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STATKRAFT UK LTD

SWANSEA NORTH GREENER GRID PARK

PRELIMINARY ECOLOGICAL APPRAISAL REPORT – FULL APPLICATION

FEBRUARY 2023

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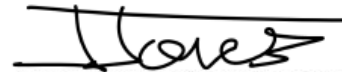
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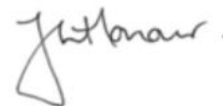
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Appendix 3	20221205 Swansea Entire Site Layout Rev I @A3
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DRAWINGS	TITLE	SCALE
ST19905-023	Site Location Plan Rev B	1:20,000@A3
ST19905-024	UKHab Habitat Plan Rev B	1:2,500@A3
ST19905-025	Waterbody Location Plan Rev B	1:10,000@A3
ST19905-022	Ecological Enhancements Location Plan	1:1,000@A3

EXECUTIVE SUMMARY

Wardell Armstrong LLP was commissioned by Statkraft UK Ltd in November 2022 to carry out a Preliminary Ecological Appraisal (PEA) on an area of land constituting an area adjacent to the Swansea North Substation, Llangyfelach SA5 7DU. The site is centred on approximate National Grid Reference SN 65355 01143.

Full planning (ref. 2021/0163/FUL) was approved on the 8th June 2021 for this land for the construction of a new Greener Grid Park at the Felindre Pumping Substation, Llangyfelach including associated road and access ways, into the surrounding habitats.

The site is approximately 6.24ha and consists predominantly of developed land sealed surface in the form of an access road, managed grassland, and broadleaved woodland. Other habitats within the site boundary include scrub, scattered trees, streams, and ditches. The surrounding habitat includes a pastural landscape with areas of broadleaved woodland to the north west, south, and north east of the site. The building associated with the adjacent power grid station is located directly to the north west of the application site.

There are two Site of Special Scientific Interest (SSSI) and 21 Sites of Importance for Nature Conservation (SINC) identified within 2km of the application site. The Carmarthen Bay and Estuaries European Marine Site which comprises the Burry Inlet Special Protection Area and Ramsar site and Carmarthen Bay and Estuaries Special Area of Conservation is located approximately 7km west of the application site.

The desk study has identified records for protected and notable species including bats, badger *Meles meles*, breeding birds, barn owl *Tyto alba*, common reptiles *Zootoca vivipara*, European hedgehog *Erinaceus europaeus*, Eurasian otter *Lutra lutra*, amphibians, invertebrates, protected plant species and invasive plant species within 2km of the application site.

Receptors which the PEA has identified may be subject to adverse effects in the absence of mitigation are as follows:

- Non-statutory designated sites;
- Broadleaved woodland;
- Scattered trees;
- Bats;
- GCN and common amphibians;
- European hedgehog;
- Otter;
- Badger;

- Invertebrates;
- Hazel dormouse;
- Common reptiles;
- Breeding birds;
- Invasive plant species.

Provisional mitigation for protected sites, habitats, and species above which may use the application site has been proposed. This includes retention of semi-natural broadleaved woodland and scattered trees where possible, or compensation through creating habitats of similar size and structure within the application site if they cannot be retained. An assessment with regards to recreational impacts on a number of SINC's has also been made.

Surveys for the following may be required to support a planning application:

- Bats – Preliminary Ground Level Roost Assessment

Opportunities for ecological enhancement are set out in Section 5 of this report.

1 INTRODUCTION

1.1 Terms of Reference

1.1.1 Wardell Armstrong LLP (WA) was commissioned by Statkraft UK Ltd to carry out a Preliminary Ecological Appraisal (PEA), on an area of land (hereafter referred to as the ‘application site’), constituting an area adjacent to the Swansea North Substation, Llangyfelach SA5 7DU. The main area of the development site is centred on approximate National Grid reference SN 65355 01143. The location of the application site is shown on Drawing ST19905-023 (Site Location Plan).

1.1.2 This report has been produced with reference to current guidelines for preliminary ecological appraisal (Chartered Institute of Ecology and Environmental Management (CIEEM, 2017)) and British Standard BS 42020:2013 (BSI, 2013) which involves the evaluation of potential ecological constraints based on UK Habitat Classification (UKHabs) survey data (UK Habitat Classification (Professional Edition) and background desk study.

1.2 Background

1.2.1 Planning permission reference “2021/0163/FUL” was approved in June 2021 for the construction of a Greener Grid Park comprising energy storage and grid balancing equipment, including change of use from agricultural grazing land, along with associated infrastructure, landscaping and access track | Land West Of Rhydybandy Road Morriston Swansea. A previous PEA report (PEAR) for the site was submitted by Arcus in 2021.

1.2.2 A PEAR for the Minor Mineral Amendments (MMA) application was submitted by WA in December 2022.

1.2.3 Previous application documents relevant to this report are provided in Appendix 1.

1.3 Scope of Report

1.3.1 The purpose of the PEA is to satisfy the requirements of Planning Policy Wales 2021 and identify the likely presence of ecological receptors within or near the site that could be subject to adverse effects arising from the proposed development. Certain species, habitats and nature conservation sites receive legislative protection which are detailed fully within Appendix 2.

1.3.2 This report also seeks to identify any requirement for further specialist survey where the initial assessment cannot be relied upon to adequately determine presence or

reliably infer absence of protected species/taxa. An indicative assessment of potential adverse effects is provided, although this is not a substitute for full Ecological Impact Assessment (CIEEM, 2018 updated 2022) which may be required to fully inform any subsequent planning application along with additional surveys and assessments.

1.3.3 Provisional mitigations measures and enhancement opportunities are also discussed, where appropriate

1.4 Site Context

1.4.1 The application site is approximately 6.24ha and consists predominantly of developed land sealed surface in the form of an access road, managed grassland, and broadleaved woodland. Other habitats include scrub, scattered trees, streams, and ditches.

1.4.2 The surrounding habitat includes a pastoral landscape with areas of broadleaved woodland to the north west, south, and north east of the site. The building associated with the adjacent power grid station is located directly to the north west of the application site.

1.5 Description of Development

1.5.1 The development includes the construction and operation of a Greener Grid Park Facility comprising synchronous compensators, transformers, generators and ancillary plant, underground electricity ducting and/or cabling to connect to the existing substation and associated hard and soft landscaping.

1.5.2 The site boundary (6.24 ha) and layout approved under Planning permission reference 2021/0163/FUL is provided In Appendix 3 –20221205 Swansea Entire Site Layout Rev I @A3.

2 METHODOLOGY

2.1 Desk Study

2.1.1 The desk study was informed by a review of available information provided by Aderyn (Local Environmental Records Centre) Wales Biodiversity Information and Reporting Database, via South East Wales Biodiversity Records Centre Limited (SEWBReC), in November 2022 for a 2km search radius from the application site boundary. Satellite and Ordnance Survey (OS) mapping was also used to gain contextual habitat information and identify aquatic features within 500m of the site.

2.1.2 Specific information was sought for:

- Statutory designated sites;
- Locally designated (non-statutory) sites;
- Legally protected species;
- Section 7 (S.7) Habitats and Species of Principal Importance¹;
- Ancient woodlands²; and
- Invasive species (covered by UK legislation).

2.1.3 The Natural Resources Wales Site Checker³ website and the Multi Agency Geographic Information for the Countryside (MAGIC) website⁴ were utilised to gather data on the National Site Network Sites within 10km of the application site boundary.

2.1.4 For brevity, of the species information extracted, nationally protected species to those of S.7 have been included from the last 10 years. Nonetheless, all records beyond this age have been considered on a species-by-species basis and included where they give context to key species that may use the application site or adjacent but could be under recorded.

¹ Species or habitats of principal importance for the conservation of biodiversity listed on Section 7 (S.7) of the Environment Wales Act 2016

² As defined by Natural England in their Inventory of Ancient Woodlands

http://www.gis.naturalengland.org.uk/pubs/gis/tech_aw.htm

³ <https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/protected-areas-of-land-and-seas/find-protected-areas-of-land-and-sea/?lang=en>

⁴ <https://magic.defra.gov.uk/> (Accessed January 2023)

2.2 Extended UK Habitat Classification (UKHabs) Survey

- 2.2.1 An Extended UKHabs survey of the survey area (encompassing the application site boundary and landownership boundary) was undertaken on 6th December 2022, broadly following the ‘UK Habitat Classification’ methodology as set out in the user manual (Panks et al., 2022) and each of the main habitats were classified to the relevant criteria including vegetation composition expressed according to the DAFOR⁵ system. The survey was carried out by an experienced ecologist from WA.
- 2.2.2 An additional UKHabs survey was conducted on 19th January 2023, to cover areas of habitat that were inaccessible in 2022.
- 2.2.3 UKHab classification codes are shown in brackets after the habitat description. Details on the secondary codes used to provide further detail and context to habitats as part of the habitat assessment. A full list of secondary codes used for habitats within the site can be found in Table 2.
- 2.2.4 The presence of a legally protected species is a material consideration for a local planning authority dealing with a planning application for any development that would be likely to result in harm to the species or its habitat therefore, preliminary investigations were undertaken during the UKHabs survey in respect of the potential presence of a legally protected species and S.7 species.
- 2.2.4 Habitats are mapped on Drawing Number ST19905-024 (UKhab Habitat Plan). Target notes (TNs), provided in Appendix 4, are used to highlight features of ecological interest. TN locations are also shown on the Habitat Plan.
- 2.2.5 A separate waterbody location plan, showing waterbodies located within 500m of the application site is provided on Drawing Number ST19905-025 (Waterbody Location Plan).

2.3 Nomenclature

- 2.3.1 Vascular plant names follow ‘*New Flora of the British Isles*’ (Stace, 2019) with vernacular names as provided in the Botanical Society of the British Isles website (BSBI, 2013)⁶. The common and scientific name of species/taxa is provided when first mentioned in the text, with only the vernacular name referred to thereafter.

⁵ D – Dominant, A – Abundant, F – Frequent, O – Occasional, R – Rare.

⁶ <http://rbg-web2.rbge.org.uk/BSBI/intro.php>

2.4 Assessment Limitations

- 2.4.1 Ecological surveys are limited by factors that affect the presence of plants and animals such as time of year, weather, migration patterns and behaviour. The survey was undertaken in December and January, therefore represents a sub-optimal sample of ecological evidence present for that date/season (the optimum recommended period for habitat surveys is April to September). The report is not designed, nor is it required to present a complete inventory of flora/fauna however the UKHabs survey still provides useful data on broad habitat types.
- 2.4.2 The absence of desk study records cannot be relied upon to determine absence of a particular species/habitat. Often, the absence of records is a result of under-recording within the given search area.
- 2.4.3 Several areas within the woodland were inaccessible due to health and safety concerns (stream banksides) and dense scrub. Consideration has however been given to these areas for potential ecological constraints in Section 3 and 4, in line with the habitats identified. This should overcome the limitation to survey access.

2.5 Quality Assurance & Environmental Management

- 2.5.1 The surveys and assessments have been overseen by and the report checked and verified by a full member of CIEEM, who is bound by its code of professional conduct. All surveys and assessments have been undertaken with reference to the recommendations given in BS 42020, and as stated within specialist guidance, as appropriate and referenced separately.

3 RESULTS AND EVALUATION

3.1 Statutory and Non-Statutory Designated Sites

- 3.1.1 Desk study results for designated sites of national or local importance for nature conservation within 2km of the search radius are evaluated in Table 1, below. Table 1 also includes sites designated for their international importance for nature conservation up to 10km around the application site.
- 3.1.2 Sites which are considered potentially sensitive to proposed works by virtue of the sensitivity of supported species or habitat assemblages, the distance/ecological connectivity to the site and the nature of the perceived impacts are highlighted in **bold text** and are discussed in the final sections of the report.
- 3.1.3 The location of all statutory and non-statutory nature conservation designations within the 2km search radius are shown on the plan provided by Aderyn via SEWBRcC in Appendix 5.
- 3.1.4 Sites for which potential adverse effects are not anticipated are excluded from further assessment.

Table 1: Designated Sites Evaluation.			
Site Name and Status⁷	Reason for Designation	Approximate Distance and Location from the site	Potential Adverse Effects?
Statutory Designations			
Carmarthen Bay and Estuaries European Marine Site (EMS), comprising Burry Inlet SPA and Carmarthen Bay and Estuaries SAC	The SPA and Ramsar is designated for its important over wintering and waterfowl populations, at levels of international importance. The SAC is designated for Annex 1 Habitats including sandbanks, estuaries, mudflats and sandflats, Atlantic salt meadows and for Annex II species including Twaite shad, sea lamprey, river lamprey, allis shad and otter.	SAC 7km west, 8.5km south west.	Hydrological link from site to these international designations. Potential adverse effect on features of the Burry Inlet SPA and Ramsar Site and Carmarthen Bay and Estuaries SAC (and its conservation objectives) from changes in water quality through construction and operational impacts which could enter local watercourses. However due to distance of the proposed development from the EMS is such that it is unlikely that the development will result in significant effects on the water quality of Burry Inlet SPA and Ramsar Site and Carmarthen Bay and Estuaries SAC.

⁷ **SAC**- Special Area of Conservation; **SSSI** - Site of Special Scientific Interest, **LNR** – Local Nature Reserve, **SINC** - Site of Importance for Nature Conservation, **LWS** – Local Wildlife Site

Table 1: Designated Sites Evaluation.			
Site Name and Status⁷	Reason for Designation	Approximate Distance and Location from the site	Potential Adverse Effects?
Nant y Crimp SSSI	Wet pastures, species-rich neutral grasslands, and semi-natural woodland as well as associated scrub, which are host to several uncommon plant species. Additionally, there is a colony of marsh fritillary <i>Euphydryas aurinia</i> butterfly at the site, which is a declining species. ⁸	1.4km NW	No - Due to distance and lack of hydrological connectivity no potential adverse impacts are expected during and post development.
Non-Statutory designations			
Cefn Forest Stream SINC	Good assemblage of ancient woodland indicator species. Breeding/overwintering raven <i>Corvus corax</i> and Eurasian woodcock <i>Scolopax rusticola</i>, and foraging bats <i>Vespertilionidae spp.</i>	0.4km SW	Yes – Without mitigation, potential negative effects from noise pollution and air quality impacts during and post development.
Cilfaen SINC	Wet woodland and woodland containing ancient woodland assemblage, and purple moor grass <i>Molinia caerulea</i> and rush <i>Juncaecae spp</i> pasture habitat.	1.1km N	No – no significant direct or indirect effects anticipated due to the distance from the application site.
Cwn Rhydyceirw to Birchgrove Railway SINC	Continuous semi-natural linear vegetation.	1.8km SE	No – no significant direct or indirect effects anticipated due to the distance from site.
Felindre Grasslands SINC	Wet woodland and lowland mixed deciduous woodland, purple moor grass <i>Molinia caerulea</i> and rush pasture <i>Juncaecae spp.</i> and scrub habitats.	Adjacent to western boundary of the site.	Yes – Without mitigation, potential negative effects from dust impacts during construction.

⁸ <http://citations.lercwales.org.uk/sssi/164.pdf>

Table 1: Designated Sites Evaluation.			
Site Name and Status⁷	Reason for Designation	Approximate Distance and Location from the site	Potential Adverse Effects?
Llangyfelach Common SINC	Common cotton grass <i>Eriophorum angustifolium</i> , ragged-robin <i>Silene flos-cuculi</i> , western gorse <i>Ulex gallii</i> , various orchid species <i>Orchidaceae spp.</i> , tormentil <i>Potentilla erecta</i> , and whorled caraway <i>Carum verticillatum</i> are present, along with adder <i>Vipera berus</i> , common lizard <i>Vivaparous lizard</i> , and slow worm <i>Anguis fragilis</i> .	0.5km S	Yes – Without mitigation, potential negative effects dust impacts during construction and if hydrologically connected to the watercourse on site.
Llangyfelach Golf Course & Surrounds SINC	No information available	1.5km S	No – Limited information for this SINC is available, however it is unlikely significant direct or indirect effects occur due to the distance from the site.
Llety-Morfil SINC	Wet and ancient semi-natural woodland, purple moor grass <i>Molina caerulea</i> and rush <i>Juncaecae spp.</i> pasture, and scrub habitats.	Location not provided by Aderyn	Possible – Potential adverse effects are difficult to assess due to limited information available for this site.
Lougher to Penllergaer Railwayline SINC	No information available.	1.9km NW	No – Limited information for this SINC is available, however it is unlikely significant direct or indirect effects occur due to the distance from the site.
Lower Lliw Reservoir SINC	No information available.	1.6km N	No – Limited information for this SINC is available, however it is unlikely significant direct or indirect effects occur due to the distance from the site.
M4 Corridor SINC	Scrub and continuous semi-natural linear vegetation.	1.3km W	No – No significant direct or indirect effects anticipated due to the distance from site.

Table 1: Designated Sites Evaluation.			
Site Name and Status⁷	Reason for Designation	Approximate Distance and Location from the site	Potential Adverse Effects?
Middle Llan SINC	Watercourse habitat.	0.3km S	Yes – Without mitigation, potential negative effects from reduced water quality during construction if hydrologically connected to the watercourse on site..
Middle Lliw SINC	Ancient woodland, purple moor grass <i>Molina caerulea</i> and rush <i>Juncaecae spp.</i> pasture, bracken, scrub, lowland dry acid grassland, gorse, watercourses, and neutral grassland.	0.9km N	No – No significant direct or indirect effects anticipated due to the distance from site.
Mynydd Bach, Llangyfelach SINC	Woodland scrub, purple moor grass <i>Molina caerulea</i> and rush <i>Juncaecae spp.</i> pasture, and water course habitats.	1.6km S	Yes Without mitigation, potential negative effects from reduced water quality during construction if hydrologically connected to the watercourse on site.
Mynydd Gelli-wasted SINC	Woodland, scrub, heath, purple moor grass <i>Molina caerulea</i> and rush <i>Juncaecae spp.</i> pasture habitats.	1.6km E	No – No significant direct or indirect effects anticipated due to the distance from site.
Pant Lasau SINC	Woodland, scrub, purple moor grass <i>Molina caerulea</i> and rush <i>Juncaecae spp.</i> pasture, and water course habitats.	0.3km S	Yes – Without mitigation, potential negative effects dust impacts during construction and if hydrologically connected to the watercourse on site. .
Penllergaer Forest SINC	Range of woodland types. Purple moor grass <i>Molina caerulea</i> and rush <i>Juncaecae spp.</i> pasture, reedbeds, watercourses.	0.6km	Yes – Without mitigation, potential negative effects dust impacts during construction and if hydrologically connected to the watercourse on site.

Table 1: Designated Sites Evaluation.			
Site Name and Status⁷	Reason for Designation	Approximate Distance and Location from the site	Potential Adverse Effects?
Penllegr to Llangelech Tunnel Railway Line SINC	Range of woodland types. Purple moor grass <i>Molina caerulea</i> and rush <i>Juncaecae spp.</i> pasture, scrub and watercourses.	1km SW	Yes – Without mitigation, potential negative effects from noise pollution and air quality impacts during and post development.
Rhos Fawr SINC	Woodland containing assemblage of ancient woodland indicator species, scrub, purple moor grass <i>Molina caerulea</i> and rush <i>Juncaecae spp.</i> pasture, neutral grassland habitats.	1.1km N	No – No significant direct or indirect effects anticipated due to the distance from site.
Rhyd-Y-Pandy Valley and Grasslands SINC	Wet woodland and woodland with assemblage of ancient woodland indicator species, scrub, purple moor grass <i>Molina caerulea</i> and rush <i>Juncaecae spp.</i> pasture, lowland meadow, neutral grassland, scrub, reed bed and water course habitats.	0.7km E	No – No significant direct or indirect effects anticipated due to the distance from site.
Valley Wood SINC	No information available.	1.9km SW	No – Limited information for this SINC is available, however it is unlikely significant direct or indirect effects occur due to the distance from the site.
Waun Garn Wen SINC	Purple moor grass <i>Molina caerulea</i> and rush <i>Juncaecae spp.</i> pasture, wet woodland, scrub, and watercourse habitats.	0.2km N	Yes – Without mitigation, potential negative effects dust impacts during construction.

3.2 Ancient Woodland

- 3.2.1 There are several areas of ancient woodland within a 2km radius of the application site.
- 3.2.2 In the absence of mitigation, the proposed works are considered to potentially have an adverse effect on the area of ancient woodland in close proximity to the application site due to an increase in dust during construction.
- 3.2.3 Semi-natural broadleaved woodland was also identified within the application site boundary and are discussed in Table 2 below.

3.3 Habitats

- 3.3.1 All habitats within the site are described in Table 2, together with an indication of their S.7 status, according to the definitions given in ‘UK BAP Priority Habitat Descriptions’ (Anon 2008, updated 2010). The table also provides an evaluation of the sensitivity of the habitats relative to the proposed works.
- 3.3.2 Habitats which have the potential to be subject to adverse effects are indicated with **bold** text and are discussed in the latter sections of the report. Habitats for which potential adverse effects are not anticipated are excluded from further assessment.
- 3.3.3 The location and extent of habitats is shown on Drawing Number ST19905-024 (UKHab Habitat Plan).
- 3.3.4 A review of OS data has identified a large number of watercourses within 500m of the site, as shown on Drawing Number ST19905-025 (Waterbody Location Plan). The majority of these are assumed to be flowing ditches and streams with the exception of the River Llan 300m south east of the application site boundary.



Table 2. Habitat Description and Evaluation				
UK Habitat Classification Habitats (* = secondary codes)			UK BAP / Section 7	Potential Adverse Effects?
Primary Habitats				
<p>Modified grassland g4,73,16</p> <p>Makes up the majority of habitat within the application site, dominated by perennial rye grass <i>Lolium perenne</i> (D) with frequent white clover <i>Trifolium repens</i> (F) and occasional creeping buttercup <i>Ranunculus repens</i> (O). An area of bare ground and tall herb is present represented by secondary codes 73 and 16 respectively.</p>			X	No – This habitat is common and widespread and is not considered to be of significant conservation value.
<p>Holcus-Juncus Neutral Grassland g3c8</p> <p>Present within the site margins, ditch banks, and the north-eastern area of the main infrastructure area of the application site.</p> <p>Species present include – Perennial rye grass (A), Yorkshire fog <i>Holcus lanatus</i> (F), soft rush <i>Juncus effusus</i> (F), white clover (O), daisy (O), dandelion <i>Bellis perennis</i> (O), broad-leaved dock <i>Rumex obtusifolius</i> (O), creeping buttercup (O).</p>			X	Yes - The current development proposal will result in the direct loss of this habitat. See table 3 re bats, bird, hedgehog, reptiles and invertebrates.

Table 2. Habitat Description and Evaluation			
UK Habitat Classification Habitats (* = secondary codes)		UK BAP / Section 7	Potential Adverse Effects?
Dense scrub h3d,69,191,11, Bramble <i>Rubus fruticosus</i> agg., dominated scrub with adjacent line of trees, fence and ditch.		X	No – This habitat is common and widespread and is not considered to be of significant conservation value. See Table 3 re common reptiles, hedgehog and invertebrates.

Table 2. Habitat Description and Evaluation		
UK Habitat Classification Habitats (* = secondary codes)	UK BAP / Section 7	Potential Adverse Effects?
<p>Other woodland, broadleaved – w1g, 10</p> <p>Broadleaved woodland is present along the proposed access route to the site infrastructure with various ages of trees ranging from sapling to mature. An area of scattered bramble and hawthorn <i>Crataegus monogyna</i> scrub is present at the understory.</p> <p>Species present include – pedunculate oak <i>Quercus robur</i>, holly <i>Ilex aquifolium</i>, hazel <i>Corylus avellana</i>, hawthorn, willow <i>Salix spp.</i>, alder <i>Alnus glutinosa</i>, and ash <i>Fraxinus excelsior</i>.</p>		<p>✓</p> <p>Yes – The development will lead to the loss of this habitat.</p> <p>Please also see Table 3 re nesting birds, common reptiles, hedgehogs, badgers, dormice, and bats</p>



Table 2. Habitat Description and Evaluation				
UK Habitat Classification Habitats (* = secondary codes)			UK BAP / Section 7	Potential Adverse Effects?
Developed land sealed surface - u1b, Forms the existing access road along the west of the site.				X No – This habitat is common and widespread and is not considered to be of significant conservation value
Secondary codes*				
Bare ground - 73				X No – This habitat is common and widespread and is not considered to be of significant conservation value.

Table 2. Habitat Description and Evaluation		
UK Habitat Classification Habitats (* = secondary codes)	UK BAP / Section 7	Potential Adverse Effects?
Fence - 69 	X	No – This habitat is common and widespread and is not considered to be of significant conservation value.

Table 2. Habitat Description and Evaluation		UK BAP / Section 7	Potential Adverse Effects?
UK Habitat Classification Habitats (* = secondary codes)			
Ditch - 191		X	<p>Possible – Individually waterfilled ditches provide limited ecological value, however these ditches provided connectivity throughout the application site and to additional habitats off site. These ditches could be used as commuting corridors for a number of species particularly otter and amphibians. Water filled ditches can lead to the spread of invasive species if disturbed.</p>



Table 2. Habitat Description and Evaluation		
UK Habitat Classification Habitats (* = secondary codes)	UK BAP / Section 7	Potential Adverse Effects?
Scattered line of trees - 11		<p>X</p> <p>No – Individual trees have no ecological conservation value. However, these trees do provide many ecological benefits including providing foraging and refuge habitat for a variety of fauna species (See Table 3).</p> <p>Furthermore, although the individual trees on Site are of limited intrinsic ecological value, it would be necessary to undertake a BS5837 Tree Survey in the event that their removal, damage, or incursion into root zone is unavoidable.</p>

Table 2. Habitat Description and Evaluation				
UK Habitat Classification Habitats (* = secondary codes)			UK BAP / Section 7	Potential Adverse Effects?
Tall herb - 16			X	No – This habitat is common and widespread and is not considered to be of significant conservation value.

Table 2. Habitat Description and Evaluation				
UK Habitat Classification Habitats (* = secondary codes)			UK BAP / Section 7	Potential Adverse Effects?
Scattered scrub - 10			X	No – This habitat is common and widespread and is not considered to be of significant conservation value.
Car Park - 89			X	No – This habitat is common and widespread and is not considered to be of significant conservation value.

Table 2. Habitat Description and Evaluation		
UK Habitat Classification Habitats (* = secondary codes)	UK BAP / Section 7	Potential Adverse Effects?
Road - 111 	X	No – This habitat is common and widespread and is not considered to be of significant conservation value.
<p><i>* Secondary codes are used to provide further detail and context to primary habitats as part of the habitat assessment.</i></p>		

3.4 Target notes

3.4.1 All TN are discussed further in Appendix 4 given the range of legislative constraints that apply. A brief description is given below. The location of TNs are shown on Drawing ST19905-024 (UKHab Habitat Plan).

- TN 1 – Log piles suitable for reptile hibernacula
- TN2 – A vegetated south facing bund
- TN3 – Mammal burrow

3.5 Species

- 3.5.1 Protected and S.7 species are evaluated to identify potential ecological constraints in Table 3 below, based on the desk study records, presence, extent and viability of supporting habitat, ecological connectivity and perceived nature and extent of effects.
- 3.5.2 Species which have the potential to be subject to adverse effects are indicated with **bold text** and are discussed in the latter sections of the report. Species/taxa for which potential adverse effects are not anticipated are excluded from further assessment.

Table 3: Protected Species Evaluation				
Species/taxa	Desk Study	Status ⁹	Supporting Habitat	Potential Adverse Effect?
Bats (Chiroptera)	<p>There are no recorded roosts within 2km of the application site within the last 10 years.</p> <p>In total, there are 244 incidental records of bats species within 2km of the application site, within the last 25 years.</p> <p>The nearest record is approximately 0.11km west of the application site, recorded in 1997. The most recent record was 2022.</p> <p>Recorded species are; 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>), natterer’s bat (<i>Myotis nattereri</i>), noctule bat (<i>Nyctalus noctula</i>), soprano pipistrelle</p>	<p>CHSR (2), WCA5 (2), Bern, S.7</p>	<p>Yes – The mature trees within the application site have the potential to support roosting bats.</p> <p>The grassland and scrub habitat on the application site have the potential to support foraging and commuting bats with connectivity to suitable habitats off-site.</p>	<p>Yes – If mature trees or flight lines potentially used for roosting / foraging / commuting are impacted upon by the development proposals.</p> <p>Consideration should also be given to the effects of lighting.</p>

⁹ **CHSR** – Protected under Conservation of Habitats and Species Regulations 2017 (as amended) schedule in brackets, **WCA** – Fully protected under Section 9 of the Wildlife and Countryside Act (as amended) schedule in brackets, **WCA5** – Protected under Section 9, Part 5 of the Wildlife and Countryside Act only, **BA** – Protection of Badgers Act, **LBAP** – Local BAP, **Section 7** – Environment (Wales) Act, 2016, **Bern** – The Bern Convention on the Conservation of European Wildlife and Natural Habitats, **UKBR (RSPB)** - RSPB UK Red listed birds, **UKBAm (RSPB)** - RSPB UK Amber listed birds and **LBAP** – Local Biodiversity Action Plan

Table 3: Protected Species Evaluation				
Species/taxa	Desk Study	Status ⁹	Supporting Habitat	Potential Adverse Effect?
	<i>(Pipistrellus pygmaeus)</i> , and whiskered bat <i>(Myotis mystacinus)</i> .			
Badger <i>Meles meles</i>	Yes – 102 records of badger within 2km of the application site. The nearest record is approximately 0.04km to the west of the application site, recorded in 1998. The most recent record was in 2020.	BA	No – No evidence of badger setts or associated activity was observed within the application site. However, the woodland habitat has suitable potential for sett creation and foraging badgers. A mammal burrow was found (TN3), however it was too small for badger.	Yes – The woodland habitat on site will be impacted by the development proposals. Badgers in the area could be directly harmed or disturbed by the development.
Brown hare <i>Lepus europaeus</i>	No records within the past 10 years.	S.7	No – The habitats within the site are unlikely to support brown hare.	No – The habitats within the site are considered unlikely to support this species.
European hedgehog <i>Erinaceus europaeus</i>	Yes – 29 records of hedgehog within 2km of the application site from the past 20 years. The nearest record is approximately 0.08km to the east of the application site, recorded in 2020. The most recent record was in 2021.	S.7, Bern	Yes – Grassland, scrub and woodland habitats within the application site have the potential to support hedgehog.	Yes – Potential for harm if present at the time of works.
Eurasian otter <i>Lutra lutra</i>	Yes – 39 records of otter within 2km of the application site within the last 30 years. The nearest record was 0.62km to the east of the site. The most recent record was in 2017.	CHSR (2), WCA5, S.7	Yes – The waterbodies on site have the potential to support commuting otters. The application site and surrounding area has considerable connectivity through a number of	Yes - Potential for harm if present at the time of works. Pollution or direct loss of the streams/ditches on site could negatively impact this species.

Table 3: Protected Species Evaluation				
Species/taxa	Desk Study	Status ⁹	Supporting Habitat	Potential Adverse Effect?
			ditches and streams. The River Llan is approximately 300m south east of the application site which could also have the potential to support otter.	
Hazel Dormouse <i>Muscardinus avellanarius</i>	One record 1.8km from the site recorded in 2021.	CHSR (2), WCA5, S.7	Yes – The site contains key food plants that dormice require (hazel, bramble etc.) mainly within the area of woodland. The woodland on site has a dense scrub understory which would be suitable for dormice. The site provides connectivity to further areas of suitable broadleaved woodland.	Yes – Vegetation clearance and direct habitat loss have the potential to harm/disturb dormice, if present. The removal of woodland on site would disrupt a commuting corridor for this species.
Water vole <i>Arvicola amphibius</i>	No recent records.	WCA5, S.7	No – The habitats within the application site are considered unlikely to support water vole.	No – The habitats within the site are considered unlikely to support this species.
White-clawed Crayfish <i>Austropotamo bius pallipes</i>	No records across the whole desk study.	WCA5, S.7	No – The habitats within the application site are considered unlikely to support white-clawed crayfish.	No – The habitats within the site are considered unlikely to support this species.
Common reptiles	Yes – four species of common reptile have been recorded within 2km of the application site in the past 30 years: <ul style="list-style-type: none">- Adder (<i>Vipera berus</i>): - eight records within 2km of the site. The nearest	WCA5, Bern, S.7	Yes – The scrub and grassland habitat within the site has the potential to provide suitable habitat for common reptiles. Hibernacula, that have the potential to support reptiles, are present within the application site, shown	Yes – Vegetation clearance and direct habitat loss have the potential to harm/disturb reptiles, if present.

Table 3: Protected Species Evaluation				
Species/taxa	Desk Study	Status ⁹	Supporting Habitat	Potential Adverse Effect?
	<p>record was 0.15km west of the site. The most recent record was in 2020.</p> <ul style="list-style-type: none"> - Common lizard (<i>Zootoca vivipara</i>): - 20 records within 2km of the site. The nearest record was 0.20km south of the site. The most recent record was in 2020. - Grass snake (<i>Natrix helvetica</i>): - seven records within 2km of the site. Nearest record was 0.7km west of the site, recorded in 1998. The most recent record was in 2020. - Slow worm (<i>Anguis fragilis</i>): - five records within 2km of the site. The nearest record was 0.47km west of the site. The most recent record was in 2020. 		<p>on Drawing Number ST19905-024 (UKHab Habitat Plan) as TN1. Further details of target notes TN1-TN2 are shown in Appendix 4 – Target notes.</p> <p>The woodland within and adjacent to the site has the potential to provide suitable hibernacula for reptiles.</p>	
Great Crested Newt (GCN) <i>Triturus cristatus</i>	No recent or historical records.	CHSR (2), WCA5, S.7	<p>Yes – The terrestrial habitats within the site have potential to support GCN.</p> <p>Several waterbodies are located within 500m of the application site as shown on Drawing Number ST19905-025 (Waterbody Location Plan). These</p>	Yes – risk of harm, disturbance and habitat loss if GCN are present in the waterbodies within 500m of the application site.

Table 3: Protected Species Evaluation				
Species/taxa	Desk Study	Status ⁹	Supporting Habitat	Potential Adverse Effect?
			waterbodies provide connectivity throughout the application site and into the wider area.	
Other amphibians	<p>Yes – three species of common amphibian have been recorded within 2km of the site</p> <ul style="list-style-type: none"> - Common toad (<i>Bufo Bufo</i>): - ten records within 2km of the site. Nearest record was 0.76km south of the site, recorded in 1998. The most recent record was in 2022. - Common frog (<i>Rana tempraria</i>): - 38 records within 2km of the site. Nearest record was 0.2km south of the site, recorded in 2009. The most recent record was in 2021. - Palmate newt (<i>Lissotriton helveticus</i>): - 20 records within 2km of the site. The nearest record was 0.76km south of the site, recorded in 1998. The most recent record was in 2022. 	WCA (sale only), Bern, S.7 (common toad)	<p>Yes – The terrestrial habitats within the application site have potential to support amphibians.</p> <p>Several waterbodies are located within 500m of the application site, refer to Drawing Number ST19905-025 (Waterbody Location Plan). These waterbodies provide connectivity throughout the site and into the wider area.</p>	Yes – risk of harm, disturbance and habitat loss if present in the waterbodies within 500m of the site.
Birds	Yes - Numerous bird records within 2km search area including WCA Schedule 1 listed species, and RSPB UK Red and amber listed birds of conservation concern. Of which, a	WCA1, Bern, S.7	Yes – Foraging and breeding habitat provided in grassland, line of trees and broadleaved woodland within the site.	Yes – Loss of trees and scrub has the potential to significantly affect breeding birds if present at the time of removal.

Table 3: Protected Species Evaluation				
Species/taxa	Desk Study	Status ⁹	Supporting Habitat	Potential Adverse Effect?
	<p>number occur within 100-200m of the application site boundary. These include grasshopper warbler, lesser spotted woodpecker, redwing and ring ouzel which are red listed, and Eurasian bullfinch, and dunnock which are amber listed.</p> <p>Barn owl <i>Tyto alba</i> were also recorded within the desk study (3 records with 2km, in the last 10 years). The nearest and most recent record is 0.9km south-east recorded in 2019.</p>			
Invertebrates	<p>Yes – numerous records within 2km of the site for species listed in Section 7 including but not limited to:, marsh fritillary <i>Euphydryas aurinia</i>, small heath <i>Coenonympha pamphilus</i>, rosy minor <i>Litologia literosa</i>, dot moth <i>Melanchra persicariae</i>, small phoenix <i>Ecliptopera silaceata</i> and shoulder-striped Wainscot <i>Leucania comma</i>.</p>	LBAP, S.7	<p>Yes – Habitats including scrub, woodland and grassland are considered suitable to support invertebrates. Although suitable habitat and/or food plants are available for some of these species, the limited habitat, abundance, and distribution of suitable plant species within the site means that significant populations of these species are unlikely to occur.</p>	<p>Yes – Loss of suitable habitat such as scrub woodland and grassland could potentially negatively impact S.7 invertebrate species, if present.</p>

Table 3: Protected Species Evaluation				
Species/taxa	Desk Study	Status⁹	Supporting Habitat	Potential Adverse Effect?
Protected and Notable Plant Species	Yes – Vascular plant species recorded within 2km of the site, including but not limited to: <ul style="list-style-type: none"> - Bluebell <i>Hyacinthoides non-scripta</i>. 	WCA (8), BAP, S.7	No protected plant species under section 8 of the WCA were identified during the Habitat Survey	No – unless found to be present in the future.
Invasive non-native plant species	Yes - Various records within 2km search area for species, including but not limited to; <ul style="list-style-type: none"> - Japanese knotweed (<i>Fallopia japonica</i>) - <i>Rhododendron ponticum</i> - <i>Cotoneaster horizontalis</i> - Butterfly bush (<i>Buddleja davidii</i>) 	WCA (9)	No invasive non-native plant species under section 9 of the WCA were identified during the Habitat Survey. However, invasive Himalayan balsam <i>impatiens glandulifera</i> plant species was identified during the habitat survey conducted by Arcus in 2020. The waterfilled ditches on site could lead to the spread of this species.	Yes – Disruption of the waterfilled ditch could lead to the spread of Himalayan balsam if present at the time of development. The seed pods could travel down stream and contaminate areas off site.

4 DISCUSSION AND RECOMMENDATIONS

4.1.1 The following habitats, and species (receptors) have been evaluated as being subject to potential adverse effects;

- Statutory and non-statutory designated sites;
- S.7 Habitat: Broadleaved woodland;
- Amphibians (including great crested newt);
- Badger;
- Bats;
- Birds;
- Otter;
- Common reptiles;
- Invertebrates;
- Dormouse;
- European hedgehog; and
- Invasive plant species.

4.1.2 Potential effects, requirements for further survey, and proposed mitigation/compensation are discussed below for each of the identified ecological receptors above.

4.2 Non-Statutory Designated Sites

SINC's (Cefn Forest Stream SINC, Felindre Grasslands SINC, Llangyfelach Common SINC, Middle Llan SINC, Mynydd Bach, Llangyfelach SINC, Pant Lasau SINC, Penllergaer Forest SINC, Penllregar to Llangeflech Tunnel Railway Line SINC, Waun Garn Wen SINC)

4.2.1 These SINC's are located in close proximity to the application site. Potential effects on habitats within this SINC could arise from construction activities such as an increase in dust or noise.

- 4.2.2 It is recommended that best construction practices are adopted and undertaken in accordance with an appropriate dust or noise mitigation plan to prevent significant adverse effects on the qualifying features of these designated sites.
- 4.2.3 Due to the large number of waterbodies leading off site It is recommended that appropriate water pollution prevention measures are implemented during construction to prevent damage and pollution to the nearby SINC's and those downstream of the application site. This can be achieved through following CIRIA's Environmental Good Practice (2015) guidance with regards to the prevention of environmental pollution, the degradation of the water, environment and associated habitats.
- 4.2.4 The above measures should be provided in a Construction Environmental Method Statement which is approved by the Local Planning Authority prior to commencement of any site works, as required under Condition 3 of permission 2021/0163/FUL.
- 4.2.5 As required under Condition 4 of permission 2021/0163/FUL, a sensitive lighting scheme will be required to ensure habitats created/retained for biodiversity are not indirectly degraded by light pollution and maintain dark foraging /commuting corridors for wildlife.

4.3 Habitats

Woodland/Scattered Trees

- 4.3.1 It is recommended that the proposed development retains and protects of as much of the woodland/scattered tree habitat as possible. Where habitat loss is unavoidable, any losses should be compensated for by the provision of new habitat elsewhere on site of at least equivalent length/area. Retained habitat should be protected in accordance with BS 5837:2012 – Trees, in relation to design, demolition and construction and in accordance with any Tree Protection Plans approved by the Local Authority.

Stream/Ditch

- 4.3.2 It is recommended that a suitable buffer is implemented along the stream and ditch corridors and that development works are not undertaken within a 7m buffer, to prevent significant adverse effects on this feature.

- 4.3.3 It is recommended that appropriate pollution prevention measures are implemented during construction and during the operational phases of the development where required to prevent pollution events that may affect these features.

4.4 Fauna

Badger

- 4.4.1 No evidence of badgers was identified within the application site however there are records for badger within 2km.
- 4.4.2 Prior to construction the site application site and immediate surrounds will be undertaken by the Contractor's Ecological Clerk of Works. The requirement for this will be detailed in a Construction and Environmental Management Plan (CEMP) for the proposed development. Other measures will include providing means of escape from excavations left open overnight and adhering to good construction practices with regards to chemical storage i.e., ensuring chemicals are banded and stored securely.

Bats

Bat roosts - Trees

- 4.4.3 Where the removal of trees is required, it is recommended that a Preliminary Ground Level Roost Assessment (PLGRA) is carried out to determine bat roost presence/likely absence on trees likely to be impacted upon by the proposed development.
- 4.4.4 The survey comprises an external examination of the tree(s) using high powered torches and binoculars to identify any evidence of bat activity (such as scratch marks on roost entrances, urine stains, excrement stains) or potential features (cracked limbs, woodpecker holes, lifted bark) suitable for roosting bats. Where accessible, potential roost entrances would also be subject to an endoscopic inspection to determine bat presence/likely absence.
- 4.4.5 Any features identified as having potential to support roosting bats will be categorised (high, moderate, low, negligible) in accordance with best practice guidelines (Collins, 2016) and may inform the requirements for further bat surveys (e.g. climb and inspect and/or bat dusk emergence/ dawn re-entry surveys). The requirement to conduct a PGLRA on trees to be removed during construction will be detailed within the CEMP.

In terms of long-term management of retained and planted trees, this requirement will also be specified within a Landscape and Ecological Management Plan (LEMP)

Bat activity (foraging and commuting)

- 4.4.6 Bats may potentially forage/commute along the line of trees, woodland, and scrub habitats within the application site.
- 4.4.7 It is recommended that the boundary line of trees and woodland habitats are retained and protected as part of the development proposals. Retained habitat should be protected in accordance with BS 5837:2012 Trees, in relation to design, demolition and construction and in accordance with any Tree Protection Plans approved by the Local Authority.
- 4.4.8 The proposed development has the potential to impact on foraging and commuting bats through artificial lighting. It is recommended that no lighting during construction or as part of the proposed development is located along or directed at the suitable habitat on site. Lighting levels should not be increased within the areas of suitable habitat on site.
- 4.4.9 Should lighting be permanently introduced as part of the development, it is recommended that the lighting is designed with input from an ecologist and with reference to the IJP and BCT Guidelines on Bats and Artificial Lighting (IJP & BCT, 2018).
- 4.4.10 Providing that impacts on foraging/commuting bats are avoided through the protection of boundary line of trees/scrub/woodland habitat and the implementation of a lighting strategy then activity surveys are not considered to be required.
- 4.4.11 As required under Condition 4 of permission 2021/0163/FUL, a sensitive lighting scheme will be required to ensure habitats created/retained for biodiversity are not indirectly degraded by light pollution and maintain dark foraging /commuting corridors for wildlife including bat species sensitive to artificial light.

Birds

- 4.4.12 Breeding and foraging habitat for birds is located within and adjacent to the application site including the broadleaved woodland and scrub.

4.4.13 Potential breeding and foraging habitat may be lost or disturbed by the proposed development.

4.4.14 Any vegetation clearance should be undertaken outside of bird breeding season (March to August, inclusive). If this is not possible, then areas of vegetation clearance and buildings should be checked by a suitably qualified ecologist 48 hours in advance of any affecting works for the presence of occupied nests. Any subsequent advice provided by the ecologist, as to how to accord with legislation, should be followed.

4.4.15 The above measures will be detailed in a CEMP and Landscape and Ecological Management Plan for the proposed development.

Common reptiles and amphibians

4.4.16 The habitats on site, notably the scrub and woodland have the potential to support common reptiles, providing refuge and foraging habitat. However, given the size of suitable habitats on site, the likelihood of a significant reptile population being present is considered to be low as reported in the Reptile Report dated January 2021 which accompanied application 2021/0163/FUL. Vegetation clearance and direct habitat loss have the potential to harm common reptiles if present at the time of the works, which would be an offence under the Wildlife and Countryside Act 1981 (as amended).

4.4.17 There are no records of GCN within 500m of the application site and the habitats within the survey area are considered to offer limited habitat for amphibians, including GCN with the woodland, scrub and streams being of most value. It is therefore considered unlikely that amphibians are utilising the habitats on site.

4.4.18 However, as a precaution, it is recommended that reasonable avoidance measures are implemented, under a Precautionary Working Method Statement (PWMS), to prevent harm to common reptiles and amphibians, if present.

4.4.19 The mitigation measures, methodologies, timetable and details contained within the following document approved under Condition 17 of permission 2021/0163/FUL:

- Reptile Method Statement dated January 2021.

Invertebrates

4.4.20 The habitats within the site could potentially support a range of invertebrate species including Section 7 species.

4.4.21 It is recommended that existing habitat on the peripheries of the application site are retained, protected and enhanced for invertebrates, where possible.

Hazel Dormouse

4.4.22 The woodland and dense scrub on site has limited potential to support hazel dormouse, therefore, there is potential for the proposed development to cause harm and/or disturbance to individual dormice, if present, during vegetation removal.

4.4.23 The mitigation measures, methodologies, timetable and details contained within the following document approved under Condition 17 of permission 2021/0163/FUL:

4.4.24 Hazel dormouse Non-Licensed Method Statement dated January 2021.

European Hedgehog

4.4.25 The risk of harm to hedgehogs, if present, can be reduced by the implementation of suitable reasonable avoidance measures. Such measures should include a toolbox talk, limiting night-time working, providing means of escape from excavations left open overnight, avoid the removal of suitable hibernacula during the hibernation period (November – March) and details on appropriate vegetation removal. This will be detailed in the CEMP for the proposed development.

4.4.26 Boundary treatments for the proposed development will provide hedgehog access as required under Condition 5 of permission 2021/0163/FUL.

Invasive Plant Species

4.4.27 While no invasive species were identified during the Ukhabs survey in 2022. Himalayan balsam was previously identified in 2020 along the water filled ditch on site. Himalayan balsam is listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), making it an offence to plant or otherwise cause to grow in the wild. Measures should therefore be implemented to avoid the spread of invasive species during the works, if present.

- 4.4.28 It is recommended that these species are eradicated and disposed of under the guidance of a specialist contractor. Should works proceed prior to the removal of invasive plant species protocols and bio security measures will need to be put in place to limit their spread.
- 4.4.29 A 7m buffer should be set around the plants to avoid disturbing the seedpods or accidental excavation of soil that may contain seeds or other plants.
- 4.4.30 Additional care should be taken to avoid the spreading of Himalayan balsam to onsite watercourses. Stockpiling of material suspected to contain Himalayan balsam should be kept at least 10m from any watercourse.
- 4.4.31 The requirement for its eradication should be detailed in the CEMP for the proposed development.

General

- 4.4.32 It is recommended that an update walkover survey is undertaken if 12 months has elapsed since this report to assess if there have been any significant changes to the habitats present.
- 4.4.33 Wooden planks, or another means of egress, should be placed in all excavations which are to remain open overnight. This will provide a means of escape for mammals which may enter the excavations.
- 4.4.34 Night-time work should be avoided whenever possible to minimise potential disturbance to nocturnal mammals.

5 ECOLOGICAL ENHANCEMENTS

5.1.1 In accordance with the requirements of the Planning Policy Wales (2021) and BSI 42020:2013, ecological enhancements should be proposed which will result in a net benefit for biodiversity. A separate report provides the details on Biodiversity Net Gain relevant to the full planning application.

5.1.2 The previous Landscape and Biodiversity Management Plan provided in Appendix 1 provides details of the biodiversity enhancements that will be delivered as part of the full development plan. The proposed enhancements remain the same and are summarised below:

- Log and brash piles along the northern boundary;
- Bird and bat boxes installed on two mature trees along the southern boundary;
- Existing grazing grass to be managed to increase species richness and tussocky grassland for marsh fritillary butterfly; and
- Batters (except southern slopes) seeded with fescue/bent species mix and to include suitable wildflower spp. to attract wall butterfly.

5.1.3 Further enhancements that are recommended that support local biodiversity include:

- One additional bird box along the western boundary, with a variation of design from other boxes added, such as 45mm entrance box or 32mm entrance box;
- One Schwegler 2F bat box to be installed on the southern boundary;
- Hedgerows to be planted where possible with native flora of local provenance and connected to retained habitats that link into the wider landscape;
- The design and implementation of a sensitive lighting scheme, designed in conjunction with a lighting engineer and an ecologist, to ensure that habitats created/retained for biodiversity are not indirectly degraded by light pollution;
- Implementation of a hedgehog house within the scheme for sheltering opportunities and implementation of hedgehog friendly fencing, by creating 13cm x 13cm holes, to limit fragmentation;
- Sowing of areas of open space with a diverse native wildflower seed mix would provide a foraging resource for a range of species including invertebrates and birds;

- Seed mix could include the following species; common knapweed *Centaurea nigra*, yarrow *Achillea millefolium*, red campion *Silene dioica*, meadow vetchling *Lathyrus pratensis*, meadow buttercup *Ranunculus acris*, devils bit scabious *Succisa pratensis* and bird's foot trefoil *Lotus corniculatus*.
- Provision of an additional hibernaculum for the benefit of common reptiles and amphibians;
- Provision of an additional insect hotels, wood piles / loggery would benefit invertebrates; and
- Bulb planting could also be undertaken to provide early nectar sources for invertebrates. Planting of native bluebell (*Hyacinthoides non-scripta*), cowslip (*Primula veris*), ragged robin (*Lychnis flos-cuculi*), daffodil (*Narcissus* sp.), snowdrop (*Galanthus nivalis*) and crocus (*Crocus* sp.) will provide an early nectar source for insects.

5.1.4 The measures listed above are set out in Drawing Number ST19905-022 (Ecological Enhancements Location Plan) to be created post planning consent but prior to construction. Notwithstanding, to achieve the best result, these enhancements should be 'designed-in' at an early stage.

5.1.5 Log and brush piles formed through woodland removal on site could be used to facilitate areas of enhancement for reptiles, and invertebrates.

5.1.6 The location of enhancements outlined in Drawing Number ST19905-022 (Ecological Enhancements Location Plan) are an approximate recommendation. The majority of enhancements will be suitable to be installed within the treeline habitats surrounding the site.

6 REFERENCES

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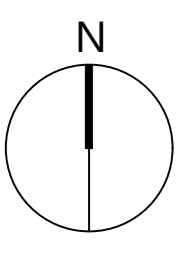
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Himalayan balsam: Public information on invasive species in Wales (gov.wales)

APPENDICES

Appendix 1
Previous application documents



PLANTING NOTES

The handling of plants to be in accordance with National Plant Specification 'Handling and Establishing Landscape Plants'. All plants and planting operations are to comply with the requirements and recommendations of all current relevant British Standard specification including but not limited to:

- BS 8545: Trees: From Nursery to Independence in the Landscape
- BS 3936-1:1992: Nursery stock: Specification for trees and shrubs
- BS 3882:2015: Specification for topsoil
- BS 4428:1989: Code of practice for general landscape operations (excluding hard surfaces) (AMD 6784)
- BS 5837: 2012 Trees in relation to design, demolition and construction. Recommendations

All planting to be carried out during appropriate climatic conditions from mid-November to mid-March. Existing topsoil and/or imported, clean/inert horticultural ameliorants from sustainable sources. Contractor to satisfy himself of measurements on site and the full extent of works before pricing.

Clearance
Cut back all grass and perennial vegetation including brambles, suckering and epicormic growth to a height of 25-50mm across site. All rubbish, debris and existing redundant infrastructure to be removed. Stone picking of all stones and debris over 25mm to be undertaken. All trees and shrubs to be retained to be protected during works in line with BS5837:2012.

Topsoil
Existing topsoil must be cultivated in accordance with BS 3882:2015 outside RPAs of existing trees. No cultivation should take place in wet/waterlogged conditions and within the RPAs of existing trees.

Trees

The hedgerow trees will be planted as whips (100-125 cm), pit planted to accommodate all the roots and provided with a supporting stake and 1.2m high tree shelter to ensure they are noticed when mechanical trimming commences.

Native Species Woodland and Shrub Mix

Plants shall be randomly mixed throughout the beds in groups of 3 or 5. Planting shall be at the specified density.

Native Species Hedgerow Mix

Hedges to comprise a double staggered row of plants 450mm apart within each row, overall 5 plants per linear metre. Species mixed throughout the hedge line in random groups of 3/5. 500mm wide trench excavated to take plants and topsoil cultivated to 450mm depth prior to application of fertiliser. All native planting shall be of local provenance.

Mulch

Hedge planting to receive 75mm depth pulverised bark mulch.

Plant position

Final position of trees and shrubs subject to confirmation of service location and approval of statutory undertakers. Allow for location of service information prior to work commencing on site.

Grass Seeding

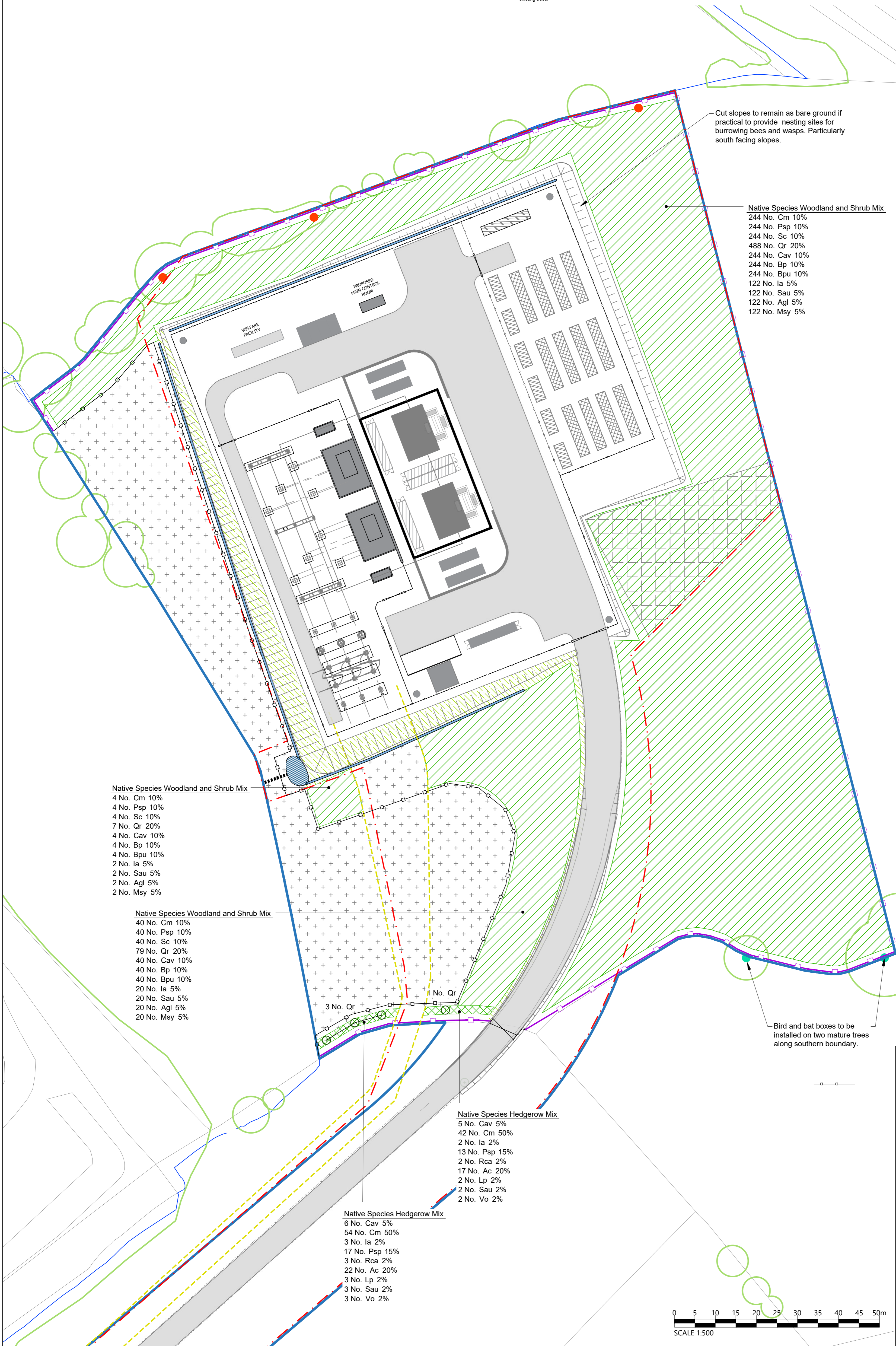
All seeding areas to be hydro-seeded with proposed grass and wildflower mix.

Planting Season

Bare-root shrubs to be planted between mid-November and mid-March dependent upon the planting season.

KEY

- Site Boundary
- Land Under Control of The Applicant
- Existing Tree/vegetation to be Retained
- Existing Ditch
- Existing Fence
- Proposed Features
 - Proposed Native Species Woodland and Shrub Mix (Approx. Total Area: 1.06ha, 0.25m²)
 - Proposed Native Species Hedgerow Mix (Approx. Total Length: 42.6m, 5/1m)
 - Proposed Hedgerow Tree
 - Existing Grazing Grass to be managed to increase species richness and Tussocky Grassland for Marsh Fritillary butterfly
 - Proposed Fescue/Bent Mix with Wildflowers (Approx. Total Area: 0.11ha)
 - Proposed Battery Storage
 - Proposed Inverter
 - Proposed Switchgear Container
 - Proposed E-House
 - Proposed E-House Enclosed in Building
 - Proposed Cooler
 - Proposed Diesel Generator
 - Proposed Transformer with 7.0m High Connecting Bus Bars
 - Proposed Track
 - Proposed Fire Stop Wall
 - Proposed 3.4 m Security Fencing
 - Proposed Stock Proof Fencing (2 m high timber post and wire)
 - Proposed Gate
 - Proposed Drainage
 - Proposed Underground 400 kV Cable
 - Proposed Underground 400 kV Cable 4m Buffer
 - Proposed Log and Brush Piles Location
 - Proposed Bird and Bat Boxes Location
 - Proposed Temporary Laydown Area
 - Proposed Swale
 - Proposed Attenuation Pond
 - Proposed Stock Proof Metal Field Gate



Cut slopes to remain as bare ground if practical to provide nesting sites for burrowing bees and wasps. Particularly south facing slopes.

- Native Species Woodland and Shrub Mix**
- 244 No. Cm 10%
 - 244 No. Psp 10%
 - 244 No. Sc 10%
 - 488 No. Qr 20%
 - 244 No. Cav 10%
 - 244 No. Bp 10%
 - 122 No. Ia 5%
 - 122 No. Sau 5%
 - 122 No. Agl 5%
 - 122 No. Msy 5%

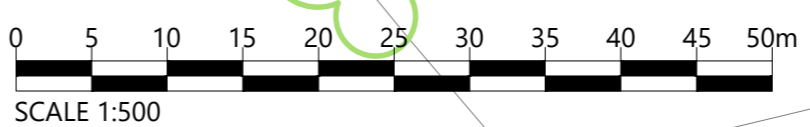
- Native Species Woodland and Shrub Mix**
- 4 No. Cm 10%
 - 4 No. Psp 10%
 - 4 No. Sc 10%
 - 7 No. Qr 20%
 - 4 No. Cav 10%
 - 4 No. Bp 10%
 - 4 No. Bpu 10%
 - 2 No. Ia 5%
 - 2 No. Sau 5%
 - 2 No. Agl 5%
 - 2 No. Msy 5%

- Native Species Woodland and Shrub Mix**
- 40 No. Cm 10%
 - 40 No. Psp 10%
 - 40 No. Sc 10%
 - 79 No. Qr 20%
 - 40 No. Cav 10%
 - 40 No. Bp 10%
 - 40 No. Bpu 10%
 - 20 No. Ia 5%
 - 20 No. Sau 5%
 - 20 No. Agl 5%
 - 20 No. Msy 5%

- Native Species Hedgerow Mix**
- 5 No. Cav 5%
 - 42 No. Cm 50%
 - 2 No. Ia 2%
 - 13 No. Psp 15%
 - 2 No. Rca 2%
 - 17 No. Ac 20%
 - 2 No. Lp 2%
 - 2 No. Sau 2%
 - 2 No. Vo 2%

- Native Species Hedgerow Mix**
- 6 No. Cav 5%
 - 54 No. Cm 50%
 - 3 No. Ia 2%
 - 17 No. Psp 15%
 - 3 No. Rca 2%
 - 22 No. Ac 20%
 - 3 No. Lp 2%
 - 3 No. Sau 2%
 - 3 No. Vo 2%

Bird and bat boxes to be installed on two mature trees along southern boundary.



PLANTING SCHEDULE

Specimen Tree Planting					
Number	Abbreviation	Species	Height	Girth	Specification
4 No.	Qr	Quercus robur	100-125cm		Whip
Total :4 No.					
Native Species Woodland and Shrub Mix					
Number	Abbreviation	Species	Height	Specification	Spacing
144 No.	Agl	Alnus glutinosa	60-80cm	1+1 :BR	:Transplant 0.25m ²
288 No.	Bp	Betula pendula	60-80cm	1+1 :BR	:Transplant 0.25m ²
288 No.	Bpu	Betula pubescens	60-80cm	1+1 :BR	:Transplant 0.25m ²
288 No.	Cav	Corylus avellana	60-80cm	1+1 :BR	:Transplant 0.25m ²
288 No.	Cm	Crataegus monogyna	60-80cm	1+1 :BR	:Transplant 0.25m ²
144 No.	Ia	Ilex aquifolium	60-80cm	1+1 :BR	:Transplant 0.25m ²
144 No.	Msy	Malus sylvestris	60-80cm	1+1 :BR	:Transplant 0.25m ²
288 No.	Psp	Prunus spinosa	60-80cm	1+1 :BR	:Transplant 0.25m ²
574 No.	Qr	Quercus robur	60-80cm	1+1 :BR	:Transplant 0.25m ²
288 No.	Sc	Salix cinerea	60-80cm	1+1 :BR	:Transplant 0.25m ²
144 No.	Sau	Sorbus aucuparia	60-80cm	1+1 :BR	:Transplant 0.25m ²
Total :2878 No.					
Native Species Hedgerow Mix					
Number	Abbreviation	Species	Height	Specification	Spacing
39 No.	Ac	Acer campestre	60-80cm	1+1 :BR	:Transplant 5/m
11 No.	Cav	Corylus avellana	60-80cm	1+1 :BR	:Transplant 5/m
96 No.	Cm	Crataegus monogyna	60-80cm	1+1 :BR	:Transplant 5/m
5 No.	Ia	Ilex aquifolium	60-80cm	1+1 :BR	:Transplant 5/m
5 No.	Lp	Lonicera periclymenum	60-80cm	1+1 :BR	:Transplant 5/m
30 No.	Psp	Prunus spinosa	60-80cm	1+1 :BR	:Transplant 5/m
5 No.	Rca	Rosa carolina	60-80cm	1+1 :BR	:Transplant 5/m
5 No.	Sau	Sorbus aucuparia	60-80cm	1+1 :BR	:Transplant 5/m
5 No.	Vo	Viburnum opulus	60-80cm	1+1 :BR	:Transplant 5/m
Total :201 No.					

- Notes:**
1. Log and brush piles located in partial shade along northern boundary.
 2. Woodland, shrub and hedgerow planting to limit views from properties to the east, south and north and provide additional habitat.
 3. No planting undertaken over underground cable area.
 4. Batters (except southern slopes) seeded with fescue/bent species mix and to include suitable wildflower spp. to attract wall butterfly.
 5. Planting to be planted 2m offset from existing/proposed drainage/ditch.

REVISION SCHEDULE

Rev	Date	Description
A	26.05.2020	Revised matching the latest planning layout plan (WM)
B	24.06.2020	Revised matching the latest planning layout plan (WM)
C	16.12.2020	Revised matching the latest planning layout plan (LH)
D	20.01.2021	Revised matching the latest planning layout plan (LH)

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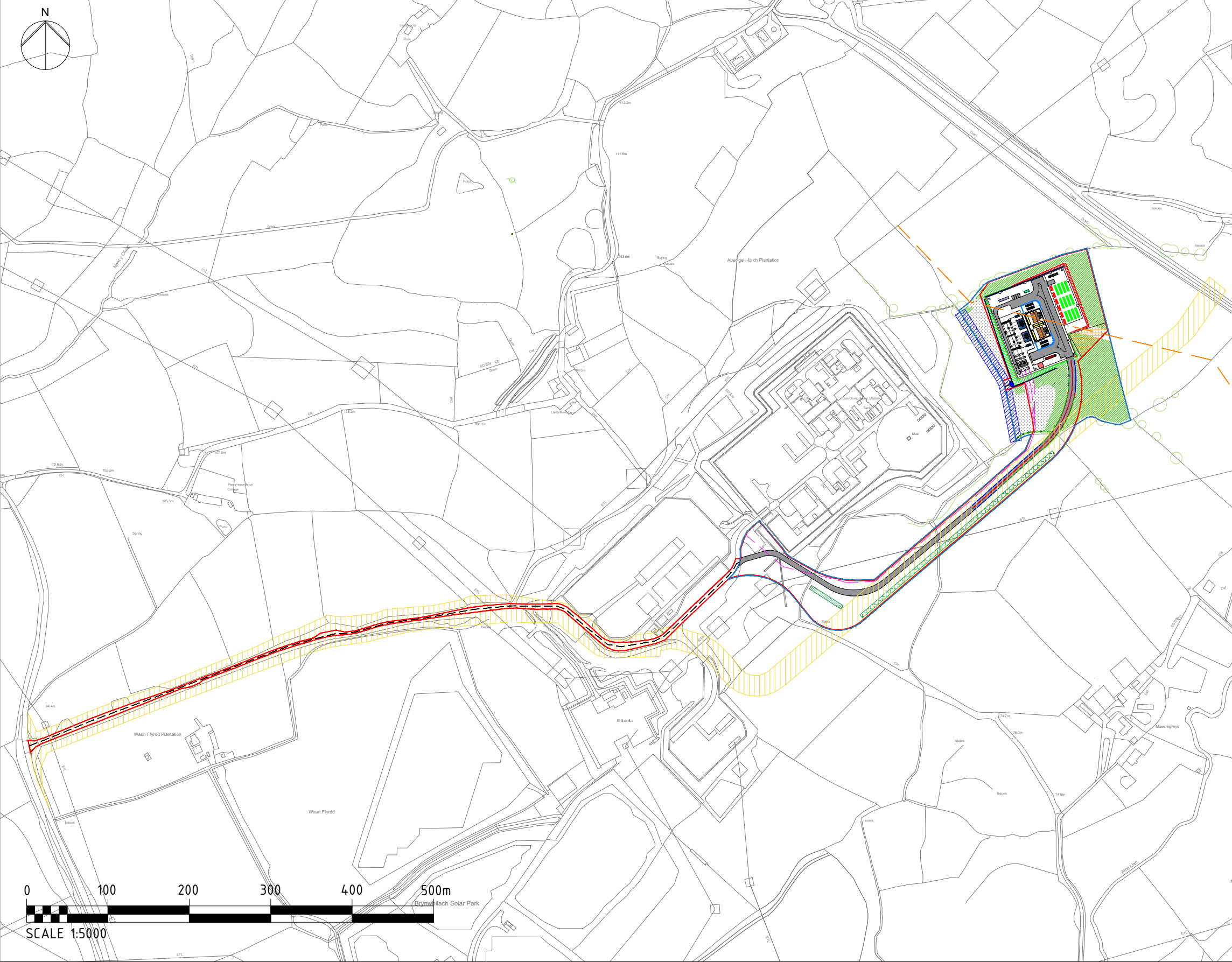
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PROJECT: Swansea North Greener Grid Park
TITLE: Landscape and Biodiversity Mitigation Plan
Planning Drawing 017

CLIENT: Statkraft UK

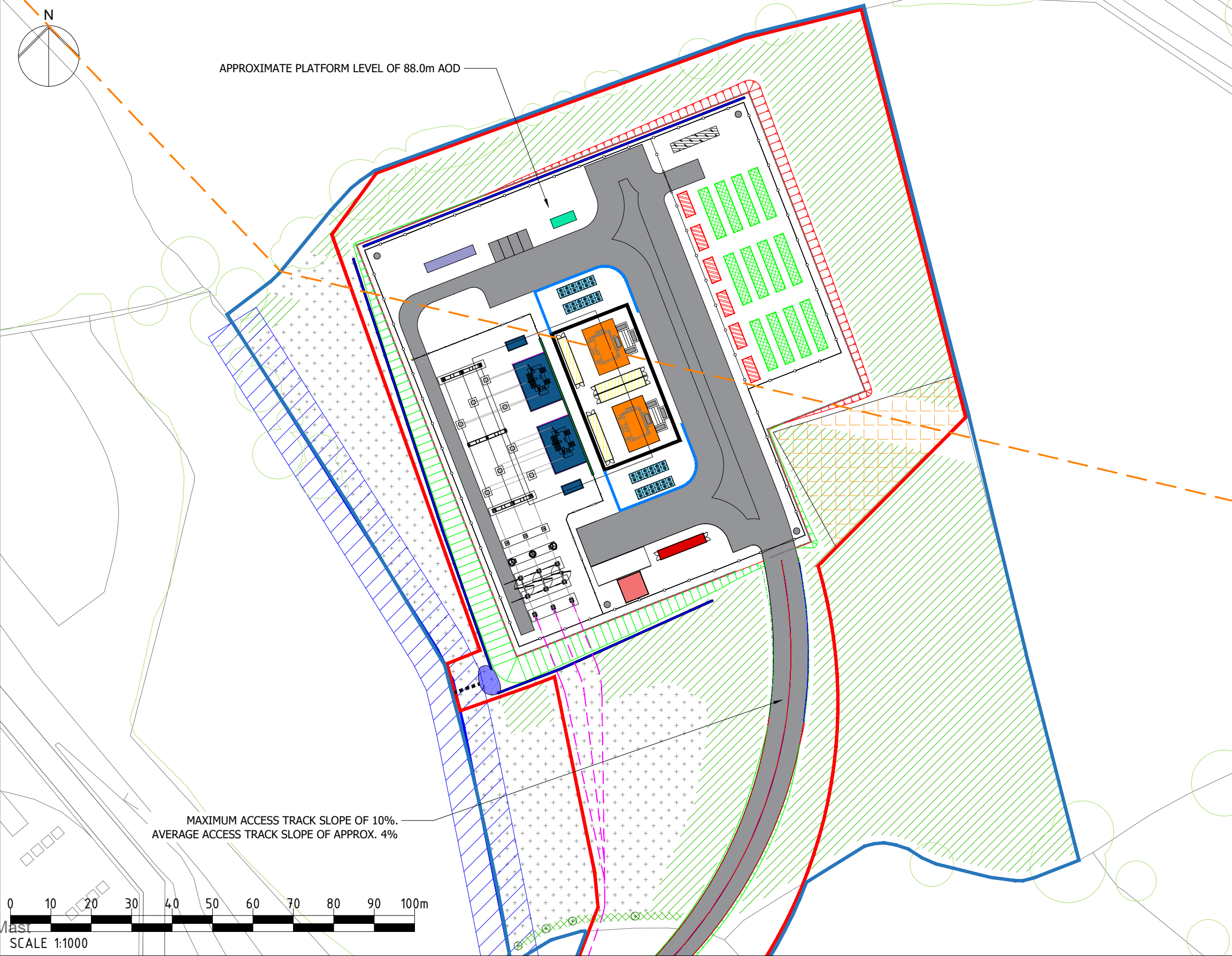
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CHECKED: GW **REVISION:** D

Plot Date : 25 June 2021 13:45:17
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- KEY:**
- SITE BOUNDARY (4.47 Hectares)
 - LAND OWNERSHIP BOUNDARY
 - 3.40m HIGH WELDMESH FENCING
 - BATTERY (12.9m x 2.44 x 2.59m)
 - INVERTER (6.1m x 2.44m x 2.59m)
 - TRANSFORMER
 - LV SWITCH HOUSE (12.19m x 2.44m x 3.0m)
 - E-HOUSE (ENCLOSED IN BUILDING 20.7m x 36.7m x 10.0m TO ROOF PITCH)
 - COOLER (9.6m x 2.4m x 2.5m)
 - PROPOSED TRACK AREAS + ACCESS OPTION 1
 - MAIN CONTROL ROOM (6.1m x 2.44m x 3.0m)
 - ENERGY MANAGEMENT SYSTEM (ENCLOSED IN BUILDING 20.7m x 36.7m x 10.0m TO ROOF PITCH)
 - EMERGENCY DIESEL GENERATOR (6.0m x 6.0m)
 - BUILDING (20.7m x 36.7m x 10.0m TO ROOF PITCH)
 - SWITCHGEAR CONTAINER (12.19m x 2.44m x 3.0m)
 - TEMPORARY LAYDOWN
 - FIRE STOP WALL (36.2m X 0.4m x 10.0m)
 - ABERGELLI CORRIDOR
 - 6m SECURITY COLUMN
 - 4m HIGH WALL
 - 7m RIPARIAN BUFFER
 - EXISTING GRAZING GRASS
 - PROPOSED NATIVE SPECIES WOODLAND AND SHRUB MIX
 - EXISTING TREE/VEGETATION TO BE RETAINED
 - PROPOSED NATIVE SPECIES HEDGEROW MIX
 - PROPOSED HEDGEROW WITH TREES
 - HEDGEROW WITH TREES AS PER ABERGELLI POWER DCO*
 - 400kV CABLE
 - EXISTING OVERHEAD CABLE TO BE RELOCATED UNDERGROUND
 - ACCESS ROUTE TO PUBLIC ROAD
 - INDICATIVE EARTHWORKS - CUT
 - INDICATIVE EARTHWORKS - FILL
 - WELFARE FACILITIES (12.9m x 2.44m x 2.59m)
- *IN THE EVENT THAT THE ACCESS TRACK CONSENTED WITH THE ABERGELLI POWER DCO IS NOT PROVIDED FIRST, THE EXTENT OF HEDGEROW WITH TREES SHOWN ON THIS PLAN WOULD BE PROVIDED WITH THIS DEVELOPMENT.

<p>Project Title SWANSEA NORTH GREENER GRID PARK</p>	<p>Drawing Title PLANNING DRAWING 003B PROPOSED SITE LAYOUT BLOCK PLAN</p>	<p>Purpose of issue PLANNING</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Designed -</td> <td>Drawn KB</td> <td>Checked DB</td> <td>Approved AM</td> </tr> <tr> <td colspan="2">Arcus Internal Project No. 3421</td> <td colspan="2">Date 25/06/21</td> </tr> <tr> <td colspan="2">Scale @ A3 1:5000</td> <td colspan="2"></td> </tr> </table>	Designed -	Drawn KB	Checked DB	Approved AM	Arcus Internal Project No. 3421		Date 25/06/21		Scale @ A3 1:5000				<p>THIS DOCUMENT HAS BEEN PREPARED IN ACCORDANCE WITH THE SCOPE OF ARCUS' APPOINTMENT WITH ITS CLIENT AND IS SUBJECT TO THE TERMS OF THAT APPOINTMENT. ARCUS ACCEPTS NO LIABILITY FOR ANY USE OF THIS DOCUMENT OTHER THAN BY ITS CLIENT AND ONLY FOR THE PURPOSES FOR WHICH IT WAS PREPARED AND PROVIDED</p>	<p>Arcus Consultancy Services 7th Floor 144 West George Street Glasgow, G2 2HG Tel: +44 (0)141 221 9997 Fax: +44 (0)141 221 5610 www.arcusconsulting.co.uk</p>
Designed -	Drawn KB	Checked DB	Approved AM													
Arcus Internal Project No. 3421		Date 25/06/21														
Scale @ A3 1:5000																
<p>Client Statkraft</p>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Drawing Number 3421-DR-P-0001B</td> <td>Rev 13</td> </tr> </table>		Drawing Number 3421-DR-P-0001B	Rev 13											
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 - SWALE
 - ATTENUATION POND
 - OUTFALL
 - 400KV CABLE
 - EXISTING OVERHEAD CABLE TO RELOCATED UNDERGROUND
 - INDICATIVE EARTHWORKS - CUT
 - INDICATIVE EARTHWORKS - FILL
 - WELFARE FACILITIES (12.9m x 2.44m x 2.59m)

Plot Date : 29 January 2021 09:48:23
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Project Title	SWANSEA NORTH GREENER GRID PARK
Client	

Drawing Title	PLANNING DRAWING 003A PROPOSED SITE LAYOUT MAIN COMPOUND
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Purpose of issue			
PLANNING			
Designed	Drawn	Checked	Approved
-	KB	DB	AM
Arcus Internal Project No.		Date	
3421		26/01/21	
Scale @ A3			
1:1000			

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Appendix 2
Summary of Legislative Framework and Planning Policy

Appendix 2: Summary of Legislative Framework and Planning Policy

Summary of Legislation

Protection for animals included on Schedule 2 of The Conservation of Habitats and Species Regulations 2017 (as amended)		
A person commits an offence if they:		
Regulation 43	Part 1(a)	Deliberately captures, injures or kills any wild animal of a European protected species
	Part 1(b)	Deliberately disturbs wild animals of any such species. (1A) For the purpose of paragraph (1)(b), disturbance of animals includes in particular any disturbance which is likely a) to impair their ability i. to survive, breed or reproduce or to rear or nurture their young; or ii. in the case of animals of a hibernating or migratory species, to hibernate or migrate. b) to affect significantly the local distribution or abundance of the species to which they belong
	Part 1(c)	Deliberately take or destroy the eggs of such an animal
	Part 1(d)	Damage or destroy a breeding site or resting place of such an animal
	Part 3	To: a) be in possession of, or to control, b) transport, c) sell or exchange, or d) to offer for sale or exchange. (4) For the purpose of (3) this applies to: a) any live or dead animal or part of animal i) which has been taken from the wild, and ii) which is a species or subspecies listed in Annex IV(a) to the Habitats Directive; and b) anything derived from such an animal or any part of such an animal.
Protection for animals included on Schedule 5 of the Wildlife and Countryside Act 1981 (As Amended)		
Section 9	Part 1	Intentionally kill, injure, take a scheduled animal
	Part 2	Possess or control (live or dead animal, part or derivative)
	Part 4 (a)	Intentionally or recklessly damage, destroy or obstruct access to any structure or place used by a scheduled animal for shelter or protection
	Part 4 (b)	Intentionally or recklessly disturb an animal occupying such a structure or place
	Part 5 (a)	Sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative)
	Part 5 (b)	Advertise for buying or selling such things

A large number of species are also included under Section 7 of the Environment (Wales) Act 2016 as Species of Principal Importance which places the “biodiversity

duty” on the Welsh Government (and therefore public authorities) for the purpose of maintaining and enhancing biodiversity in relation to Wales. This stems from a review of the now superseded UK Biodiversity Action Plan and the continued need for global action on conserving biodiversity as result of the Convention on Biological Diversity.

Bats

All UK bat species are afforded full protection (including their habitats) through inclusion on Schedule 2 of The Conservation of Habitats and Species Regulations 2017 (as amended) and further partial protection by Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

Barbastelle (*Barbastella barbastellus*), Bechstein’s (*Myotis bechsteinii*), noctule (*Nyctalus noctula*), common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared (*Plecotus auritus*), greater horseshoe (*Rhinolophus ferrumequinum*) and lesser horseshoe (*Rhinolophus hipposideros*) bats are listed under Section 7 of The Environment (Wales) Act 2016 to be taken into account as part of the biodiversity duty on local planning authorities. Species included in this list are considered by the Welsh Ministers to be “of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales”.

Hazel Dormouse

Hazel dormouse are afforded full protection (including their habitats) through inclusion on Schedule 2 of The Conservation of Habitats and Species regulations 2017 (as amended by The Conservation of Habitats and Species (Amendments) (EU Exit) Regulations 2019) and further partial protection by Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

Hazel dormouse are listed under Section 7 of The Environment (Wales) Act 2016 to be taken into account as part of the biodiversity duty on local planning authorities. Species included in this list are considered by the Welsh Ministers to be “of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales”.

Great Crested Newts and Other Amphibians

Great crested newts are afforded full protection (including their habitats) through inclusion on Schedule 2 of The Conservation of Habitats and Species regulations 2017 (as amended by The Conservation of Habitats and Species (Amendments) (EU Exit) Regulations 2019) and further partial protection by Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

Under the Wildlife and Countryside Act 1981, other amphibians, including smooth and palmate newts, common frogs and common toad cannot be sold or be offered for sale.

Great crested newts and common toad are listed under Section 7 of The Environment (Wales) Act 2016 to be taken into account as part of the biodiversity duty on local planning authorities. Species included in this list are considered by the Welsh Ministers to be “of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales” within Section 7 of The Environmental (Wales) Act 2016.

Hedgehog

Hedgehogs are protected under Section 1 of the Wild Mammals (Protection) Act 1996, which makes it an offence too mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering to this species. Hedgehog is listed under Section 7 of The Environment (Wales) Act 2016 to be taken into account as part of the biodiversity duty on local planning authorities. Species included in this list are considered by the Welsh Ministers to be “of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales”.

Reptiles

Six native reptiles occur in Britain: the adder (*Vipera berus*), the grass snake (*Natrix natrix*), the smooth snake (*Coronella austriaca*), the sand lizard (*Lacerta agilis*), the common lizard (*Zootoca vivipara*) and the slow worm (*Anguis fragilis*).

The smooth snake and sand lizard are afforded full protection (including their habitats) through inclusion on Schedule 2 of The Conservation of Habitats and

Species regulations 2017 (as amended) and further partial protection by Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

Five of the six native reptile species (excluding smooth snake) are listed under Section 7 of The Environment (Wales) Act 2016 to be taken into account as part of the biodiversity duty on local planning authorities. Species included in this list are considered by the Welsh Ministers to be “of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales”.

Birds

All wild birds, their nests and eggs are protected under Part 1 Section 1 of the Wildlife and Countryside Act, 1981 (as amended), which makes it an offence (with certain limited exceptions and in the absence of a licence) to:

- Kill or injure any wild bird;
- Take, damage or destroy the nest of any wild bird whilst it is in use or being built (this includes several species of birds whose nests are reused under Schedule ZA1);
- Take or destroy the egg or any wild bird.

It is also an offence to possess any live or dead wild bird or egg, or anything derived from a wild bird or egg. Restrictions on trade and advertising also apply.

Bird species listed on Schedule 1 of the Wildlife and Countryside Act, 1981 (as amended) are afforded additional protection against intentional or reckless disturbance whilst it is building a nest, or at a nest containing eggs, young or disturbance to the young.

Further a number of bird species are listed under Section 7 of The Environment (Wales) Act 2016 to be taken into account as part of the biodiversity duty on local planning authorities. Species included in this list are considered by the Welsh Ministers to be “of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales” within Section 7 of The Environmental (Wales) Act 2016.

In addition to this legal protection, leading governmental and non-governmental conservation organisations in the UK have reviewed the population status of the birds regularly found here and produced a list of Birds of Conservation Concern. Of the 245 species assessed, 70 were placed on the red list of high conservation concern, 103 on the amber list of medium conservation concern and 72 on the green list of low conservation concern. Consideration is therefore given to those species listed as being of conservation concern although they have no greater legislative protection.

Otter

Otters are afforded full legal protection through inclusion on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of The Conservation of Habitats and Species Regulations 2017 (as amended).

Otters are included within Section 7 of The Environmental (Wales) Act 2016. Species listed on this section are considered to be of principal importance for the conservation of biodiversity and as such are listed as a priority species on the UK Biodiversity Action Plan (BAP).

Badgers

Badgers are afforded full protection under the Protection of Badgers Act 1992, which makes it an offence to:

- Wilfully kill, injure or take a badger;
- Possess or control any live or dead badger or any part, or anything derived from, a dead badger;
- cruelly ill-treat a badger, or attempt to do so;
- To interfere with a sett by:
 - damaging or destroying it;
 - obstructing access to, or any entrance of, a badger sett;
 - causing a dog to enter a badger sett;
 - disturbing a badger when it is occupying a sett;
- Sell a live badger or offer one for sale.

It is also an offence to mark, attach any ring, tag or other marking device to a badger unless authorised under licence.

Invertebrates

A number of invertebrates are afforded full protection (including their habitats) through inclusion on Schedule 2 of The Conservation of Habitats and Species regulations 2017 (as amended) and further partial protection by Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

In addition, a number of species of invertebrates are fully or partially protected only under Schedule 5 of the Wildlife and Countryside Act 1981.

A number of invertebrates are listed under Section 7 of The Environment (Wales) Act 2016 to be taken into account as part of the biodiversity duty on local planning authorities. Species included in this list are considered by the Welsh Ministers to be “of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales”.

Plants

A number of plants are afforded full protection through inclusion on Schedule 5 of The Conservation of Habitats and Species regulations 2017 (as amended) and further partial protection by Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

In addition, a number of species of plants are fully protected only under Schedule 5 of the Wildlife and Countryside Act 1981.

A number of plants are listed under Section 7 of The Environment (Wales) Act 2016 to be taken into account as part of the biodiversity duty on local planning authorities. Species included in this list are considered by the Welsh Ministers to be “of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales”.

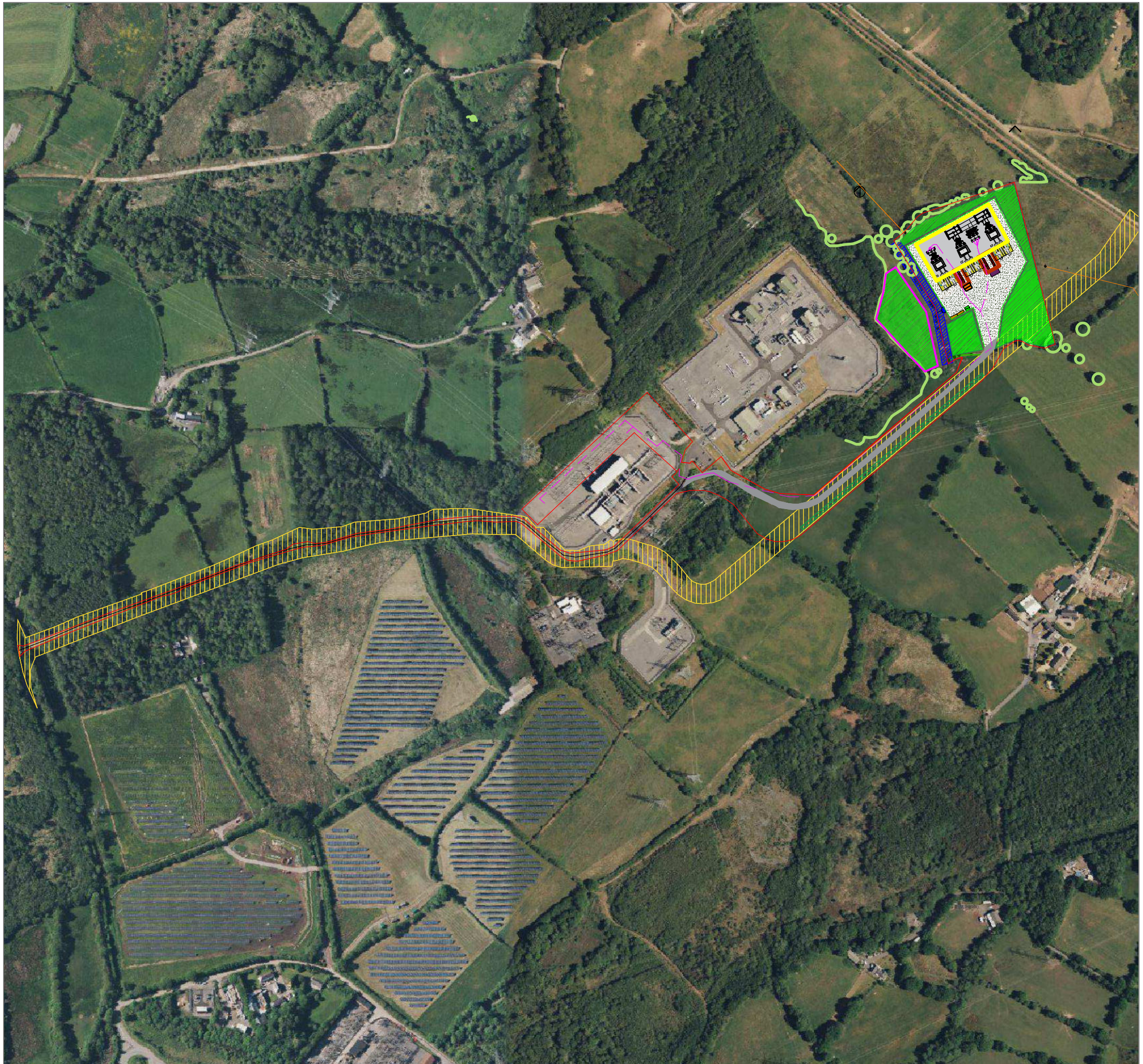
Planning policy

All statutory and non-statutory designated sites, along with species covered by national legislation and those under Section 7 of the Environment (Wales) Act 2016, are considered through Planning Policy Wales 2021 which provides a guide for Local Planning Authority (LPA) decision making, including statements such as “ensure statutorily and non-statutorily designated sites are properly protected and

managed”, “safeguard protected and priority species and existing biodiversity assets from impacts” and “secure enhancement of and improvements to ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks.”

There is also the “biodiversity duty” placed upon LPAs through the Environment (Wales) Act 2016 to enhance biodiversity and ensure the resilience of ecosystems. This will be considered by the LPA when making planning decisions to ensure that they meet their own reporting duties.

Appendix 3
20221205 Swansea Entire Site Layout Rev I A3



- KEY (L x W x H m):**
- SITE BOUNDARY
 - FENCE (3.4m HIGH)
 - HV YARD - porous gravel
 - COMMS HOUSE (7 x 13 x 3.5)
 - GENSET (3.5 x 9.6 x 3.5)
 - OFFICES (3.1 x 9.8 x 3.5)
 - STORES (2.4 x 6.1 x 2.59)
 - SYNC COMP BUILDING (25.5 x 15 x 7)
 - COOLER (2.8 x 15.8 x 2.5)
 - NOISE ATTENUATING WALL (4m HIGH)
 - ACCESS ROAD
 - POROUS GRAVEL
 - UNDERGROUND CABLE TO SUBSTATION
 - ABERGELLI DCO SHARED ACCESS
 - LANDSCAPING AND PLANTING
 - HABITAT MANAGEMENT AREA
 - ATTENUATION POND
 - OUTFALL
 - 7m RIPARIAN BUFFER

Scale: 1; 5,000 Metres

PROJECT: **Statkraft**
Swansea Greener Grid Park

DRAWING NAME: Site Layout **Rev I**

DATE: 05/12/2022 **SCALE:** 1:5000 at A3

Appendix 4
Target Notes

Appendix 4: Target Notes

The target notes (TN) are shown on the UKHAB Habitat Plan (ST19905-004). The abundance of species is given using the DAFOR scale outlined in the table below:

Abundance	Approximate Percentage Cover
Dominant	>50%
Abundant	30-50%
Frequent	Many individuals
Occasional	Few individuals
Rare	Isolated individuals
Local	Distinct populations

TN1

Various log and brush piles which could provide refuge for reptiles and amphibians.



TN2

A bund covered in denser vegetation which could provide shelter and basking opportunities for reptiles.



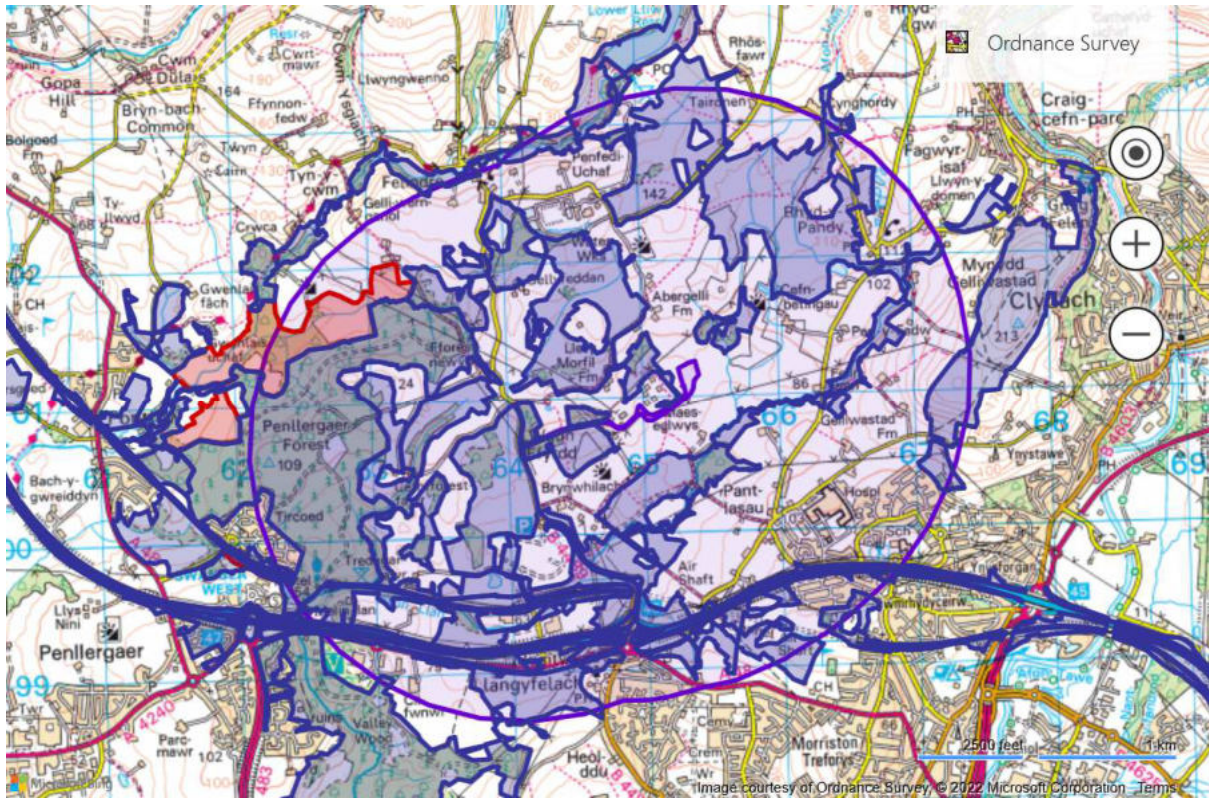
TN3

A bund within the woodland contains a small mammal burrow partially concealed with leaf litter. Too small for badger use.



Appendix 5
Sites Designated for Conservation within 2km

Appendix 5: Sites Designated for Conservation within 2km



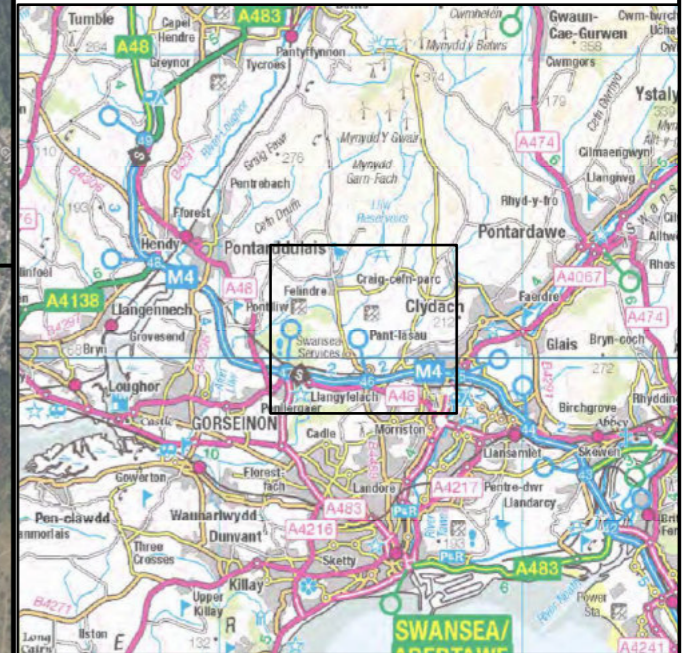
Site Type	Key	Number of sites	Category
Site of Special Scientific Interest		2	National - Statutory
Wildlife Site / SINC (Adopted)		21	Local - Non-statutory

DRAWINGS



KEY

- Site Boundary
- 2km Search Radius

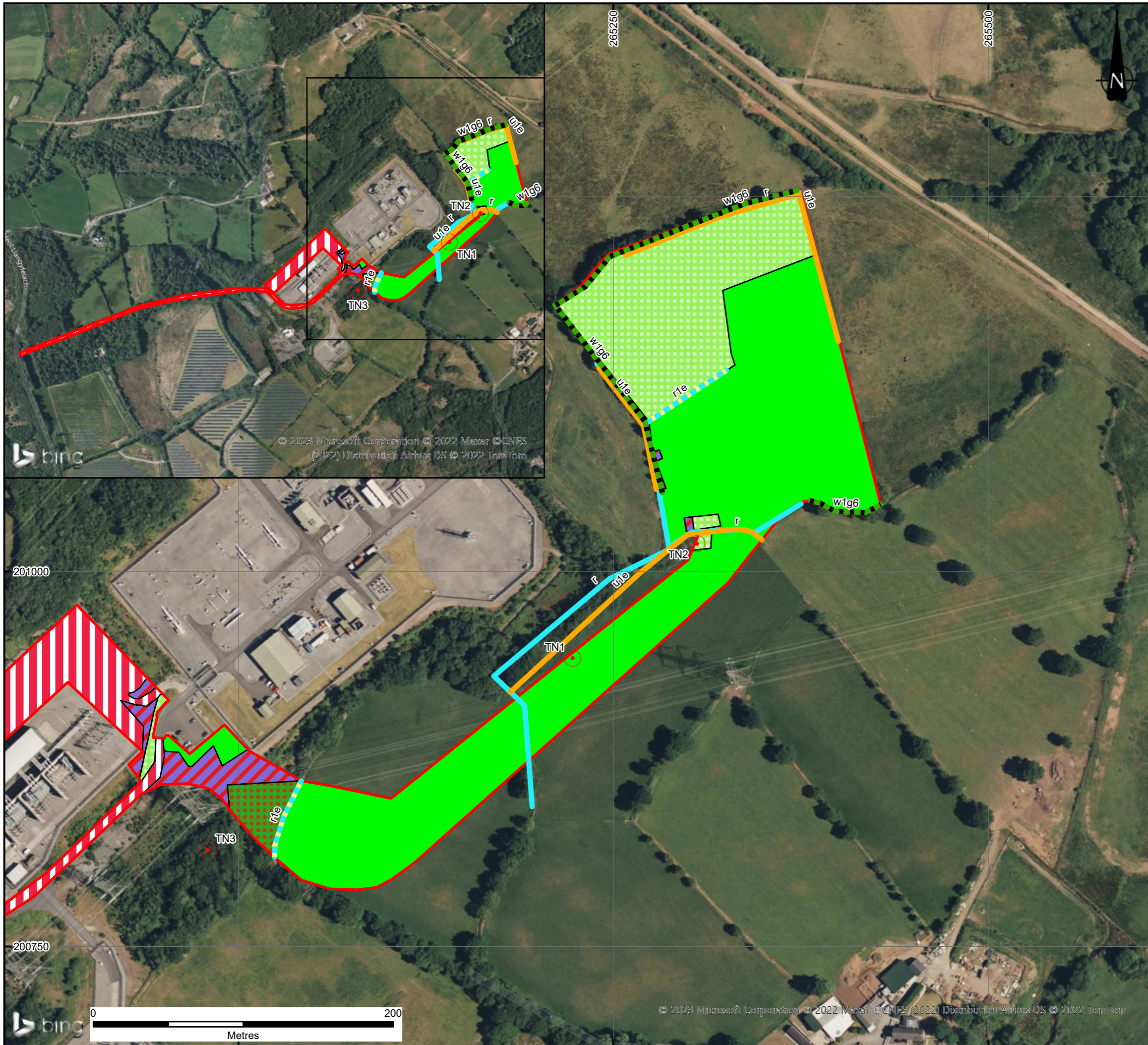


Notes:

Boundaries are indicative. Aerial imagery shown for context purposes only.
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A	FIRST ISSUE	10/02/23	CG	JJ	JH
REVISION	DETAILS	DATE	DRAWN	CHKD	APPD
CLIENT					
STARKRAFT UK LTD					
PROJECT					
SWANSEA NORTH GREENER GRID PARK					
DRAWING TITLE					
SITE LOCATION PLAN					
DRG No.	ST19905-023	REV	A		
DRG SIZE	A3	SCALE	1:20,000	DATE	10/02/2023
DRAWN BY	CG	CHECKED BY	JJ	APPROVED BY	JH





KEY

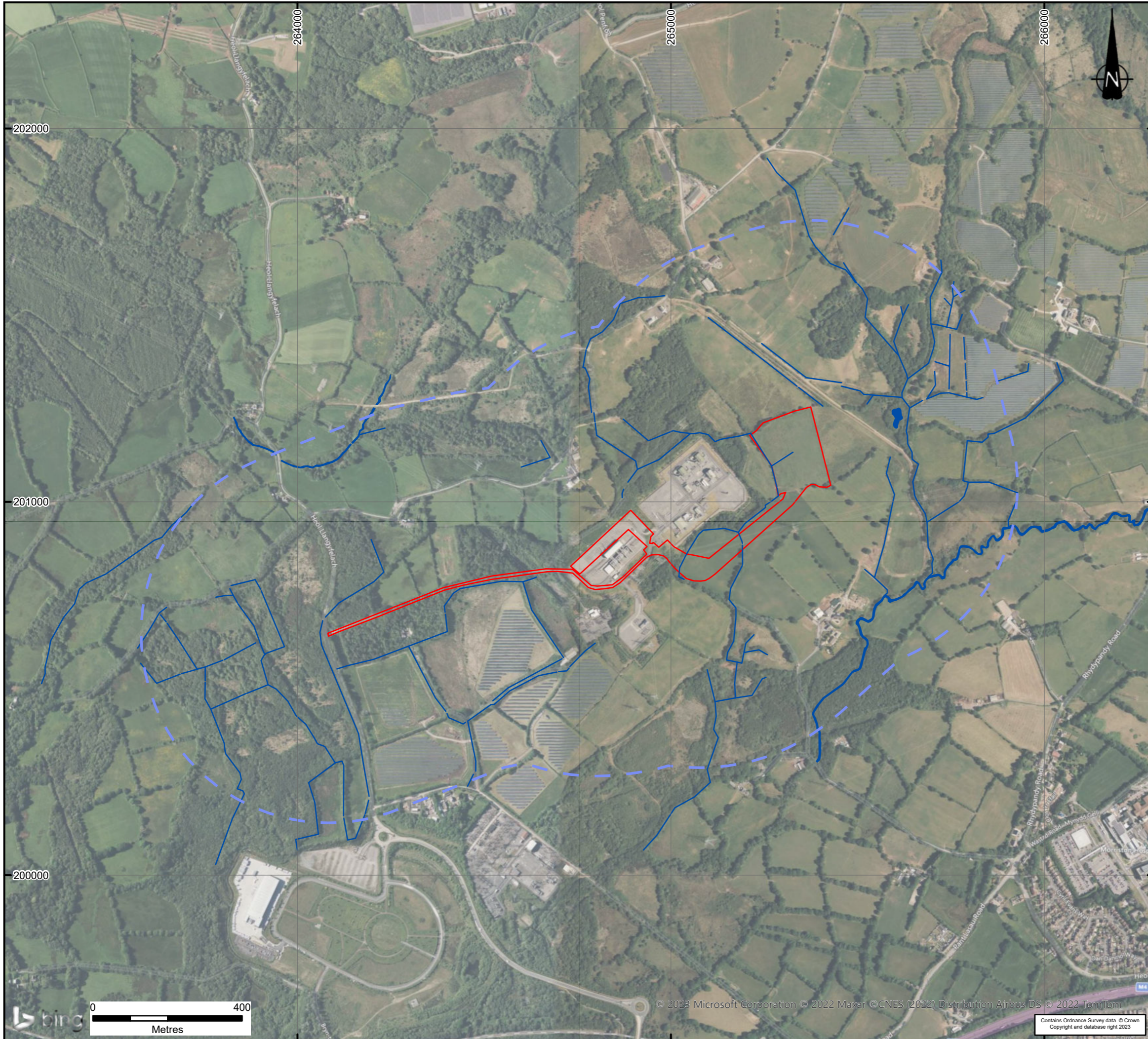
- Site Boundary
- g3c8 - Holcus-Juncus neutral grassland
- g4 - modified grassland
- h3 - dense scrub
- u1b - developed land, sealed surface
- w1g - other woodland, broadleaved
- r - rivers and lakes
- r1e - canal or ditch
- u1e - built linear feature
- w1g6 - line of trees
- Target note

Notes:

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REVISION	DETAILS	DATE	DRAWN	CHKD	APPD
CLIENT					
STARKRAFT UK LTD					
PROJECT					
SWANSEA NORTH GREENER GRID PARK					
DRAWING TITLE					
UKHAB HABITAT PLAN					
DRG No.	ST19905-024	REV	A		
DRG SIZE	A3	SCALE	1:2,500	DATE	10/02/2023
DRAWN BY	CG	CHECKED BY	JJ	APPROVED BY	JH





KEY

- Site Boundary
- 500m Buffer
- Waterbodies within 500m

Notes:

Boundaries are indicative. Aerial imagery shown for context purposes only.

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REVISION	DETAILS	DATE	DRAWN	CHKD	APPD

CLIENT	STARKRAFT UK LTD
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PROJECT	SWANSEA NORTH GREENER GRID PARK
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DRAWING TITLE	WATERBODY LOCATION PLAN
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DRG No.	ST19905-025	REV	A
DRG SIZE	A3	SCALE	1:10,000
		DATE	10/02/2023
DRAWN BY	CG	CHECKED BY	JJ
		APPROVED BY	JH





KEY

- Site Boundary
- Bat Box
- Bird Box
- Brash Pile
- Hedgehog House
- Insect Hotel

Notes:

Boundaries are indicative. Aerial imagery shown for context purposes only.

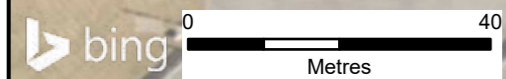
A	FIRST ISSUE	10/02/23	MAB	JJ	JH
<small>REVISION</small>	<small>DETAILS</small>	<small>DATE</small>	<small>DRAWN</small>	<small>CHKD</small>	<small>APPD</small>

CLIENT
STATKRAFT UK LTD

PROJECT
SWANSEA NORTH GREENER GRID PARK

DRAWING TITLE
ECOLOGICAL ENHANCEMENTS LOCATION PLAN

DRG No. ST19905-022	REV A
DRG SIZE A3	SCALE 1:1,000
DRAWN BY CG	CHECKED BY JJ
	APPROVED BY JH



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