European population is found in the UK.

Green list species are all regularly occurring species that do not qualify under any of the red or amber criteria are green listed.

Global IUCN Red List

The International Union for Conservation of Nature (IUCN) Threatened Species was devised to provide a list of those species that are most at risk of becoming extinct globally. It provides taxonomic, conservation status and distribution information about threatened taxa around the globe.

The system catalogues threatened species into groups of varying levels of threat, which are: Extinct (EX), Extinct in the Wild (EW), Critically Endangered (CE), Endangered (EN), Vulnerable (VU), Near Threatened (NT), Least Concern (LC), Data Deficient (DD), Not Evaluated (NE). Criteria for designation into each of the categories is complex, and consider several principles.

Local Biodiversity Action Plan (LBAP)

Local Biodiversity Action Plans (LBAP) identify habitat and species conservation priorities at a local level (typically at the County level), and are usually drawn up by a consortium of local Government organisations and conservation charities.

Some LBAP's may also include Habitat Action Plans (HAP) and/or Species Action Plans (SAP), which are used to guide and inform the local decision making process.

Wild Mammals (Protection) Act 1996

This Act offers protection to all wild species of mammals, irrespective of other legislation, and focussed on animal welfare, rather than conservation.

Unless covered by one of the exceptions, a person is guilty of an offence if he mutilates, kicks, beats, nails or otherwise impales, stabs, burns, stones, crushes, drowns, drags or asphyxiates any wild mammal with intent to inflict unnecessary suffering.

It's application is typically restricted to preventing deliberate harm to wildlife (in general) during construction works etc.

National Planning Policy (Wales)

The national planning policy guidance is found principally in Planning Policy Wales Edition 12 (PPW) dated December 2021 (Welsh Government, 2021). The document is supported by a series of Technical Advice Notes (TANs) with the most relevant for ecology being TAN 5: Nature Conservation and Planning (Welsh Government, 2009), which provides advice on how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. A summary of the main points relevant to the ecological assessment of the development is provided below.

Paragraph 6.4.2 states that local planning authorities, along with other public bodies, as part of the Environment (Wales) Act 2016 have a duty to take reasonable steps, consistent with the proper exercise of their functions, to further the conservation and enhancement of biodiversity and help maximise contributions to achieve well-being goals.

Paragraph 6.4.3 states that the planning system has a key role to play in helping to reverse the decline in biodiversity and increasing the resilience of ecosystems, at various scales, by ensuring appropriate mechanisms are in place to both protect against loss and to secure enhancement. Addressing the consequences of climate change should be a central part of any measures to conserve biodiversity and the resilience of ecosystems. 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 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.

Paragraph 6.4.4 states that biodiversity and resilience considerations should be taken into account at an early stage in development planning. All reasonable steps must be taken to maintain and enhance biodiversity and promote the resilience of ecosystems which should be balanced with the wider economic and social needs of business and local communities.

Paragraph 6.4.5 states that planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions, and that development should not cause any significant loss of habitats or populations of species, locally or nationally and must provide a net benefit for biodiversity. The diversity of, connections between, the scale, the condition and the adaptability of ecosystems must be taken into account.

Paragraphs 6.4.11, 6.4.14 and 6.4.22 state that planning authorities must have regard to the relative significance of international, national and local designations in considering the weight to be attached to nature conservation interests, and that the international and national responsibilities and obligations for conservation should be fully met. Statutorily designated sites must be protected from damage and deterioration, with their important features conserved and enhanced by appropriate management. Statutorily protected species protected under European or UK legislation, or under Section 7 of the Environment (Wales) Act 2016 are material considerations if a development would result in disturbance or harm to the species or its habitat, and the range and population of the species should be sustained.

Paragraph 6.4.21 states 'Planning authorities must follow a step-wise approach to maintain and enhance biodiversity and build resilient ecological networks by ensuring that any adverse environmental effects are firstly avoided, then minimized, mitigated, and as a last resort compensated for; enhancement must be secured wherever possible'.

Paragraphs 6.4.24-26 also gives emphasis to the importance of trees, hedgerows and woodlands (especially ancient woodland) and states 'Ancient woodland and semi-natural woodlands and individual ancient, veteran and heritage trees are irreplaceable natural resources, and have significant landscape, biodiversity and cultural value. Such trees and woodlands should be afforded protection from development which would result in their loss or deterioration unless there are significant and clearly defined public benefits; this protection should prevent potentially damaging operations and their unnecessary loss. In the case of a site recorded on the Ancient Woodland Inventory, authorities should consider the advice of NRW.'

Related to these Biodiversity and Ecological Network policies, Section 6.2 gives weight to the protection and enhancement of multi-functional green infrastructure, which is important for sustainable management of natural resources. Green infrastructure should be incorporated into development through appropriate site selection and use of creative design.

Circular Letter CL-05-04 reaffirmed the Welsh Government's commitment to ensuring that designated sites and species of nature conservation importance are protected from damage and deterioration, with their important features conserved by appropriate management. The letter advised that under specific circumstances a pre-commencement condition should be attached to planning consents requiring the applicant to provide the LPA with a copy of their European Protected Species (EPS) Licence (once issued by NRW). The Circular Letter was withdrawn in March 2018 in an attempt to reduce the number of pre-commencement conditions, with LPA's advised to instead use a replacement informative (to be attached to all relevant consent notices) to avoid unnecessary duplication controls of other legislation.

Environment (Wales) Act

As part of the Welsh Government's commitment to reversing the decline in biodiversity in Wales and increasing the resilience of its ecosystems, the Environment (Wales) Act 2016 aims to build greater resilience into our ecosystems. Biodiversity and well-functioning ecosystems provide natural solutions that build resilience, which in turn help society create jobs, support livelihoods and human well-being, adapt to the adverse impacts of climate change and contribute to sustainable development.

Part 1 of the Environment Act sets out Wales' approach to planning and managing natural resources at a national and local level with a general purpose linked to statutory 'principles of sustainable management of natural resources' defined within the Act.

Section 6 under Part 1 of the Act places an enhanced duty on public authorities to 'seek to maintain and enhance biodiversity' so far as it is consistent with the proper exercise of those functions. In so doing, public authorities must also seek to 'promote the resilience of ecosystems'. This duty replaces the section 40 duty in the Natural Environment and Rural Communities Act 2006 (NERC Act 2006), in relation to Wales, and applies to those authorities that fell within the previous duty.

Section 7 replaces the duty in section 42 of the NERC Act 2006. The Welsh Ministers will publish, review and revise lists of living organisms and types of habitat in Wales, which they consider are of key significance to sustain and improve biodiversity in relation to Wales. The Welsh Ministers must also take all reasonable steps to maintain and enhance the living organisms and types of habitat included in any list published under this section, and encourage others to take such steps. Certain public authorities will also be required to consider the section 7 list, in complying with the new biodiversity duty under section 6 of the Act. The list is important in assisting public bodies to identify potential issues that they may wish to address in meeting their well-being objectives, in addition to contributing to the well-being goal 'a resilient Wales' (Goal 2). The current Section 7 lists are interim lists which are exactly the same as the previous list under Section 42 of the NERC Act, and is under review in consultation with NRW.

Part 1 of the Act, including Sections 6 and 7, came into force on 21st May 2016.

DECCA Framework

The Environment (Wales) Act, the Well-Being of Future Generations Act and the Chief Planner's letter frame biodiversity with respect to its contribution to achieving ecosystem resilience.

Natural Resources Wales (NRW) has developed a framework for evaluating ecosystem resilience based on five attributes and properties specified in the Environment (Wales) Act. This is referred to as DECCA: Diversity, Extent, Condition, Connectivity and Aspects of ecosystem resilience.

The attributes provide a framework for considering the state of ecosystem resilience in Wales and can be applied across different habitats and land uses and for a range of different scales.

NRW works to the definition of ecosystem resilience published in its State of Natural Resources Report in 2020, which is: "An environment that can respond to pressures by resisting, recovering or adapting to change; and is able to continue to provide natural resources and benefits to people."

When assessing planning applications, Planning Policy Wales instructs planning authorities to take account of and promote the resilience of ecosystems, in particular the five attributes of ecosystem resilience. The DECCA attributes are explained further in NRW's Terrestrial and freshwater Resilient Ecological Networks: a guide for practitioners in Wales¹⁷, but as a broad summary, the definitions are as follows:

- **Diversity:** maintaining and enhancing diversity at every scale, including genetic, structural, habitat and between-habitat levels. This supports the complexity of ecosystem functions and interactions that deliver services and benefits.
- **Extent:** incorporating measures which maintain and increase the area of semi-natural habitat/features and linkages between habitats. In general, smaller ecosystems have reduced capacity to adapt, recover or resist disturbance.
- **Condition:** The condition of an ecosystem is affected by multiple and complex pressures acting both as short term and longer term types of disturbance. Both direct and wider impacts should be considered, for example avoiding or mitigating pressures such as climate change, pollution, invasive species, land management neglect etc.
- **Connectivity:** This refers to the links between and within habitats, which may take the form of physical corridors, stepping stones in the landscape, or patches of the same or related vegetation types that together create a network that enables the flow or movement of genes, species and natural resources. Developments should take opportunities to develop functional habitat and ecological networks within and between ecosystems, building on existing connectivity.
- **Aspects of ecosystem resilience (adaptability, recovery and resistance):** ecosystem resilience is a product of the above four attributes. Adaptability, recovery and resistance to/from a disturbance are defining features of ecosystem resilience.

Swansea Local Development Plan 2010-2025 (Swansea Council, 2019)

ER 8: HABITATS AND SPECIES

Development proposals that would have a significant adverse effect on the continued viability of habitats and species, including those identified as priorities in the UK or Swansea Local Biodiversity Action Plan, will only be permitted where:

- The need for development outweighs the nature conservation importance of the site;
- The developer demonstrates that there is no satisfactory alternative location for the development which avoids nature conservation impacts; and
- Effective mitigation measures are provided by the developer.
- Any unavoidable harm is minimised by effective mitigation to ensure that there is no reduction in the overall nature conservation value of the area. Where this is not feasible, compensation measures designed to conserve, enhance, manage and, where appropriate, restore natural habitats and species must be provided.

Paragraph 2.9.60 states development proposals should aim to minimise detrimental impacts on habitats and species. There should be no net loss in overall biodiversity as a result of development and where possible there should be biodiversity gains.

	<p>Paragraph 2.9.61 states protected habitats and species are those protected under European or UK legislation, as identified in TAN 5 and including the Habitats Directive, Birds Directive, Wildlife and Countryside Act, Environment Act, Section 42 of the Natural Environment and Rural Communities (NERC) Act 2006 [the latter now replaced by Section 7 of the Environment (Wales) Act]. They include priority habitats and species that are protected in UK and Local Biodiversity Action Plans.</p> <p>Paragraph 2.9.62 states factors to be taken into consideration in assessing the significant adverse effect development proposals are likely to have on habitats and species are:</p> <ul style="list-style-type: none"> • The current distribution and status of the protected habitat or species within the county; • All likely effects, including cumulative effects and impacts during construction; • The role of the habitats as connectivity pathways; and • Whether effective mitigation and/or compensatory measures have been provided. <p>Paragraph 2.9.63 states where habitats and species are likely to be disturbed or harmed, development proposals will be assessed in accordance with National Planning Policy and Guidance. Developers will be expected to provide: an ecological survey; an assessment of the likely impact of the proposal on the protected species/habitats; and, where necessary, make appropriate provision for their safeguarding, mitigation and/or compensatory measures. In addition, opportunities to enhance biodiversity, such as through habitat creation, will be encouraged.</p>
ER 9: ECOLOGICAL NETWORKS AND FEATURES OF IMPORTANCE FOR BIODIVERSITY	<p>Development proposals will be expected to maintain, protect and enhance ecological networks and features of importance for biodiversity. Particular importance will be given to maintaining and enhancing the connectivity of ecological networks which enable the dispersal and functioning of protected and priority species.</p> <p>Development proposals that could result in a significant adverse effect on the connectivity of ecological networks and features of importance for biodiversity will only be permitted where:</p> <ol style="list-style-type: none"> The need for the development outweighs the nature conservation value of the site; It can be demonstrated that there is no satisfactory alternative location for the development; A connected element of the natural resource is retained as part of the design of the development; and Compensatory provision will be made of comparable ecological value to that lost as a result of the development. <p>Paragraph 2.9.64 states there are a significant number of ecological habitats and features within the County, in addition to those that are legally protected, that lie outside the designated areas and make a significant contribution to the overall biodiversity resource. These include linear wildlife corridors such as rivers, hedgerows and cycle tracks and also 'stepping stones' such as ponds and copses.</p> <p>Paragraph 2.9.65 states the wildlife corridors and stepping stones are a vital part of the ecological network. Whilst it is important to protect and enhance biodiversity sites and species of importance dispersed throughout the County this cannot be achieved without protecting and enhancing the intervening habitats and spaces that provide crucial links between the designated sites.</p> <p>Paragraph 2.9.66 states the protection, management and enhancement of ecological networks is recognised as being particularly important for nature conservation. Wildlife corridors allow species to move between fragmented habitats, to recolonise areas and to move in response to climate change and development that may have destroyed part of their habitat. For example, the water vole, which is a priority species will not travel through unvegetated ground. If its habitat becomes isolated through development and then the colony within this isolated habitat become endangered, for example through disease, it is likely that it will not survive.</p> <p>Paragraph 2.9.67 states the Plan has been informed by an assessment of ecological connectivity across the whole of the County. This assessment maps the existing ecological connectivity network and also identifies locations where ecological connectivity has the potential to be enhanced. The latest version of the Swansea Ecological Connectivity Assessment will inform the implementation of this Policy.</p> <p>Paragraph 2.9.68 states providing ecological connectivity is an important ecosystem service of the green infrastructure network and its protection and/or enhancement accords with Policy ER 2 Strategic Green Infrastructure Network.</p>

Supplementary Planning Guidance (SPG)

Swansea Council LDP 2010-2025. Supplementary Planning Guidance: Biodiversity and Development
Swansea Council LDP 2010-2025. Supplementary Planning Guidance: Trees, Hedgerows and Woodlands