

**Castle Road Battery Storage
Energy System (BESS)**

Ecological Impact Assessment Report

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1 Introduction

- 1.1 BSG Ecology was commissioned by REWE 7 Ltd to complete an Ecological Impact Assessment (EclA) report of the Site for a proposed Battery Energy Storage System (BESS) at land north of Castle Road, Burton, Rhose¹.
- 1.2 This EclA is based on the final design layout of the Proposed Development (DWG: WIN-BES-08-DR-03-03-01, Rev.06, **Appendix 1**), and has been informed by an extended Phase 1 survey and winter and breeding bird surveys conducted between November 2023 and June 2024

Site description

- 1.3 The development site ('the Site') is approximately 10.5 hectares (ha) in size and consists of two fields currently used for non-cereal crop production (southern field – hereafter referred to as Field 1) and hay/silage making² (northern field – hereafter referred to as Field 2). The fields are bounded by hedgerows with mature trees, scrub tracks and fences. The Site is bordered by agricultural land and the Aberthaw Quarry. A solar farm is present ~950 m to the south. There are multiple watercourses and waterbodies around the Site with the closest being the Kenson River ~120 m west and the Aberthaw Quarry ponds ~30 m to the south. The Site boundary relative to its surrounding area can be seen in **Figure 1**.

Description of project

- 1.4 The Applicant proposes to construct and operate a Battery Energy Storage System (BESS) facility with a capacity of up to 440MW capacity, with associated infrastructure.
- 1.5 Construction works are expected to last approximately 12 months and will include general mobilisation and site preparation, earth works that include a cut and fill operation at Field 2 to accommodate the creation of the access track on a steep slope, pilling, road works and battery installation. The construction compounds will be located within the Site.
- 1.6 The proposed access to the Site will be making use of an existing access from Fontygary Road, to the north west of the Site. Assessment has confirmed that articulated vehicles would be able to enter and leave the Site safely through this main access. An emergency access will also be provided using the existing access from Fontygary Road to the south west of the Site. The access points have been located to make use of existing access points, and also with consideration to the requirement for two separate and suitable access points for emergency vehicles to always allow unobstructed access and egress to and from the Site (taking account of wind conditions/direction). The access road from the north west continues through the Site to the Proposed Development to the south east of the Site and has been engineered to accommodate the Site levels. The route of the proposed access results in the loss of ~5 m of a hedgerow between the two fields on Site (referred to as hedgerow HR7 in this report).
- 1.7 The underground cable route to connect the Proposed Development to the National Grid is not part of this application but will be delivered via Permitted Development Rights. Approximately 4 m of hedgerow between the two fields (referred to as HR3 in this report) will be removed and re-instated in order to implement the cable route. This is to minimise the amount of turns in the cable, hence reducing the length, allowing the cable to go under the Overhead Lines as close to perpendicular as possible.

Purpose of this report

- 1.8 The purpose of this report is to detail methods and results of surveys carried out on Site, identify ecological features that could be impacted by the Proposed Development, set out measures to avoid and reduce impacts on them, and to identify opportunities for ecological enhancement.

¹ Approximate central Ordnance Survey Grid Reference ST 03690 67655.

² Intensively managed short rotation grass crops and cultivating rapeseed *Brassica napus* field.

- 1.9 Identify any residual impacts following the application of the mitigation hierarchy (avoid, reduce, compensate).

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2 Methods

Project personnel

- 2.1 Zoe Paraskevopoulou MBiol., CIEEM Qualifying Member, is an Ecologist at BSG Ecology. Zoe has worked as an ecological consultant June 2021. Zoe conducted the extended Phase 1 habitat survey and is the main author of this report. She has an MBiol. In Biology and has a wide range of experience writing ecological reports and conducting habitat surveys.
- 2.2 Edward Hunter worked as a Field Surveyor for BSG Ecology at the time the work was completed. Edward completed the wintering bird surveys. He is an experienced field ornithologist with a detailed knowledge of the distribution and ecology of birds in South Wales. He was awarded the British Birds Carl Zeiss award in 2016 for his detailed documentation of breeding Iberian chiffchaff in South Wales (the first time this species is considered to have bred in the UK).
- 2.3 James Darke BSc PGCert MCIEEM, is a Senior Ecologist at BSG Ecology. James completed breeding bird survey at the Site. He is an experienced bird surveyor and has used methods such as Common Bird Census, Breeding Bird Survey, Vantage Point surveys and transect surveys for seabirds at sea from aerial and boat-based platforms. James is also an ESAS qualified surveyor and has undertaken over 100 aerial surveys for waterbirds.
- 2.4 James Garside BSc is a Senior Ecologist at BSG Ecology. James completed breeding bird survey at the Site and inputted to the ornithological sections of this report. He is an experienced field ornithologist who has undertaken breeding bird surveys at a wide range of sites throughout the UK. James has considerable experience completing a variety of bird survey methods, including specialist survey for goshawk, honey buzzard, nightjar and a range of other species, and completed his dissertation research on bird movements in Swansea Bay during his Degree studies. He undertakes annual breeding bird surveys for the BTO in the Welsh uplands and conducts a range of ornithological survey for Natural Resources Wales at their Newport Wetlands reserve.
- 2.5 Owain Gabb MSc MCIEEM CEnv acted as a technical director for the work and technically reviewed this report. Owain has worked as a professional ecologist since 2003 and has led and managed multiple renewable projects, including solar and battery storage schemes, throughout the UK.
- 2.6 Summary paragraphs detailing the professional experience of all staff are provided at www.bsg-ecology.com/people/.

Desk study

- 2.7 A data search request was made to the South East Wales Biodiversity Records Centre (SEWBRc) to obtain information on non-statutory designated sites and records of protected, invasive or otherwise notable species within 2 km of the approximate centre of the Site (Ordnance Survey Grid Reference (OSGR) ST 03665 67661). Data was received on 14 August 2024.
- 2.8 Publicly available aerial photography and mapping including the UK Government's MAGIC³ website, Natural Resources Wales (NRW) natural environment interactive map⁴, 'Where's the Path'⁵ and Google Earth Pro⁶ was also reviewed in order to understand the ecological context of the Site within the local landscape, and its linkage with statutory designated sites of biodiversity interest. Data from both sources was accessed throughout the preparation of this ecological report.
 - The MAGIC database and the NRW natural environment interactive map were used to establish the presence of statutory designated sites of nature conservation interest and priority habitats in

³ Available at www.magic.defra.gov.uk/magicmap.aspx. Accessed on 30 August 2024.

⁴ Available at https://experience.arcgis.com/experience/dd852f0e12864928973e3e165a1b4631/page/English/?views=Layers#data_s=id%3Awidget_1_6_output_config_1%3A0. Accessed on 30 August 2024.

⁵ Available at <https://wtp2.appspot.com/wheresthepath.htm>. Accessed on 30 August 2024

⁶ Google Earth Pro 7.3.4.8248 (64-bit)

relation to the Proposed Development within 2 km of the Site. Designation / notification information associated with each designated site was searched for on NRW website⁷.

- Where's the Path was used to review Ordnance Survey (OS) data and Google Earth Pro to obtain recent and historical aerial photography of the local area. This helped understand landscape-scale connectivity and to identify any waterbodies (with potential to support great crested newt) within 500 m of the Site boundary.

2.9 The desk study results were used to provide ecological context for the results of the Site assessment.

Field survey

Extended Phase 1 habitat survey

2.10 An extended Phase 1 Habitat survey was undertaken on 19 June 2024 by Zoe Paraskevopoulou MBiol., CIEEM Qualifying Member (Ecologist). Zoe has worked in consultancy since 2021 and has undertaken multiple Phase 1 habitat assessments during her career to date. The survey method was based on industry standard guidance (JNCC, 2016). Habitats present at the Site were identified and mapped, with any features of ecological interest recorded as "target notes (TN)". **Table 1** presents the details of the survey.

Table 1: Habitat survey information

Date	Survey	Timing	Temperature (°C)	Wind Speed (Beaufort)	Cloud Cover (Oktas ⁸)	Precipitation
19/06/2024	Extended Phase 1	10:30 – 13:30	15	2	2	None

2.11 The survey was 'extended' to assess the habitats on, or close to the Site, for the presence, or potential to support, protected or notable species. The Site was also searched for the presence of invasive non-native plants such as Japanese knotweed *Reynoutria japonica* and Himalayan balsam *Impatiens glandulifera*, as listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Invasive Species (Enforcement and Permitting) Order 2019.

Wintering Bird Survey

2.12 Wintering bird surveys were conducted by Edward Hunter, an experienced bird surveyor, during winter 2023-2024. Five survey visits were completed (monthly) during the period November 2023 to March 2024 inclusive.

2.1 The dates, times and weather conditions for each survey visit are provided in **Table 2**.

Table 2: Winter bird survey details

Date	Time	Weather			
		Wind (Beaufort)	Precipitation	Cloud (Oktas)	Temperature (°C)
27/11/2023	07:45-14:15	2	Nil	2	9
11/12/2023	07:50-14:15	2	Nil	0	10
08/01/2024	08:30-15:30	2	Nil	5	2
05/02/2024	07:50-14:15	2	Light intermittent	8	9
02/03/2024	06:55-13:35	1	Nil	0	3

⁷ Available at <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>. Accessed on 30 August 2024.

⁸ An okta is a unit of cloud cover, with each okta equating to 1/8 of the sky

- 2.2 During each visit, a walkover of the Site was completed, covering both of the Site fields, seven adjacent fields and two lagoons in Aberthaw Quarry, visible from publicly accessible land (a third lagoon identified on aerial imagery was not visible from publicly accessible land) (**Figure 2**). The surveyor stopped to visually scan fields from various locations (as necessary to achieve good coverage) for bird species using binoculars and a telescope.
- 2.3 To minimise disturbance and double counting of flushed birds, the walkover route was chosen to limit the number of scanning stops and avoid walked entry to fields that could be thoroughly scanned from a distance. Where birds were flushed, an effort was made to estimate numbers of birds, track flight paths and approximate settling locations were recorded. Birds considered likely to have been flushed earlier in the survey were not counted.
- 2.4 The location, species, flock size and behaviour of birds present were noted onto field maps.

Breeding Bird Survey

- 2.5 Breeding bird surveys were completed by James Darke BSc PGCert MCIEEM and James Garside BSc (both experienced bird surveyors) walking at a slow pace along a predetermined transect route through the Proposed Development area and immediate surrounds. All habitat features within the development area were approached to within approximately 50 m. The direction of travel was varied between visits, and frequent stops were made to listen and scan for singing and calling birds. Bird locations and behaviour were mapped using standard two-letter BTO species and activity codes (Marchant, 1983).
- 2.6 Behaviours and other observations considered to be evidence of breeding were:
- Birds in song / displaying.
 - Distraction display or injury feigning.
 - Used nests or eggshells found (occupied or laid within the survey period).
 - Recently fledged young or downy young.
 - Adults entering or leaving a nest site in circumstances indicating an occupied nest or an adult sitting on a nest.
 - Adults carrying food for young or faecal sacs.
 - Nest containing eggs.
 - Nest with young seen or heard.
- 2.7 Three survey visits were considered proportionate to the size of the Site as the principal purpose was to identify whether ground nesting species were present (as field boundaries were to be retained and enhanced). The survey date, time, and weather conditions at the time of survey are provided in **Table 3**.

Table 3: Details of breeding bird surveys

Date	Time	Weather			
		Wind (Beaufort)	Precipitation	Cloud (Oktas)	Temperature (°C)
03/05/2024	05:30-07:30	3 W	Light intermittent	8	12
23/05/2024	05:45-07:55	3 NW	Nil	8	12
14/06/2024	06:15-08:10	3 SW	Heavy showers before and after	6	13

- 2.8 The results of the three breeding bird surveys were combined to create a map showing territories of birds recorded as breeding in or within close proximity of the Site (**Figure 3**). BTO codes are used to identify species.

- 2.9 Where a bird was recorded in the same area during more than one survey visit in a year, and it was judged to be the same individual bird, one registration of that bird was recorded on the Figure. Where more than one individual of the same species is shown in close proximity on the Figure, it represents individual birds seen simultaneously during one or more surveys. Note the locations of presumed territories do not represent nest locations.
- 2.10 For species where definitive evidence of breeding was not obtained, professional judgement (based on a range of factors including knowledge of habitat requirements, local status and / or repeat sightings) was used to conclude whether breeding was likely. A precautionary approach was taken in the interpretation of the data, with species considered likely to have bred being shown.

BoCC status of birds recorded

- 2.11 The colour of the registration of each species shown on the figures reflects its 'Welsh Birds of Conservation Concern (BoCC)' status (Johnstone *et al.*, 2022), which assesses bird species on the basis of their population status, reflecting changes in their abundance and range. Only species with red or amber status were mapped. The Welsh BoCC listing Criteria are listed below.
- 2.12 Red-listed species are of high nature conservation concern and are those that:
- are Globally Threatened according to international (IUCN) criteria;
 - whose population or range has declined rapidly in recent years; or
 - have declined historically and not shown a substantial recent recovery.
- 2.13 Amber-listed species are of medium conservation concern, and are those:
- with an unfavourable conservation status in Europe;
 - whose population or range has declined moderately in recent years;
 - whose population has declined historically but made a substantial recent recovery;
 - that are rare breeders; or
 - occur in internationally important numbers within the area or have localised populations.

Limitations to methods

- 2.14 The northernmost field was cut for hay / silage prior to the PEA survey, complicating the Phase 1 habitat survey a little. Many of the grass species present could be identified through the presence of flower heads within the cuttings; however, some less common species or species not in flower may have been missed. Due to the highly agriculturally improved nature of the Site, sufficient botanical information was collected to confirm the habitats present / their quality and this is not considered a significant limitation.
- 2.15 Dense scrub on Site may conceal evidence of protected species (such as badger setts). However, vegetation and surrounding areas (where accessible) were inspected for evidence of use (i.e., mammal runs, prints, tracks, or droppings) and no field signs were noted. Therefore, this is not considered to be a significant limitation to this assessment; however, a pre-works check will need to be carried out as a precaution to identify any changes in activity/use of the Site.

EclA assessment process

- 2.16 The evaluation and assessment within this report have been undertaken with reference to the current Guidelines for Ecological Impact Assessment (EclA) in the United Kingdom developed by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2024). Although this is recognised as the industry standard for ecological assessment, the guidance is not prescriptive; rather, it aims to "provide guidance to practitioners for refining their own methodologies".

Important ecological features

- 2.17 A first step in EclA is determination of which ecological features (habitats, species, ecosystems and their functions/processes) are important. Important features should then be subject to detailed assessment if they are likely to be affected by a development. It is not necessary to carry out detailed assessment of features that are sufficiently widespread, unthreatened and resilient to effects of the development, such that there is no risk to their viability.
- 2.18 Ecological features can be important for a variety of reasons and the rationale used to identify these is explained below. Importance may relate, for example, to the quality or extent of designated sites or habitats, to habitat/species rarity, to the extent to which a habitat/species is threatened throughout its range, or to its rate of decline.

Evaluation: determining importance

- 2.19 The importance of an ecological feature is considered within a defined geographical context. The following frame of reference has been used in this case:
- International (Europe)
 - National (United Kingdom)
 - Country (Wales)
 - Regional (South Wales)
 - County (Vale of Glamorgan)
 - Local (electoral ward - Rhose)
 - Site (application boundary and immediate surrounds).
- 2.20 In certain circumstances, receptors may be valued below the Site level. In these instances, they are described as being of Negligible importance.
- 2.21 Features which require mitigation in order to ensure legal compliance are considered to be important features, even if their conservation value is low or not applicable (e.g. badger, which is not a rare species, but which receives legal protection on animal welfare grounds).

Characterising impacts and mitigation hierarchy

- 2.22 The CIEEM (2024) guidelines provide a list of "aspects of ecological structure and function to consider when predicting impacts". The term impact is used within this report in accordance with the following definition (as provided by the guidelines):
- Impact: "Actions resulting in changes to an ecological feature. For example, the construction activities of a development removing a hedgerow".*
- 2.23 Once a potential impact has been identified, the mitigation hierarchy (avoid, mitigate, compensate, enhance) is being followed and appropriate measures are being suggested.

Main phases of development

- 2.24 The potential impacts of the Proposed Development are considered in relation to its two phases: (1) Construction Phase and (2) Operational Phase, once the development has been constructed and is in use.

3 Results and Evaluation

- 3.1 In this section the results of fieldwork and desk study are brought together along with an evaluation of their importance.

Desk Study – Designated Sites

Statutory Designated Sites

- 3.2 The desk study identified one national statutory designated site within 2km of the Site; the East Aberthaw Site of Special Scientific Interest (SSSI). The SSSI was notified due to its coastal habitats including limestone cliffs, shingle spits, saltmarsh and relict sand dunes as they support plants and animals with a limited distribution within the county. It is also rich in land and littoral invertebrates. The SSSI is ~1.4 km south of the Site and it is separated from it by a mixture of mostly agricultural land and the East Aberthaw quarry.

Priority Habitats and Non-statutory Designated Sites

- 3.3 The desk study returned 12 priority habitats and three NRW Priority Areas within 2 km of the Site. These included an area of coastal saltmarsh priority habitat shown on online maps as on-Site. However, this appears to be a mapping error as following the Phase 1 survey and the JNCC habitat descriptions (JNCC, 2010) the habitats on Site were identified as arable land with associated field margins and an area of neutral grassland with no clear maritime influences. These habitats do not meet the priority habitat descriptions and are of low ecological value. Open mosaic habitat of previous developed land is the closest priority habitat. It is located ~15 m south of the Site (associated with a ceased quarry) and it is separated from it by Castle Road.
- 3.4 There were 24 non-statutory designated sites within 2 km of the Site, all of which are Sites of Importance for Nature Conservation (SINC). The closest SINC is Castle Wood, ~190 m north of the Site, with the B4265 road and agricultural land separating the two.
- 3.5 Detailed results of the desk study are presented in **Appendix 2**.

Phase 1 Habitats

- 3.6 The results of the Phase 1 habitats survey are shown in **Figure 4** and described below. The Proposed Development will result in loss of mostly non-cereal arable land in Field 1 and some neutral grassland (**Figure 5** superimposes the development proposals on the Phase 1 habitats to illustrate this).

Arable

- 3.7 Field 1 is dominated by arable land. At the time of survey it was under a rapeseed *Brassica napus* crop (Photograph 1). The crop was ~1.5m tall and covered most of the field area (~95%) at the time of the survey. Frequent forget-me-knot *Myosotis* sp. and occasional cut-leaved crane's-bill *Geranium dissectum* were present in the field margins in addition to speedwell *Veronica* sp., and swinecress *Coronopus squamatus*. Barley *Hordeum vulgare* and wheat *Triticum* sp. occurred rarely among the rape crop (total of ~5%).
- 3.8 This habitat does not meet the definition of any priority habitat (Maddock, 2011) or local designation (Gwent Wildlife Trust, 2004), including 'species-rich tillage fields and margins'⁹. Whilst this habitat is common and species-poor, it does have some ecological value for protected and notable species on Site and is therefore assessed as of importance at the **Site** level only.

⁹ "Species-rich tillage fields and margins" is represented by sites with fields that contain eight or more of the species listed in table 7, a list of indicator species for tillage fields and margins" (Gwent Wildlife Trust, 2024). This field contains one, swinecress.

Neutral Grassland

- 3.9 This is the main habitat type in Field 2 and is present in small areas of Field 1 and along the field boundaries in both fields. Species composition varies between stands.
- 3.10 At the time the survey Field 2 had been recently cut for silage / hay (~1 cm), and the arisings left to dry (Photograph 2). Yorkshire fog *Holcus lanatus* was the dominant grass, followed by perennial rye *Lolium perenne* (abundant), crested dog's-tail *Cynosurus cristatus* (frequent) and foxtail *Alopecurus* sp. (abundant). Creeping buttercup *Ranunculus repens* was also frequently seen within the trimmings. A small number of plastic sheets and a log pile were present within Field 2 (TN1 and TN2; Photographs 3 and 4).
- 3.11 The field margins of both fields vary between 0.5-1.5 m in width, ~1-1.5 m in height and consist mostly of grasses (Photograph 5). The field margins in Field 2 included the following species: Yorkshire fog (abundant), creeping bent *Agrostis stolonifera* (abundant), crested dog's-tail (abundant), cocksfoot grass *Dactylis glomerata* (frequent), brome *Bromus* sp. (occasional), perennial rye grass (occasional), lords-and-ladies *Arum maculatum* (rare), sweet vernal-grass *Anthoxanthum odoratum* (rare), spear thistle *Cirsium vulgare* (rare), meadow buttercup *Ranunculus acris* (rare) and false oat-grass *Arrhenatherum elatius* (rare). The following species were seen only on the eastern field margin of Field 2: nettle (abundant), curled dock *Rumex crispus* (frequent), willowherb *Epilobium* sp. (occasional), hogweed *Heracleum sphondylium* (occasional) and timothy grass *Phleum pratense* (rare). Small sections of uncut vegetation within Field 2 had broadly the same species composition as the field margins of this field.
- 3.12 The field margins of Field 1 included the following species: false oat-grass (dominant), creeping bent (abundant), perennial rye grass (abundant), sow thistle *Sonchus oleraceus* (abundant), cleavers (abundant), dandelion *Taraxacum officinale* agg. (frequent), forget-me-not (frequent), common nettle *Urtica dioica* (frequent), ribwort plantain *Plantago lanceolata* (frequent), hogweed (frequent), brome (occasional), spear thistle (occasional), broad-leaved dock *Rumex obtusifolius* (occasional), cut-leaved crane's-bill (occasional), oxeye daisy *Leucanthemum vulgare* (occasional), curled dock (rare) and bristly ox-tongue *Helminthotheca echioides* (rare). A small section of tall (~0.5-1 m) grassland is present in the southwestern corner of Field 1 which has broadly the same composition as the field margins except for the lack of spear thistle, cleaver *Galium* sp. and broadleaved dock and perennial rye grass is occasional instead of abundant (Photograph 6).
- 3.13 This habitat does not meet the definition of any priority habitat (Maddock, 2011) or local designation (Gwent Wildlife Trust, 2004) including 'relatively' species rich neutral grassland¹⁰. Whilst this habitat is common, it does support a higher plant species diversity than broadly similar semi-improved neutral grasslands, is likely to be of some ecological value for protected and notable species on Site and is therefore assessed as of importance at the Site level only.

Scrub and Scattered Broadleaved Trees

- 3.14 There are small areas of scrub within and directly adjacent to the Site boundary (Photograph 7). Within the Site these consist mostly of bramble *Rubus fruticosus* although rarely rose *Rosa* sp., dogwood *Cornus sanguinea* and ash *Fraxinus excelsior* saplings were also present.
- 3.15 This habitat does not meet the definition of any priority habitat (Maddock, 2011) or the local designation description for "scrub communities"¹¹. The habitat is quite common and widespread, but the higher structural diversity compared to other habitats on Site, and the additional nectar and sheltering resources it can provide to a range of notable and protected wildlife, constitutes this habitat of Site importance.

¹⁰ 'Relatively species-rich' is represented by sites with at least eight species present from Table 2, a list of species indicative of unimproved neutral grasslands (Gwent Wildlife Trust, 2024). This grassland contains one, oxeye daisy.

¹¹ Scrub communities should only be "considered for selection should normally contain at least 6 native woody species and that there is good structural diversity, for example with a varied range of shrub ages and canopy heights, the presence of small rides and clearings, good gradations in edge habitats, varied ground flora" (Gwent Wildlife Trust, 2004).

- 3.16 Five mature hawthorn *Crataegus monogyna* trees are present within Field 2 (T1-T5; Photograph 18). Due to their maturity, there are features within the trees that result in small crevices that could be used by bats (assessed as PRF-I).
- 3.17 An additional seven blackthorn and two hawthorn trees are present near HR5 but are separated from it by a section of tall ruderal vegetation (T6-T14). These trees are similar in age / condition to T1-T5 and each have several small features that could be used by bats (PRF-I).
- 3.18 A mature hawthorn and elder are located at the south western corner of Field 2 (T15 and T16). No features with potential to support roosting bats were noted on the elder when inspected from the ground. However, the hawthorn has features, such as small crevices that are likely to be used by individual bats (PRF-I).
- 3.19 Finally, a dead tree (unidentified species) and three mature hawthorns (T17-T20) are present adjacent to but outside the red line boundary north of Field 1. The dead tree has small crevices that are likely to be used by bats (PRF-I). The hawthorns were not inspected but due to their maturity it is likely that they have similar features as the other hawthorn trees on Site.
- 3.20 The trees do not meet the definition of any priority habitat (Maddock, 2011) or local designation guidelines (Gwent Wildlife Trust, 2004). Whilst scattered trees are frequent within the surrounding landscape, mature trees within the Site can provide habitat to protected and notable species and are therefore assessed as of **Site** importance.

Broadleaved plantation woodland

- 3.21 There are two main areas of broadleaved plantation woodland; these are at the north-western corner of Field 1 (woodland 1; off-Site) and immediately north of Field 2 (woodland 2; on-Site). The latter is adjacent to an old planted hedgerow which has become overgrown making the boundaries between the two unclear and therefore, the entire patch is treated as a small section of woodland (Photograph 8).
- 3.22 Woodland 1 is outside the Site boundary and consists mostly of *Acer* sp., *Prunus* sp., silver birch *Betula pendula*, sycamore *Acer pseudoplatanus*, rowan *Sorbus aucuparia*, dogwood, hawthorn *Crataegus monogyna*, field maple *Acer campestre* and horse chestnut *Aesculus hippocastanum* trees. Most trees are relatively young (~20 years). The understory includes species such as ivy *Hedera helix* (dominant), common nettle (abundant) and cleavers (abundant).
- 3.23 Woodland 2 is within the Site boundary and consists of similarly aged trees as those in woodland 1. Species include ash, elder *Sambucus nigra*, hawthorn, elm *Ulmus procera*, blackthorn *Prunus spinosa*, rowan, oak *Quercus* sp. and hazel *Corylus avellana*. Conifers occur occasionally (<10% of the woodland). The understory of the woodland is dominated by nettle and frequent spear thistle and ivy. Some bare ground is also present.
- 3.24 This habitat does not meet any priority habitat descriptions (Maddock, 2011) and does not meet the selection criteria for local designation under 'Woodlands' (Gwent Wildlife Trust, 2004). This habitat is quite common within Wales and the Vale of Glamorgan. However, due to the limited presence of this habitat within Rhooose and its likelihood to support notable and protected species this habitat is assessed as of **Local** importance.

Bare Ground

- 3.25 A small area of bare ground is present at the south-eastern corner of Field 1 with some emerging vegetation visible which included species such as sow thistle, creeping bent, ribwort plantain, cut-leaved crane's-bill, bristly ox-tongue, white clover *Trifolium repens*, common daisy *Bellis perennis*, broad-leaved dock and creeping buttercup (Photograph 9).
- 3.26 This habitat does not meet any priority habitat descriptions (Maddock, 2011) and does not meet the selection criteria for any local designations (Gwent Wildlife Trust, 2004). This habitat is common and widespread, it has low intrinsic ecological value and is, therefore, **scoped out of further consideration**.

Tall Ruderal

- 3.27 Small areas of tall common nettle (dominant) (~1.5-2 m) with some herb-Robert *Geranium robertianum* and cleavers are present in both fields (Photograph 10).
- 3.28 This habitat does not meet the definition of a priority habitat (Maddock, 2011) or the selection criteria for any local designations (Gwent Wildlife Trust, 2004). This habitat has formed in three small areas of the Site and is indicative of disturbed ground. Given the low intrinsic ecological value of this habitat and the small area of this habitat on Site (0.052 ha) it is **scoped out of further consideration**.

Hardstanding

- 3.29 A small area of hardstanding consisting of gravel is present in the western side of Field 2 forming part of an access track into the field (Photograph 11).
- 3.30 This is of negligible value for biodiversity and is therefore **scoped out of further consideration**.

Hedgerow and line of trees

- 3.31 There are multiple hedgerows on Site (Photographs 12 and 13). The understory of all hedgerows matches the vegetation of the field margins of the field they are in and ivy is occasionally present. A description of each hedgerow is provided below. Hedgerow locations are shown on **Figure 4**.
- Hedgerow 1 (HR1) is an intact species-poor native hedgerow approximately 2 m tall and 2 m wide. Species include elm (abundant), dogwood (abundant), hazel (abundant), bramble (abundant), field maple (frequent), bracken *Pteridium aquilinum* (frequent), elder (rare), hawthorn (rare) and rose *Rosa* sp. (rare).
 - Hedgerow 2 (HR2) is a defunct species-poor native hedgerow with trees. It has an average height of ~2 m and width of ~2.5 m. The trees within the hedgerow occur irregularly and are approximately 4 m tall. Shrub species within the hedgerow include a similar mix of elder, bramble, hawthorn, elm and blackthorn, while rose occurs rarely. The trees include oak, elm and unmanaged hawthorn. These are relatively young with no deadwood or other features and have negligible potential to support roosting bats.
 - Hedgerow 3 (HR3) is an intact species-poor native hedgerow. It is approximately 1.5 m tall and 1.5 m wide. Species include elm (abundant) and hawthorn (abundant) with occasional ivy, bramble, rose and elder. A mammal track is evident under the hedgerow (TN3; Photograph 14).
 - Hedgerow 4 (HR4) is an intact species-rich native hedgerow with trees. It has an average height and width of ~2 m. The trees within the hedgerow occur irregularly and are approximately 4 m tall. Species of the base of the hedgerow include hawthorn, ash, elm, dogwood, elder and bramble. Trees are mostly ash and hawthorn. These are relatively young with no deadwood or other features. A series of dead trees (unidentified species – likely elm) were present at the northern end of the hedgerow. Some of these were covered in thick ivy and some were bare. The bare trees were inspected from ground level. No visible crevices were seen indicating minimal potential for roosting bats. Dead trees can be an important resource for invertebrates.
 - Hedgerow 5 (HR5) is a defunct species-poor native hedgerow. It has an average height of 4.5 m and width of ~2 m. It is dominated by hawthorn, although other species such as elm, ash, elder and bramble are also present.
 - Hedgerow 6 (HR6) is a defunct species-poor native hedgerow. It is approximately 2.5 m tall and 1.5 m wide. It consists of an equal mix of hawthorn, blackthorn, and elder. Bittersweet *Solanum dulcamara* occurs rarely.
 - Hedgerow 7 (HR7) is a defunct species-poor native hedgerow. It consists of two small sections of elder and hawthorn between Field 1 and Field 2. These are likely to have been connected and used to be part of a larger hedgerow which was partially removed. The section of elder is

approximately 2 m tall and 1 m wide while the section of hawthorn is approximately 1.5 m tall and 1 m wide.

- Hedgerow 8 (HR8) is a defunct species-poor native hedgerow (essentially a line of trees) with a large missing section. It consists of nine hawthorn trees, an area of neutral grassland and three additional trees (two hawthorns and an elm). The trees have an average height of 4 m. The hawthorn trees are all mature with a number of deadwood features that lead to small crevices, relatively low to the ground (~1-1.5m; Photograph 15), these features are assessed as having low potential to support roosting bats with features “that are only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats”, hence being classified as PRF-I trees according to the Bat Conservation Trust Guidelines (Collins, 2023).

- 3.32 According to the priority habitat definition for hedgerows (Maddock, 2011), HR1-HR6 are priority habitat. No hedgerows meet the guidelines to qualify for local designation (Gwent Wildlife Trust, 2004). They provide some limited connectivity across the Site and contain a reasonable diversity of tree/scrub species, which are likely to support a range of protected and notable wildlife. Hedgerows are therefore assessed as of at least **Local** importance.

Fence

- 3.33 The perimeter of Field 2 is fenced (Photographs 16 and 17). Fences do not have intrinsic ecological value and are therefore **scoped out of further consideration**.

Invasive Non-native Species

- 3.34 SEWBRc returned multiple records of ten invasive non-native plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) within the 2 km search radius. In addition, multiple records of ten bird species and 26 records of eastern grey squirrel (also listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)) were also returned.
- 3.35 No invasive non-native plant species (INNS) were observed within the Site or immediate surrounding land during the survey. The development is therefore unlikely to result in the spread of invasive non-native plant species, which are therefore **scoped out of further consideration**.

Desk Study - Protected Species

- 3.36 Desk study information on protected species is presented in the “Field Study – Protected Species” section below. Detailed results are presented in **Appendices 3 and 4**. The Legislative and policy protection afforded to these species is summarised in **Appendix 5**.

Field Study - Protected Species

Amphibians

- 3.37 Great crested newts (GCN) are protected under the Conservation of Habitats and Species 2017 (as amended) and under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) (WCA).
- 3.38 SEWBRc returned 126 records of GCN within the search radius. These records were concentrated on four locations. The closest record is approximately 1.4 km from the Site.
- 3.39 Common toads are a species of principal importance in Section 7 of the Environment (Wales) Act 2016. The closest record is 230 m from the Site. No other amphibian species with afforded legislation were returned from the desk study.
- 3.40 There were no ponds on Site. There are two ponds within 250 m of the Site boundary within the Aberthaw Quarry. At their nearest point the ponds are ~ 30 m south of the Site boundary. Both ponds have very low suitability for GCN because of their size (1.5 ha and 1.3 ha) steep banks and lack of shallow water areas. No other ponds are present within 250 m of the Site. There are approximately

six more ponds between 250 – 500 m from the Site. They are separated from the Site either by the quarry or by major roads.

- 3.41 Overall, most of the Site provides low suitability habitats for GCN. The hedgerows, field margins and scrub on Site and in the surrounding landscape provide suitable foraging and connective habitat for GCN and other amphibians to disperse through the landscape. Therefore, the Site is assessed as of **Site** level importance only to amphibian species.

Badgers

- 3.42 Badgers *Meles meles* are protected upon welfare grounds under the Protection of Badgers Act 1992. This makes it an offence to intentionally capture, kill or injure a badger, to damage, destroy or block access to a sett, and to disturb badgers in their setts.
- 3.43 SEWBreC returned two records of badger setts within the search radius, with the closest approximately 1.2 km from the Site.
- 3.44 No evidence of badgers was noted on Site. The habitats on Site could be used by foraging and/or commuting badgers. However, they are generally of lower suitability to support sett building with the areas of scrub, woodland and hedgerows having the higher likelihood of use. Badger is only considered further in the context of precautionary measures to ensure legislative compliance.

Bats

- 3.45 Bats and their resting places (roosts) are protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and the WCA 1981 (as amended).
- 3.46 SEWBreC returned 126 records of at least eight bat species, including brown long-eared, common pipistrelle, Daubenton's bat, lesser horseshoe bat, Natterer's bat, noctule, serotine, soprano pipistrelle.
- 3.47 Several bat roost records were returned. The closest roosts are of *Pipistrellus* sp., Natterer's bat, lesser horseshoe bat, brown long eared bat and serotine ~1.1 km from the Site.
- 3.48 No buildings are present within the Site boundary. There are some trees on Site that offer roosting opportunities for bats. Specifically, the trees T1-T14, T16-T20 as shown in **Figure 4** have low bat roosting potential (PRF-I, according to the Bat Conservation Trust guidelines (Collins, 2023)). The trees within the woodland adjacent to the Site were not individually assessed. However, the woodland is not expected to be affected by the proposals.
- 3.49 The habitats on Site have moderate suitability to support foraging and commuting bats due to the presence of neutral grassland, linear hedgerows, woodland and scrub areas connected to the wider landscape. However, the arable habitat on Site is unlikely to provide a valuable prey resource. As a result of all the above the Site is considered of **Local** importance to bats.

Hazel Dormouse

- 3.50 Hazel dormouse is protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and under Schedule 5 of the WCA 1981 (as amended).
- 3.51 SEWBreC returned two records of hazel dormouse within the 2 km search radius. The closest record is ~1.8 km from the Site in 2009.
- 3.52 The Site contains habitat that is suitable for nesting, foraging and commuting hazel dormice in the form of woodland, limited scrub and hedgerows which have good connectivity across the Site and to the wider landscape. Therefore, the Site is assessed as being of **Site** importance to this species.

Invertebrates

- 3.53 Limited protection is afforded to species listed on Schedule 5, Section 9.5 of the WCA 1981 (as amended). Some invertebrates are designated as species of principal importance for the conservation of biodiversity in Wales (a list compiled in accordance with Section 7 of the Environment (Wales) Act 2016).
- 3.54 SEWBrEC returned 50 records of Schedule 5, section 9.5 of the WCA 1981 (as amended) and Section 7 of the Environment (Wales) Act 2016 invertebrate species.
- 3.55 The Site offers low floristic diversity to support a diverse range of invertebrates. Exceptions are the hedgerow, scrub and woodland areas which could support a higher number of common species. Therefore, the Site is assessed as of **Site** importance for invertebrate species.

Other mammals

- 3.56 Brown hares, west European hedgehogs, harvest mice, and polecats are afforded species of principal importance under Section 7 of the Environment (Wales) Act 2016 (as amended).
- 3.57 SEWBrEC returned a total of 11 records of brown hare, 30 records for hedgehogs, four records of harvest mouse and one record of polecat within the search radius.
- 3.58 No evidence of activity of any of these species were observed during the field survey. Brown hares, hedgehogs and harvest mice may use areas within the Site due to their occurrence in the wider landscape. However, the habitats on Site are common in local area and do not provide exceptional resources for any of the aforementioned species. As such the Site is assessed as having **Site** importance to these species.

Otter

- 3.59 Otter is protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and under Schedules 5 of the WCA 1981 (as amended).
- 3.60 SEWBrEC returned 22 records of otter within the 2 km search radius. The closest record is approximately 320 m from the Site in 2021.
- 3.61 No waterbodies are present on Site. The closest water bodies are the two ponds which are ~ 30 m south of the Site boundary. The River Kenson is ~100 m north west of the Site. Both the ponds and the river are likely to support fish. No evidence of use by otter was noted on Site. Otters may move along the Site (over-ground runs), however, the Site itself is unlikely to have any valuable resources for foraging or holt creation. It is, therefore, unlikely that otters will use the Site but **further consideration is given** for this species to address indirect effects.

Protected Plants

- 3.62 SEWBrEC returned multiple records for nine protected/notable plant species with the most recent one (relevant to the Site) being in 2022 approximately 1.8 km from the Site.
- 3.63 No protected species listed on Schedule 8 of the WCA 1981 (as amended)/notable flora species were recorded during the survey. Habitats present on the Site are generally common throughout the wider landscape and are unlikely to support a diverse or significant number of notable species including those returned by SEWBrEC. Protected plants are **scoped out for further consideration**.

Reptiles

- 3.64 All reptiles are afforded protection under Schedule 5 of the WCA 1981 (as amended).

3.65 SEWBrEC returned 50 records of adder, six records of grass snake and 145 records of slow worm. The closest adder record is <500 m from the Site (2009), the closest grass snake record is 1.2 km from the Site, and the closest slow worm record is 140 m from the Site.

3.66 The Site offers limited foraging and commuting habitat for reptiles in the form of hedgerows and scrub. Although the tall rapeseed crop and hay grassland could provide sheltering opportunities, it is unlikely to be favoured by reptiles due to regular disturbance by the agricultural activities and lack of diversity in the vegetation structure within the Site leading to limited prey resources. The Site is assessed as of Site level importance for reptiles.

Water Vole

3.67 Water vole is afforded protection under Schedule 5 of the WCA 1981 (as amended).

3.68 SEWBrEC returned five records for water vole between 1978-1980 with the closest 330 m from Site.

3.69 No evidence of water vole activity (such as burrows, latrines, feeding remains) were observed during the field survey.

3.70 There are no waterbodies within the Site and the habitats on Site do not provide suitable habitat for water voles. It is therefore unlikely that water vole are present on Site and the species is **scoped out of further consideration**.

Birds

3.71 All nesting birds are protected under Section 1 of the WCA 1981 (as amended). Greater protection is afforded to species listed on Schedule 1 of the WCA 1981 (as amended).

3.72 SEWBrEC returned multiple records of 113 Schedule 1, Section 7 of the Environment (Wales) Act 2016 and Red list in Birds of Conservation Concern 5 (2021) bird species. From the species likely to be found on Site the closest records are those of red kite *Milvus milvus*, peregrine, reed bunting, linnet *Linaria cannabina*, song thrush, kestrel *Falco tinnunculus* and dunnoek *Prunella modularis* approximately 140 m from the Site.

Wintering Bird Surveys

3.73 Wintering species diversity within the Site is limited to common and widespread passerines. The most notable sighting during the surveys was a reed bunting flock (of up to 17 individuals); this species is of conservation concern in Wales. Flocks form post breeding and in winter, when they communally forage in farmland. As such, the Site is assessed to be of **Site** importance to non-breeding/wintering birds.

3.74 The wider area, and especially the quarry ponds ~30 m south of the Site, provide better resources than the habitats present on Site. Nearby woodland supports day-roosting woodcock which is likely to be foraging in surrounding farmland during the night. Single figure counts of species including mallard *Anas platyrhynchos*, teal *Anas crecca* and tufted duck *Aythya fuligula* occur on the adjacent quarry ponds (but do not use the Site), and raptors occasionally move through the area. These included sightings of a merlin *Falco columbarius*, red kite *Milvus milvus* and kestrel *Falco tinnunculus* during the surveys.

Breeding Bird Surveys

3.75 A total of thirty-two species were recorded during the breeding bird surveys, nineteen of which were considered to be breeding within the area surveyed. Territorial birds were located along the Site boundary hedgerows and woodland copses. No birds were noted breeding within either of the on-Site fields.

3.76 **Table 4** lists all of the species recorded during the breeding bird surveys and gives information on their conservation status and the number of territories recorded. The location of territories is shown on **Figure 3**.

Table 4: Number of territories and conservation status of all species recorded during the breeding bird surveys

Species			Conservation Status		Number of Territories
Common Name	Scientific Name	BTO Species Code	Section 7	Welsh BOCC Status*	
Blackbird	<i>Turdus merula</i>	B.		Green	2
Blackcap	<i>Sylvia atricapilla</i>	BC		Green	11
Blue tit	<i>Cyanistes caeruleus</i>	BT		Green	2
Canada Goose	<i>Branta canadensis</i>	CG		No Status	0
Carrion crow	<i>Corvus corone</i>	C.		Green	0
Chaffinch	<i>Fringilla coelebs</i>	CH		Green	5
Chiffchaff	<i>Phylloscopus collybita</i>	CC		Green	9
Common whitethroat	<i>Curruca communis</i>	WH		Red* (Amber)	4
Dunnock	<i>Prunella modularis</i>	D.	Y	Green* (Amber)	12
Goldcrest	<i>Regulus regulus</i>	GC		Amber* (Green)	1
Goldfinch	<i>Carduelis carduelis</i>	GO		Green	8
Great-spotted woodpecker	<i>Dendrocops major</i>	GS		Green	0
Great tit	<i>Parus major</i>	GT		Green	1
Greenfinch	<i>Chloris chloris</i>	GR		Amber* (Red)	0
Herring gull	<i>Larus argentatus</i>	HG	Y	Red	0
Jackdaw	<i>Corvus monedula</i>	JD		Green	0
Lesser black-backed gull	<i>Larus fuscus</i>	LB		Amber	0
Lesser whitethroat	<i>Curruca curruca</i>	LW		Green	1
Linnet	<i>Linaria cannabina</i>	LI	Y	Red	2
Magpie	<i>Pica pica</i>	MG		Green	0
Mallard	<i>Anas platyrhynchos</i>	MA		Amber	0
Pheasant	<i>Phasianus colchicus</i>	PH		No Status	0
Reed bunting	<i>Emberiza schoeniclus</i>	RB	Y	Green* (Amber)	1
Robin	<i>Erithacus rubecula</i>	R.		Green	5
Rook	<i>Corvus frugilegus</i>	RO		Green* (Amber)	0
Skylark	<i>Alauda arvensis</i>	S.	Y	Amber* (Red)	2
Song thrush	<i>Turdus philomelos</i>	ST	Y	Amber	6
Starling	<i>Sternus vulgaris</i>	SG	Y	Red	0
Stock dove	<i>Columba oenas</i>	SD		Green* (Amber)	0
Swallow	<i>Hirundo rustica</i>	SL		Green	1
Wood pigeon	<i>Columba palumbus</i>	WP		Green* (Amber)	2
Wren	<i>Troglodytes troglodytes</i>	WR		Green* (Amber)	19

*For these species, the Welsh BoCC status differs from the recently published 'Birds of Conservation Concern 5', which applies to the UK as a whole. For each, the UK BoCC 5 status is also given (in brackets).

Schedule 1 Species

- 3.1 None of the species recorded as breeding are listed on Schedule 1 of the Wildlife and Countryside Act (1981) (as amended).

3.2 Section 7 Species

- 3.3 Five of the species recorded as breeding within the area surveyed during the breeding bird surveys are species of principal importance for the conservation of biodiversity in Wales (Priority species) listed under Section 7 of the Environment Wales Act (2016); dunnock, linnet, reed bunting, skylark and song thrush.
- Twelve dunnock territories were recorded during the surveys, nine of which were on Site (with a bird recorded singing from the south-western corner of the Site and on boundary hedgerows), and three off-Site in the adjacent woodland copses to the west of the Site. The singing dunnock within the cereal crop would not have been breeding within the Field as they build their nests in shrubs and bushes.
 - Two linnet territories were recorded during the surveys, one centred on the small hedgerow in the central part of the Site, the other centred on the eastern boundary hedgerow.
 - One reed bunting territory was recorded during the surveys. A bird was noted singing from a hawthorn in the northern field and is likely to have bred close by.
 - Two skylark territories were recorded during the surveys, centred on adjacent (off-Site) land, one over a field to the east, the other over grassland to the north-west. The structure of the habitat on Site is unlikely to be suitable for skylark (being too short and lacking cover in the neutral grassland and too tall and dense in the rape crop).
 - Six song thrush territories were recorded during the surveys, three centred on the southern boundary hedgerows, and three centred on (off-Site) adjacent woodland copses to the north-west, north and east.

Birds of Conservation Concern in Wales**Welsh Red-Listed Species**

- 3.4 Two Welsh red-listed species were recorded breeding within the area surveyed during the work; linnet and common whitethroat. Further information regarding the breeding linnet records is summarised under Section 7 species (above).
- Four common whitethroat territories were recorded during the surveys, one centred on the small hedgerow in the central part of the Site, and three centred on the eastern boundary hedgerow.

Welsh Amber-Listed Species

- 3.5 Three Welsh amber-listed species were recorded breeding within the survey area; goldcrest *Regulus regulus*, skylark and song thrush. Further information regarding the breeding skylark and song thrush record is provided under 'Section 7 Species' (above).
- One goldcrest territory was recorded during the surveys, centred on adjacent (off-Site) woodland to the south.

Other Species

- 3.6 A total of fourteen Welsh green-listed species were considered to be breeding within the area surveyed (slightly wider area than the Site – the survey route can be seen on **Figure 2**). These are relatively widespread and / or common species in Wales and are not of particular conservation concern.
- 3.7 The majority of the species recorded on Site were common species of no conservation priority. However, there are nesting opportunities within the woodland, scrub, hedgerows and individual trees on Site which is, therefore, considered of **Site** importance for breeding birds.

Non-breeding species

- 3.8 Welsh red and amber listed non-breeding species recorded during the surveys were; greenfinch *Carduelis chloris*, herring gull *Larus argentatus*, lesser black-backed gull *Larus fuscus*, mallard *Anas platyrhynchos* and starling *Sturnus vulgaris*. Most non-breeding species on Site were of common species with no conservation priority and therefore, the habitats on Site are considered of **Site** importance for non-breeding bird species.

DRAFT

4 Impacts and Mitigation

- 4.1 This section presents an interpretation of the results and an assessment of the potential impacts of the Proposed Development on the features identified in **Section 3**. Mitigation measures incorporated / 'embedded' within the scheme design are outlined here (Primary Mitigation Measures), as well as mitigation measures related to legislative / policy requirements or standard industry practice (Tertiary Mitigation Measures). These are followed by any other anticipated mitigation requirements (Secondary Mitigation Measures). Opportunities for biodiversity enhancement in line with legislative and policy requirements are presented in **Section 5**.

Primary Mitigation Measures

- 4.2 The Proposed Development design has been informed by series of collaborative team meetings and technical reports in which ecological constraints and opportunities have been considered (i.e., Preliminary Ecological Appraisal (BSG Ecology, 2024)). The aim of this is to minimise the ecological impact of the scheme, as far as is possible given other constraints and viability considerations, through the design process, and demonstrates that the mitigation hierarchy has been followed. As such the design of the Proposed Development has sought to avoid any direct impacts on habitats of higher ecological significance where practicable by retaining these within the scheme design. These include woodland, scrub and scattered trees on Site as well as the majority of the hedgerows and field margins (i.e., 10 m buffer zone from retained hedgerows).

Tertiary Mitigation Measures

- 4.3 A Construction Environmental Management Plan (CEMP) will be produced to set out best practice construction techniques and mitigation measures to be implemented during the construction phase. Such measures will include:
- Measures to avoid impacts on retained habitats on Site during construction including ways in which accidental physical damage, lighting, pollution, soil compaction and sediment mobilisation will be avoided. There may be a requirement for the presence of an Ecological Clerk of Works (ECoW) to assist in effective implementation of the CEMP.
 - Measures to avoid impacts on nesting birds including clearance of vegetation (where required) will be conducted outside of the bird nesting season to avoid disturbing or destroying active nests. Any removal of vegetation during the nesting bird season (which is typically taken as March to August inclusive), should be preceded by a survey (undertaken by a suitably experienced Ecological Clerk of Works (ECoW)) to identify active nests. Any nests found will be protected by work exclusion buffers and monitored by the ECoW.
 - Measures to avoid impacts on hazel dormouse during the removal of HR3 and HR7. Works will need to follow procedures that will be outlined in a Non-Licence Method Statement (NLMS) which will be provided to all the contractors in advance of the Site works and a briefing on it will be provided on Site by the ECoW during a "toolbox talk". If evidence of use of the hedges by hazel dormouse is noted, then all works must cease and a development licence from Natural Resources Wales (NRW) will need to be sought.
 - A pre-commencement check for badger setts will be completed by an ECoW between one and three months in advance of ground investigation and construction works. Appropriate further mitigation measures to protect badgers and other wildlife, and avoid contravention of the law, will be set out in the CEMP (as necessary).
 - Measures to avoid killing / injuring of amphibians and reptiles will be implemented during construction. These will include staged removal of vegetation and hand-searching by an ECoW where necessary.
 - Construction and pre-commencement ground investigations will be timed, to minimise night-time working to minimise disturbance to bats. Artificial light to aid construction and during operation will be installed with motion sensors and will be designed to minimise light spillage outside active construction areas and areas of higher ecological value (e.g., woodland, scrub, trees, hedgerows, any proposed enhancements such as the pond and bat boxes etc.).

- The CEMP will identify best practice to be applied to minimise water pollution from spillages associated with construction works and air pollution from construction vehicle emissions and dust generation.
- Sufficient gaps will be left under any proposed fencing to allow access for small mammals (noting that animals will also be able to dig under these fences in normal circumstances). Gaps of approximately 250 mm (H) x 200 MM (w) at ground level will allow for wildlife movement across the Site by species such as badger, hedgehog, brown hare etc.
- Sensitive working practices will be adopted during the construction phase to prevent entrapment or other causes of harm to mammals (i.e. providing means of escape for any uncovered excavations, appropriately storage of chemicals and capping of exposed piping).

Assessment of Potential Impacts and Secondary Mitigation Measures

Statutory Designated Sites

- 4.4 The East Aberthaw Coast SSSI is the only statutory designated sites within 2 km from the Site (~1.4 km south). Due to the nature of the proposals (BESS) and the distance of the SSSI from the Site no direct (i.e. removal or modification) or indirect impacts (e.g., noise, vibrations, dust, lighting, air pollution, increased traffic etc.) are predicted that would affect the designation of the site. On this basis, mitigation measures for statutory designated sites are **not considered further**.

Priority Habitats and Non-statutory Designated Sites

- 4.5 Due to the nature of the Proposed Development, impacts are going to be very localised (contained within the Site) and therefore, no direct or indirect impacts are anticipated to any of the priority habitats.
- 4.6 The closest non-statutory designated site is the Castle Wood SINCD approximately 190 m north of the Site, designated for its ancient semi-natural native lowland mixed deciduous woodland. Any direct or indirect impacts from the development are predicted to be very localised (within the Site) and as such no impacts on SINCD habitats are expected to occur as a result of the Proposed Development. On this basis, mitigation measures for priority habitats are **not considered further**.

Habitats – Arable and neutral grassland

Impacts

- 4.7 The development footprint will result in the permanent loss of ~3.30 ha of arable land and ~0.20 ha of neutral grassland.
- 4.8 Indirect impacts during the operational phase may include increased trampling of retained field margins and any newly created habitats due to public/staff/contractors straying off the designated paths/hardstanding, which could result in the degradation of the retained/proposed habitats.

Mitigation/enhancement

- 4.9 The loss of arable and semi-improved neutral grassland will be mitigated by enhancing the majority of the remaining areas of the neutral grassland field (~2.3 ha) into a scrub/wildflower area mosaic, which is an area of higher ecological value than those being lost. Section 5 provides more information regarding the creation of this habitat. For detailed planting and management please refer to the Landscape and Ecological Management Plan (LEMP) (LDA Design Ltd, 2025).
- 4.10 Potential indirect impacts (e.g., degradation of created scrub/wildflower habitats) will be mitigated for by the provision of surfaced paths, low-level / unobtrusive fencing, scrub and tree planting and signage.

Residual impacts

- 4.11 Following mitigation no residual impacts have been identified.

Habitats - Scrub and Scattered Broadleaved Trees**Impacts**

- 4.12 Direct impacts (i.e., loss or modification) resulting from the Proposed Development would comprise the light trimming of scrub near the access routes during the construction phase.
- 4.13 Other direct impacts during the construction phase may include further removal of scrub or loss of trees due to accidental damage / degradation of retained scrub by contractors or compaction of root protection zones (RPZs) by heavy plant or material laydown.
- 4.14 No indirect impacts are anticipated during the construction phase.
- 4.15 No direct or indirect impacts are anticipated during the operational phase.

Mitigation/enhancement

- 4.16 To avoid any accidental scrub removal during the construction period, areas of retained scrub are to be fenced off. To avoid any accidental tree removal during the construction period, suitable RPZs have been established, and fencing is to be erected around them to avoid damage on the retained habitat. The RPZs have been established by a suitably qualified Arboriculturalist in accordance with the British Standard (BS5837:2012) Trees in Relation to Design, Demolition and Construction – Recommendations are set out in the Arboricultural Report (Sylva Consultancy, 2025).
- 4.17 The loss of small areas of scrub habitat will be mitigated by the enhancement of ~2.3 ha of semi-improved neutral grassland into a scrub and wildflower mosaic which is an area of higher ecological value compared to the small sections of scrub that will be lost. Section 5 provides more information regarding the creation of this habitat. For detailed planting and management please refer to the LEMP (LDA Design Ltd, 2025).

Residual impacts

- 4.18 Following mitigation no residual impacts have been identified.

Broadleaved plantation woodland**Impacts**

- 4.19 In the absence of mitigation, potential direct impacts during the construction phase may include accidental damage / degradation of by contractors or compaction of root protection zones of retained trees by heavy plant or material laydown.
- 4.20 No indirect impacts are anticipated during the construction phase.
- 4.21 No direct or indirect impacts are anticipated during the operational phase.

Mitigation/enhancement

- 4.22 To avoid any accidental woodland removal during the construction period, suitable RPZs have been established, and fencing is to be erected around them to avoid damage on the retained habitat. The RPZs have been established by a suitably qualified Arboriculturalist in accordance with the British Standard (BS5837:2012) Trees in Relation to Design, Demolition and Construction – Recommendations are set out in the Arboricultural Report (Sylva Consultancy, 2025).

Residual impacts

- 4.23 Following mitigation no residual impacts have been identified.

Hedgerow and line of trees**Impacts**

- 4.24 Direct impacts (i.e., loss or modification) resulting from the Proposed Development include the loss of part of HR7 (~5 m) and removal and re-instatement of part of HR3 (~4 m) during the construction phase. The latter will be completed under permitted development rights for the installation of the cable route and is not part of this application.
- 4.25 In the absence of mitigation, another potential direct impacts on hedgerows would be loss of hedgerow scrub/trees due to accidental damage to the RPZs during the construction phase.
- 4.26 No indirect impacts are anticipated during the construction phase.
- 4.27 No direct or indirect impacts are anticipated during the operational phase.

Mitigation/enhancement

- 4.28 To avoid any accidental hedgerow removal during the construction period, suitable RPZs have been established, and fencing is to be erected around them to avoid damage on the retained habitat. The RPZs have been established by a suitably qualified Arboriculturalist in accordance with the British Standard (BS5837:2012) Trees in Relation to Design, Demolition and Construction – Recommendations and are set out in the Arboricultural Report (Sylva Consultancy, 2025). The loss of the hedgerows will be mitigated by the enhancement of ~275 m of hedgerows HR3 and HR7 by “filling-in” gaps and re-connecting them by re-planting/laying the hedge and planting of the understory with UK native shade tolerant plants. Section 5 provides more information regarding the creation of this habitat. For detailed planting and management please refer to the LEMP (LDA Design Ltd, 2025).

Residual impacts

- 4.29 Following mitigation no residual impacts have been identified.

Protected Species

- 4.30 Potential impacts and proposed mitigation/enhancement measures for protected/notable species are presented on **Table 5**. Details on legislative protection for each species is provided within **Appendix 5**.

Table 5: Potential impacts and mitigation recommendations for protected species.

Species	Potential Impacts	Avoidance/Mitigation Actions
Amphibians	Killing/injury (if present) Loss of suitable terrestrial habitat on Site Indirect impacts through habitat fragmentation Following mitigation, no residual impacts have been identified	Taller areas of grassland and scrub should initially be cut to 10 cm, then left for at least 24 hours before clearance to allow any animals present to disperse. A hand search will need to be carried out by a great crested newt licenced ecologist before breaking of ground to ensure no individuals are present. If great crested newts are found, all works must cease, and a European Protected Species Licence will need to be sought. An NLMS will be produced outlining a range of measures that work contractors need to adhere to in order to avoid harm to amphibians and other wildlife. A briefing will be provided by the ECoW during a “toolbox” talk before works commence. Enhance retained features and incorporate new features suitable for amphibians within the Site design, such as placement of log piles (within/near the woodland) and the creation of a south facing mound to provide hibernacula (see further details in Section 5). Multiple variable-sized wildlife ponds totalling an area of ~275 m² (each pond will be at least 25 m²), associated with marginal vegetation (~0.06 ha) are to be created on Site. This is likely to help with connectivity of amphibians within the Site and the surrounding areas. More details about pond creation can be found in Section 5 of this report and the LEMP (LDA Design, 2025).
Badger	Killing/injury Following mitigation, no residual impacts have been identified	Badgers are a highly mobile species and readily occupy new territories and build setts. A badger walkover will need to be conducted between one and three months before works commence to verify the likely absence of any badger setts on Site. Retain on Site habitat where possible (i.e. scrub, woodland, and hedgerows) and maintain connectivity to off Site habitats. Sensitive working practices during construction (i.e., no uncovered excavations, appropriately stored chemicals and capping exposed pipping) are to be implemented to avoid the risk of harm to wildlife before and during the construction. Creation of at least 250 mm (H) x 200 mm (W) gaps on any proposed fencing to allow of movement of badger and any other wildlife within the Site.

Bats	Killing/injury (if present) Damage/destruction of resting/breeding sites Disturbance or abandonment of off-site roosts through lighting impacts Indirect impacts through fragmentation, light and pollution Loss and/or fragmentation of moderate foraging and commuting habitat Following mitigation, no residual impacts have been identified	A section of HR7 (~5 m) is expected to be permanently removed for which mitigation will be provided through the enhancement of HR3. A small section of HR3 (~4 m) is expected to be removed and re-instated under permitted development rights to accommodate the cable installation. The Site is of moderate suitability for foraging/commuting bats. Most hedgerows on Site are retained with the exception of the permanent removal of a ~5 m section of a defunct hedgerow (HR7). No individual trees are to be removed. Further surveys will not provide any more insight into the use of the Site and the proposed enhancement measures will significantly better the condition of habitats on Site, thus increasing their foraging suitability for bats, providing adequate mitigation. All woodland areas and most hedgerows are expected to be retained/re-instated and subject to long-term management which will enhance their value (i.e., more sheltering/cover opportunities, higher connectivity etc.). Nine bat boxes will be provided as enhancement for bat species. Their approximate locations are shown in LDA Design's Landscape Plan DWG: 8919_100 (Appendix 6). Enhance hedgerows through planting of the undergrowth vegetation with shade tolerant plants and appropriate management providing additional foraging resources. Areas not used by the Proposed Development are to be planted with species-rich wildflower mix. These areas will provide a higher floristic diversity than currently present on Site which will increase the invertebrate presence on Site which will therefore, increase its foraging value for bats. Multiple variable-sized wildlife ponds totalling an area of ~275 m² (each pond will be at least 25 m²), associated with marginal vegetation (~0.06 ha) are to be created within the Site, which is going to provide further foraging opportunities for bats. Section 5 provides more information regarding the creation of this habitat. For detailed creation, planting and management please refer to the LEMP (LDA Design Ltd, 2025). It is understood that security lighting installed with motion sensors is proposed within the development design. This is to face away from higher ecological value habitats (i.e. hedgerows, scrub, woodland, created pond) and any installed bat roosting features (i.e., bat boxes).
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Bird Assemblage	Loss of nesting and foraging habitat. Damage or destruction of active nests. Following mitigation, no residual impacts have been identified	Removal of any woody vegetation including dense scrub, if required, should be conducted outside of the breeding season (March to August as a guide) or following a pre-works check for nesting birds and under supervision of a suitably qualified Ecological Clerk of Works (ECoW). Breeding and wintering bird surveys have been conducted. These surveys did not identify any species that will require further survey/mitigation as the majority of the species recorded were common non-designated species. Bird boxes will be provided as enhancement for breeding bird species (see Section 5 for more details). Furthermore, the majority of boundary habitats including woodland, scrub and hedgerows will be retained and managed and any loss of vegetation will be mitigated by increasing nesting and foraging opportunities on Site through habitat creation (e.g., scrub mosaic, tree/hedgerow planting, wildlife pond etc.).
Hazel dormouse	Killing/injury (if present) Damage/destruction and/or fragmentation of habitats available for nesting, foraging and dispersal Following mitigation, no residual impacts have been identified	Retain hedgerows, woodland, scrub and connectivity across the Site where possible. No works to be conducted within 10m from retained hedgerows. Hedgerow removal is limited (permanent loss of ~5 m for HR7 and temporary loss of ~4 m for HR3). The area of hedgerow removed is small and it is on truncated hedgerows, not connected to any other hedgerows on Site, hence not providing substantial connectivity to suitable habitat for hazel dormouse within or around the Site. Therefore, no further surveys are recommended. However, hedgerow removal will need to be undertaken under ecological supervision by a hazel dormouse licenced Ecologist (ECoW). Works will need to follow procedures that will be outlined in an NLMS which will be provided to all the contractors in advance of the Site works and a briefing on it will be provided on Site by the ECoW during a "toolbox talk". If evidence of use of the hedges by hazel dormouse is noted, then all works must cease and a development licence from Natural Resources Wales (NRW) will need to be sought. Security lighting installed with motion sensors is proposed within the development design. This is to be positioned facing away from features of higher ecological value for the species (i.e., hedgerows, woodland, retained scrub etc.). Dormouse boxes will be placed on Site as mitigation for the small area of hedgerow removal (see Section 5 for further details). The loss of small amounts

		of hedgerow will be further mitigated by the enhancement of HR3 which would increase connectivity within the Site for the species.
Non-native invasive plants	Spread of non-native invasive plants in the wild Following mitigation, no residual impacts have been identified	No non-native invasive plants were noted during the survey. However, due to their invasive nature their growth is unpredictable, and they can spread and grow quickly. If any non-native invasive plants, as mentioned in Schedule 9 WCA 1981 (as amended) are noted before or during the demolition activities all works must cease and a suitably qualified contractor will need to be instructed for their removal.
Other protected/notable species (e.g., West European hedgehog, brown hare etc.)	Killing/injury (if present) Loss / reduction, damage, destruction and/or fragmentation of habitats available for sheltering, foraging and commuting Following mitigation, no residual impacts have been identified	Taller areas of grassland and scrub should initially be cut to 10 cm, then left for at least 24 hours before clearance to allow any animals present to disperse. Provision of gaps in or under any fencing placed on Site to allow for wildlife movement across the Site (see Badger recommendations). Further habitat enhancement measures to encourage presence of hedgehogs on Site are recommended for any future development proposals in Section 5 of this report. Security lighting installed with motion sensors is proposed within the development design. This is to be positioned facing away from features of higher ecological value for the species (i.e., hedgerows, woodland, retained scrub, created pond etc.).
Otter	Killing/injury (if present) Damage, destruction and/or fragmentation of habitats Following mitigation, no residual impacts have been identified	Otter use of the Site is unlikely. However, due to their highly mobile nature sensitive working practices during construction (i.e., no uncovered excavations, appropriately stored chemicals and capping exposed pipping) are to be implemented to avoid the risk of harm to wildlife before and during the construction. Multiple variable-sized wildlife ponds totalling an area of ~275 m² (each pond will be at least 25 m²), associated with marginal vegetation (~0.06 ha), are to be created on Site. This could provide future foraging opportunities for otter (typically associated with spawning amphibians). Security lighting installed with motion sensors is proposed within the development design. This is to be positioned facing away from features of higher ecological value for the species (i.e., hedgerows, woodland, retained scrub, created pond etc.).

Reptiles	Killing/injury (if present) Following mitigation, no residual impacts have been identified	Taller areas of grassland and scrub should initially be cut to 10 cm, then left for at least 24 hours before clearance to allow any animals present to disperse. The plastic sheets and log piles in Field 2 (TN1 and TN2) are to be lifted carefully and by hand before works commence. No works to be conducted within 10m from retained hedgerows and management of the Site will need to remain the same until construction starts. Habitat enhancement measures to encourage presence of reptiles on Site are recommended in Section 5 of this report.
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5 Biodiversity Net Benefit

Policy Requirements

- 5.1 Section 6 of the Environment (Wales) Act 2016 places a 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 doing so, public authorities must also seek to ‘promote the resilience of ecosystems’.
- 5.2 Chapter 6 (Distinctive and Natural Places) of Planning Policy Wales 12 (PPW 12) aims to ensure the planning system in Wales meets the challenges set out in the Global Biodiversity Framework¹², the Biodiversity Deep Dive recommendations developed in response to this (Welsh Government, 2022), and the Duty, under Section 6 of the Environment (Wales) Act 2016, to maintain and enhance biodiversity and ecosystem resilience in Wales.

Maintaining and Enhancing Biodiversity

- 5.3 PPW states that development should not cause any significant loss of habitats or populations of species, locally or nationally and, must work alongside nature to provide a net benefit for biodiversity and improve, or enable the improvement of, the resilience of ecosystems.
- 5.4 A step-wise approach should be worked through iteratively, with the result being a scheme of enhancement secured through the Proposed Development to provide a net benefit for biodiversity, with the improvement of ecosystem resilience, particularly improving the connectivity to the immediate surroundings, being a key contribution to on-site avoidance, minimisation, and mitigation strategies and enhancement.
- 5.5 A net benefit for biodiversity is the concept that development should leave biodiversity and the resilience of ecosystems in a significantly better state than before, through securing immediate and long-term, measurable, and demonstrable benefit, primarily on or immediately adjacent to the Site. The step-wise approach is the means of demonstrating the steps which have been taken towards securing a net benefit for biodiversity.
- 5.6 In doing so, regard must also be given to promoting the resilience of ecosystems, through the DECCA framework, which is framed as such:
- Diversity between and within ecosystems,
 - The extent or scale of ecosystems,
 - The condition of ecosystems including their structure and functioning,
 - The connections between and within ecosystems, and
 - Adaptability of ecosystems including their ability to adapt to, resist and recover from a range of pressures likely to be placed on them through climate change, for example.
- 5.7 Furthermore, PPW paragraph 6.4.16 notes that ‘*all development must deliver a net benefit for biodiversity and ecosystem resilience from the baseline state (proportionate to the scale and nature of the development proposed). Even if the biodiversity value has been maintained, there must still be a pro-active process to look for and secure enhancement through the design and implementation of the development*’.

Local Plan

- 5.8 In addition to the PPW, Policy MD 9 of the Vale of Glamorgan Local Development Plan 2011-2026 (“Promoting Biodiversity”) states that “*New development proposals will be required to conserve and where appropriate enhance biodiversity interests unless it can be demonstrated that:*

¹² See: <https://www.cbd.int/gbfi/>

1. The need for the development clearly outweighs the biodiversity value of the site; and
2. The impacts of the development can be satisfactorily mitigated and acceptably managed through appropriate future management regimes.”

5.9 Two Supplementary Planning Guidance (SPG) documents have also been produced to provide further guidance on the above¹³.

Biodiversity Net Benefit Commitments

5.10 The key aspects of achieving policy compliance are, illustrating how biodiversity has been considered in the design of the scheme and how biodiversity net benefit and increased ecosystem resilience will be achieved through the application. Therefore, it is necessary to demonstrate:

- How the stepwise approach to securing a net benefit for biodiversity has been applied.
- How ecosystem resilience will be demonstrably achieved through the development process.

Stepwise Approach to Biodiversity Enhancement

Site Design and Avoidance

5.11 The Site design was informed by survey results and a review of potential impacts to ensure key ecological features were considered and avoided at the design stage. The design of the Proposed Development has sought to avoid any direct impacts of woodland sites, individual trees and the majority of the hedgerows. This has been achieved by:

- Placing the majority of the development within arable land, avoiding boundary features of greater ecological value and which had the potential to support protected / notable species.
- Retention of the majority of boundary features (i.e., hedgerows, woodland and trees), with a limited amount of scrub removal required to facilitate access and the construction process, to maintain ecological connectivity across the Site.
- Buffering the construction area to avoid impacts to key boundary features such as retained hedgerows and woodland areas (establishment of a 10 m buffer from hedgerows and woodlands).

Mitigation Measures

5.12 In terms of habitats, the Proposed Development will result in the loss of ~3.30 ha of arable land, ~0.20 ha of neutral grassland and light trimming of small areas of scrub to accommodate access route creation. The creation of ~2.3 ha of scrub/wildflower area mosaic as well as the appropriate management actions applied to areas of retained habitat on Site to improve their overall condition will mitigate for the loss of habitats on Site and enhance its ecological value.

5.13 Avoiding the removal of HR7 would be challenging in terms of the levels on the Site and would require turn angles in the access road which would be too tight for articulated vehicles accessing the Site for construction and maintenance. In addition to this, in order to deliver the cable route under permitted development rights a section of HR3 (~4 m) will be removed and re-instated. This is to minimise the amount of turns in the cable, hence reducing the length, allowing the cable to go under the Overhead Lines as close to perpendicular as possible. The permanent and temporary loss of these hedgerows will be compensated for by enhancing ~275 m of HR3 and HR7 by increasing their length hence connecting the two and providing understory planting with shade tolerant plants. The hedgerow margins (10 m of either side of the hedgerows) will be managed as wildflower areas (see Section 6 and LEMP for the Site (LDA Design, 2025)).

5.14 Root protection areas and applying controls to avoid damage and / or degradation of retained habitats (i.e., control accidental physical damage, lighting and soil compaction) during all phases.

¹³ The two SPGs include: Biodiversity and Development (Vale of Glamorgan, 2018) and Trees, Woodlands, Hedgerows and Development (Vale of Glamorgan, 2025)

- 5.15 Operational phase impacts will be minimised through the provision of surfaced paths, low-level/unobtrusive fencing, scrub and tree planting and signage to avoid damage of created/retained habitats by the public/staff/contractors straying off the designated areas.
- 5.16 In turn habitat losses may result in the loss of a limited amount of foraging / commuting / sheltering resource for protected species including common amphibians, foraging bats, badger, breeding birds, invertebrate species, reptiles, and other small mammals. Habitat creation and enhancement for protected species (outlined in **Table 6** below) will mitigate the short-term habitat loss and would provide overall enhancement to protected species.

Enhancement opportunities

- 5.17 The Site offers good potential for habitat enhancement as most of the Site is of low ecological value and there are areas within the Site that will not be needed for the infrastructure of the Proposed Development.
- 5.18 The Proposed Development will deliver the enhancement measures¹⁴ outlined in **Table 6** below. These have been linked to the DECCA framework to satisfy the PPW requirement to provide a net benefit for biodiversity and improve, or enable the improvement of, the resilience of ecosystems. Planting and management details for the proposed measures can be seen at the LEMP for the Site (LDA Design, 2025).
- 5.19 Where possible, habitat management and enhancement measures will be commenced at the earliest opportunity (i.e., pre-construction) to provide a continued resource to support any displaced species during the construction phase.
- 5.20 The enhancement measures for ecology receptors and wider biodiversity interest features are detailed within the LEMP (LDA Design, 2025). The LEMP also includes an appropriate monitoring scheme to ensure the enhancement measures are delivered in accordance with the principles above.

¹⁴ The location of proposed enhancements can be seen in LDA Design's landscape plan DWG: 8919_100 (**Appendix 6**).

Table 6: Description of how biodiversity enhancement features satisfy the DECCA framework

Enhancement description	Receptor	Resilience of biodiversity/ ecosystems enhancement using DECCA framework				
		Diversity between and within ecosystems	Extent or scale of ecosystems	Condition of ecosystems and structure/ function	Connection between and within ecosystems	Adaptability
Tree planting, creation of a 15 m woodland edge ecotone (~0.72 ha) and native broadleaf woodland (~0.52 ha). Trees will include native broadleaf species such as silver birch, rowan, field maple, hawthorn and horse chestnut.	Habitats, amphibians, badger, bats, breeding birds, wintering birds, hazel dormouse, other protected/notable species (i.e., hedgehog, brown hare etc.), otter, reptiles, invertebrates	Increased structural and species diversity on Site by enhancing Field 2 (from semi-improved neutral grassland to scrub/wildflower mosaic).	The extent of the ecosystem has increased by provision of habitat preferable by more species.	Condition, structure and function of ecosystem improved by enhancing the habitat in Field 2.	Connection between ecosystems for mobile species improved by enhancing the habitat in Field 2.	Adaptability increased with increased diversity, extent, connectivity and better condition, structure and function of the ecosystem on Site.
Creation of scrub/wildflower mosaic (~2.28 ha). Scrub species will include native woody species, such as hawthorn, rowan, willow <i>Salix</i> sp., silver birch and gorse <i>Ulex europaeus</i> . The areas in between the scrub patches will be planted with wildflower rich mixes similar to those in the wildflower area in Field 2 west of the proposed BESS infrastructure (see description for wildflower area below).	Habitats, amphibians, badger, bats, breeding birds, wintering birds, hazel dormouse, other protected/notable species (i.e., hedgehog, brown hare etc.), otter, reptiles, invertebrates	Increased structural and species diversity on Site by enhancing Field 2 (from semi-improved neutral grassland to scrub/wildflower mosaic).	The extent of the ecosystem has increased by provision of habitat preferable by more species.	Condition, structure and function of ecosystem improved by enhancing the habitat in Field 2.	Connection between ecosystems for mobile species improved by enhancing the habitat in Field 2.	Adaptability increased with increased diversity, extent, connectivity and better condition, structure and function of the ecosystem on Site.

Creation of wildflower areas (~2.17 ha). These areas can be planted with wildflower rich mixes, appropriate to the soils on Site, which can be verified following soil testing by qualified professionals. If new high-quality topsoil is imported on Site soil testing will not be necessary. The sward could be maintained to varying heights within the grassland, increasing opportunities for a variety of species.	Habitats, amphibians, bats, breeding birds, wintering birds, other protected/notable species (e.g., hedgehog, brown hare etc.), reptiles, invertebrates	Increased structural and species diversity on Site by improving the condition of the grasslands on Site.	Extent of functioning habitat increased.	Condition, structure and function of habitats improved by improving the condition of the grasslands on Site.	Connectivity between ecosystems for mobile species on Site as well as between the Site and the surrounding areas will be improved by improving the condition of the grasslands on Site.	Adaptability of ecosystem increased with increased diversity, extent, condition and connectivity on Site as well as between the Site and surrounding areas.
Hedgerow creation (~250 m) and enhancement of all retaining hedgerows by filling in gaps by laying or planting. Improvement of understory by planting shade resistant plants (i.e. red campion <i>Silene dioica</i> , foxglove <i>Digitalis purpurea</i>) and managing the hedgerow margins (10 m on either side of the hedgerow) as wildflower areas. The enhancement of HR3 (~275 m) will act as compensation for the permanent loss of a section of HR7 (~5 m).	Habitats, amphibians, badger, bats, breeding birds, wintering birds, hazel dormouse, other protected/notable species (e.g., hedgehog, brown hare etc.), reptiles, invertebrates	Increased structural and species diversity by the enhancement of hedgerows on Site.	Increase of the extent of existing hedgerows on Site.	Condition, structure and function of habitat improved through appropriate management and enhancement of hedgerows on Site.	Increased connectivity for mobile species within the Site and habitats in proximity to the Site.	Adaptability of habitats increased with improvement of condition, structure and function of ecosystems within the Site in addition to increased structural and species diversity, extent and connectivity on Site and between the Site and surrounding habitats.

Creation of multiple variable-sized wildlife ponds totalling an area of ~275 m² (each pond will be at least 25 m²), associated with marginal vegetation (~0.06 ha). Each pond will be at least 25 m² (ideally between 50-300 m²) and will hold water for most part of the year. Edge planting with riparian plants such as yellow flag iris <i>Iris pseudacorus</i>, purple loosestrife <i>Lythrum salicaria</i> and great reed-mace <i>Typha latifolia</i> will also need to be incorporated into the design. Creation of a drainage basin and swale (~0.12 ha at maximum level), the perimeters of which will be planted with flood-tolerant wildflower mixes such as Emorsgate's EM8F Wild Flowers for Wetlands or similar (~0.14 ha when water is at the maximum level).	Habitats, amphibians, bats, breeding birds, wintering birds, other protected/notable species (i.e., hedgehogs, brown hare etc.), otter and water vole, invertebrates	Increased structural and species diversity through the provision of a new habitat niche.	N/A	Condition, structure and function of ecosystem improved with the provision of a new habitat.	Connectivity within and between ecosystems for mobile species improved by provision of a new habitat niche. This will increase connectivity both on Site as well as between the Site and the surrounding areas.	Adaptability increased with increased diversity, increased connectivity and better condition, structure and function of the ecosystem on Site.
Creation of a south facing mound (~0.05 ha) with areas of bare ground as well as incorporated rubble/tree stumps from any vegetation clearance, to provide	Amphibians, reptiles, invertebrates (e.g., mining bees, butterflies etc.)	It will increase species diversity within the Site by increasing the amount of available	N/A	N/A	Connectivity within the Site will increase by the increase in availability of suitable sheltering and	Adaptability will increase by the increase in species diversity and increased

sheltering/hibernation habitat for a multitude of species, such as invertebrates (mining bees, butterflies etc.), reptiles and amphibians. This will be at least 20 m long, 50 m deep and 1.5 m wide.		habitat for the receptor species.			hibernating habitat within the Site.	connectivity within the Site.
Incorporation of nine bat boxes on retained standard trees within the Site ¹⁵ .	Bats	Increased species diversity on Site by increase in availability of roosting resources.	N/A	N/A	Increased connectivity between the Site and the surrounding areas as well as within the Site by the increase in available bat roosting resources.	Adaptability increased with increased species diversity within the Site and increased connectivity within the Site and in-between the Site and its surrounding areas.
Placement of three bird boxes ¹⁶ .	Breeding birds, wintering birds	Increased species diversity by increasing available nesting habitat.	Increasing the extent of bird nesting habitat on Site.	N/A	Increased connectivity within the Site by increasing available nesting habitat.	Adaptability increased with increased species diversity, extent and connectivity on Site.
Placement of two hazel dormouse boxes.	Hazel dormouse	Increased species diversity on Site by increasing available hazel dormouse nesting habitat.	Increasing the extent of hazel dormouse nesting habitat.	N/A	Increased connectivity within the Site by increasing the available hazel dormouse nesting and sheltering habitat.	Adaptability increased with increased species diversity, extent

¹⁵ Examples include 2F Schwegler Bat Box, 2FN Schwegler Bat Box or similar.

¹⁶ Example include NHBS Wooden Bird Nest Box, Vivara Pro Seville 32mm WoodStone Nest Box or similar.

						and connectivity on Site.
Log/compost piles	Amphibians, reptiles, other protected/notable species invertebrates	Increasing species diversity within the ecosystems on Site by providing more available habitat for more species.	N/A	N/A	Increasing connectivity within the ecosystem by providing more sheltering/egg laying/hibernating habitat.	N/A

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7 Figures

(overleaf)

DRAFT



Legend

Site boundary



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JOB REF: P23-068

PROJECT TITLE
CASTLE ROAD BATTERY ENERGY STORAGE
SYSTEM (BESS)

DRAWING TITLE
Figure 1: Site location

DATE: 19/02/2025	CHECKED: OG	SCALE: 1:8,188
DRAWN: ZP	APPROVED: OG	VERSION:1.1

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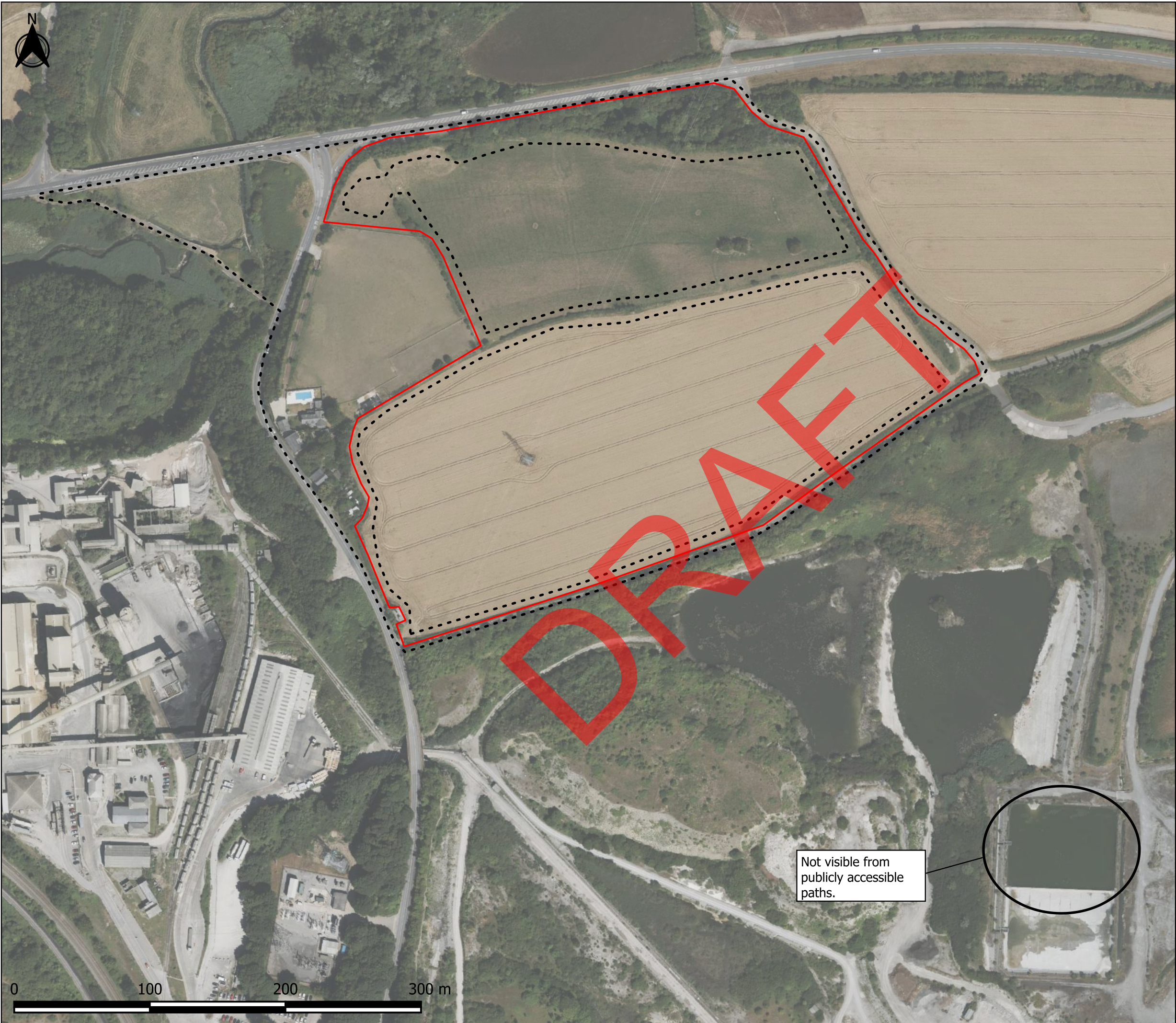
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Projection: OSGB 1936/British National Grid - EPSG 27700

Sources: BSG Ecology survey data



- Legend
- Site boundary
 - Survey transect



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JOB REF: P23-068

PROJECT TITLE
**CASTLE ROAD BATTERY ENERGY STORAGE
SYSTEM (BESS)**

DRAWING TITLE
**Figure 2: Winter bird survey and breeding bird
survey transects**

DATE: 19/02/2025
DRAWN: ZP

CHECKED: OG
APPROVED: OG

SCALE: 1:2,669
VERSION: 1.1

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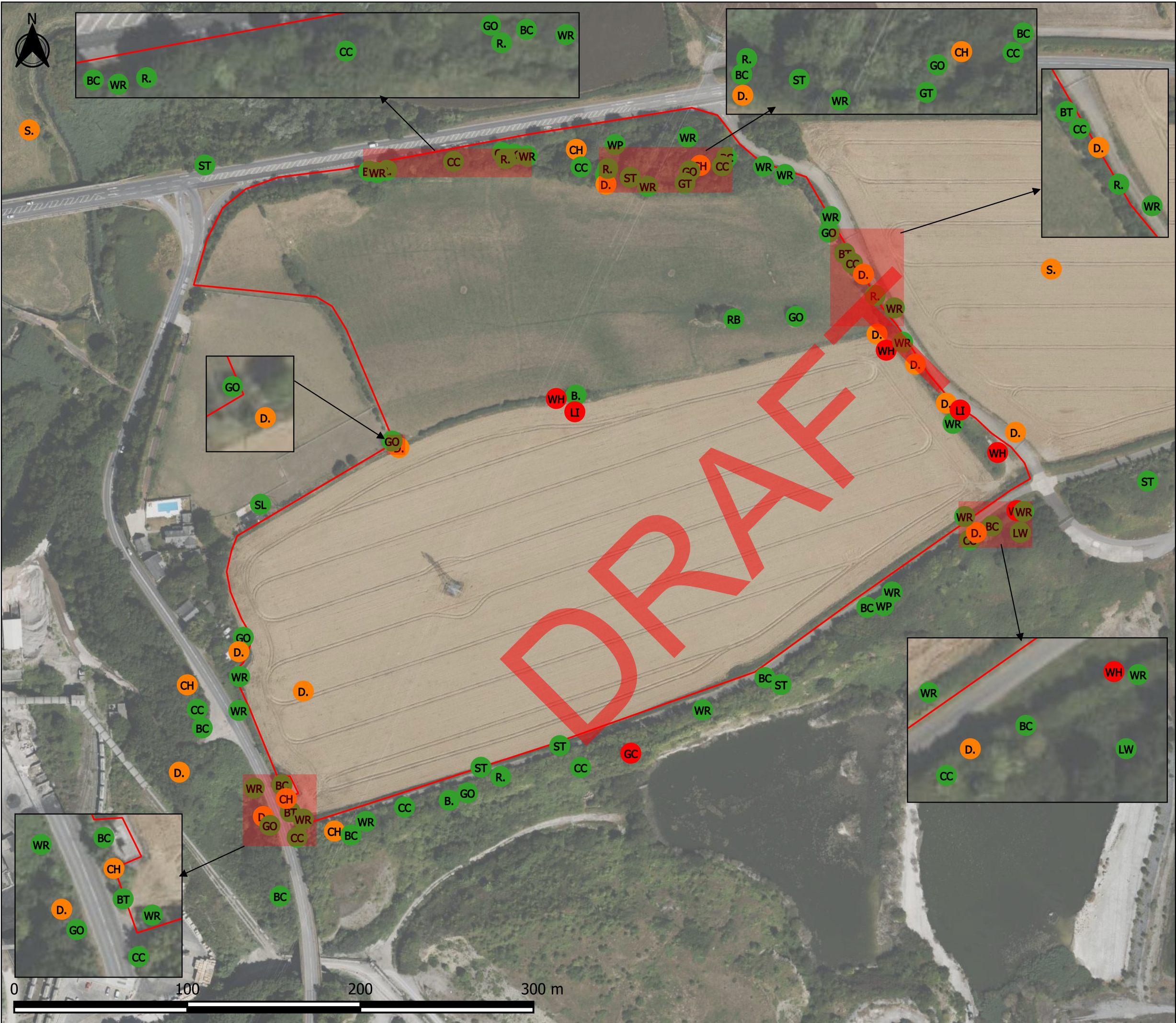
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Sources: BSG Ecology survey data



Legend

- Red
- Amber
- Green
- Site boundary

BTO Code	Common Name
B.	Blackbird
BC	Blackcap
BT	Blue Tit
CC	Chiffchaff
CH	Chaffinch
D.	Dunnock
GC	Goldcrest
GO	Goldfinch
GT	Great Tit
LI	Linnet
LW	Lesser Whitethroat
R.	Robin
RB	Reed Bunting
S.	Skylark
SL	Barn Swallow
ST	Song Thrush
WH	Whitethroat
WP	Woodpigeon
WR	Wren

PROJECT TITLE
CASTLE ROAD BATTERY ENERGY STORAGE
SYSTEM (BESS)

DRAWING TITLE
Figure 3: Breeding Bird Survey Summary
Results

DATE: 19/02/2025
DRAWN: ZP

CHECKED: OG
APPROVED: OG

SCALE: 1:8,188
VERSION: 1.1

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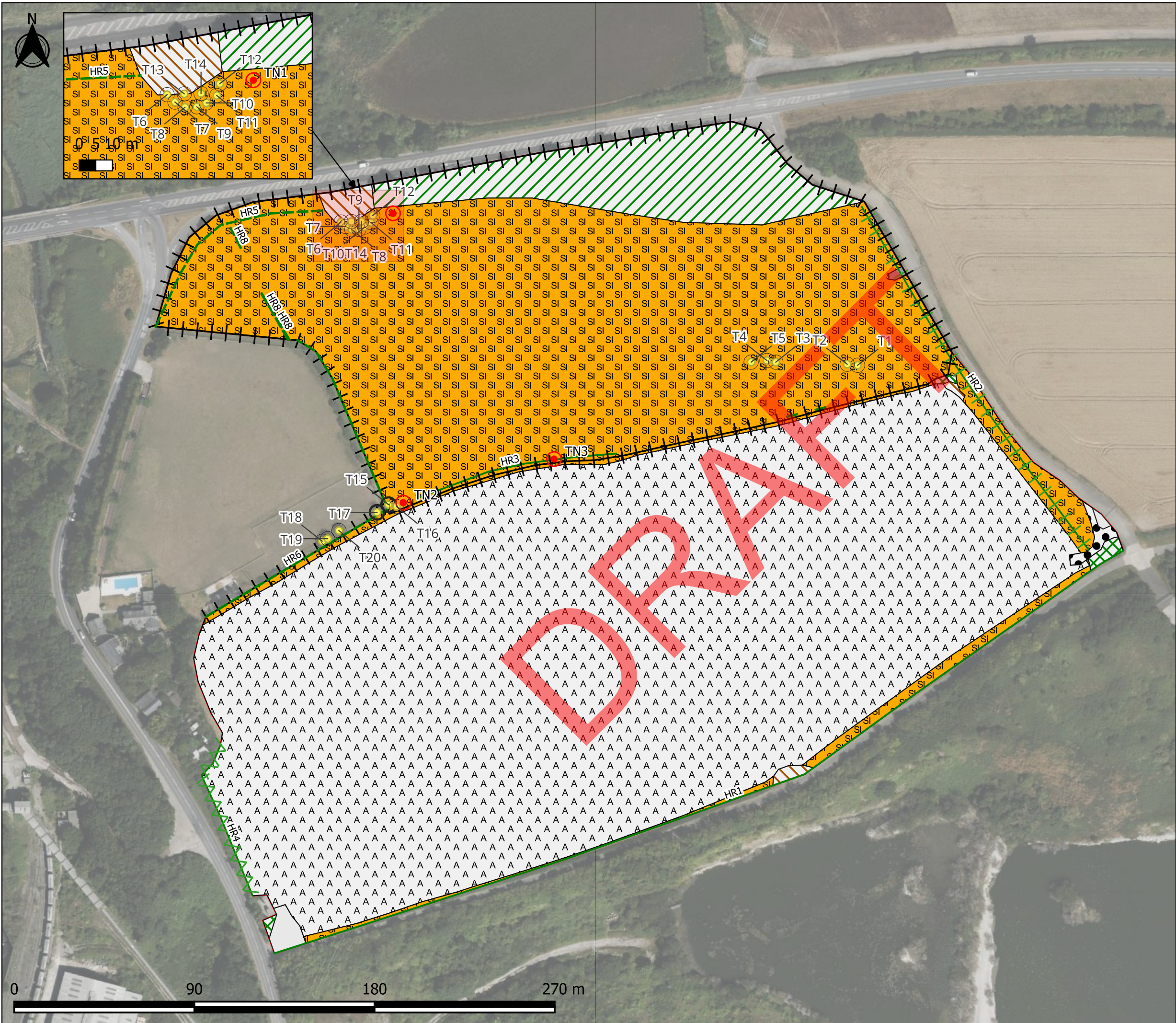
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Sources: BSG Ecology survey data



- Legend
- Target note
 - Existing Large Rural Tree
 - Existing Medium Rural Tree
 - Intact hedge - native species-rich
 - Intact hedge - species-poor
 - Defunct hedge - species-poor
 - Hedge with trees - species-poor
 - Fence
 - Broadleaved woodland - plantation
 - Scrub - dense/continuous
 - Neutral grassland - semi-improved
 - Other tall herb and fern - ruderal
 - Cultivated/disturbed land - arable
 - Built up areas inc. hardstanding
 - Bare ground
 - Site boundary

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PROJECT TITLE
CASTLE ROAD BATTERY ENERGY STORAGE
SYSTEM (BESS)

DRAWING TITLE
Figure 4: Preliminary Ecological Appraisal
Findings

DATE: 19/02/2025
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CHECKED: OG
APPROVED: OG
SCALE: 1:1,808
VERSION: 1.1

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8 Photographs



Photograph 1: Rape crop in Field 1.



Photograph 2: Neutral grassland on Field 2.



Photograph 3: Plastic sheets within Field 2 (TN1). To be lifted carefully and by hand before works commence.



Photograph 4: Log pile within Field 2 (TN2). To be lifted carefully and by hand before works commence.



Photograph 5: Example of field margin vegetation. The field margin structure was variable.



Photograph 6: Example of neutral grassland in Field 1.



Photograph 7: Example of scrub habitat on Site.



Photograph 8: Example of woodland habitat on Site.



Photograph 9: Example of bare ground on Site. Emergent vegetation is visible



Photograph 10: Example of tall ruderal vegetation on Site.



Photograph 11: Example of hardstanding on Site.



Photograph 12: Example of intact hedgerow on Site.



Photograph 13: Example of defunct hedgerow on Site.



Photograph 14: Mammal underpass on HR3.



Photograph 15: Example of cavity on mature trees. Features such as these are close to the ground (~1 m which constitutes it unlikely to be used by large number of bats).



Photograph 16: Example of barbed wire fencing on Site.



Photograph 17: Example of post and rail fencing on Site.

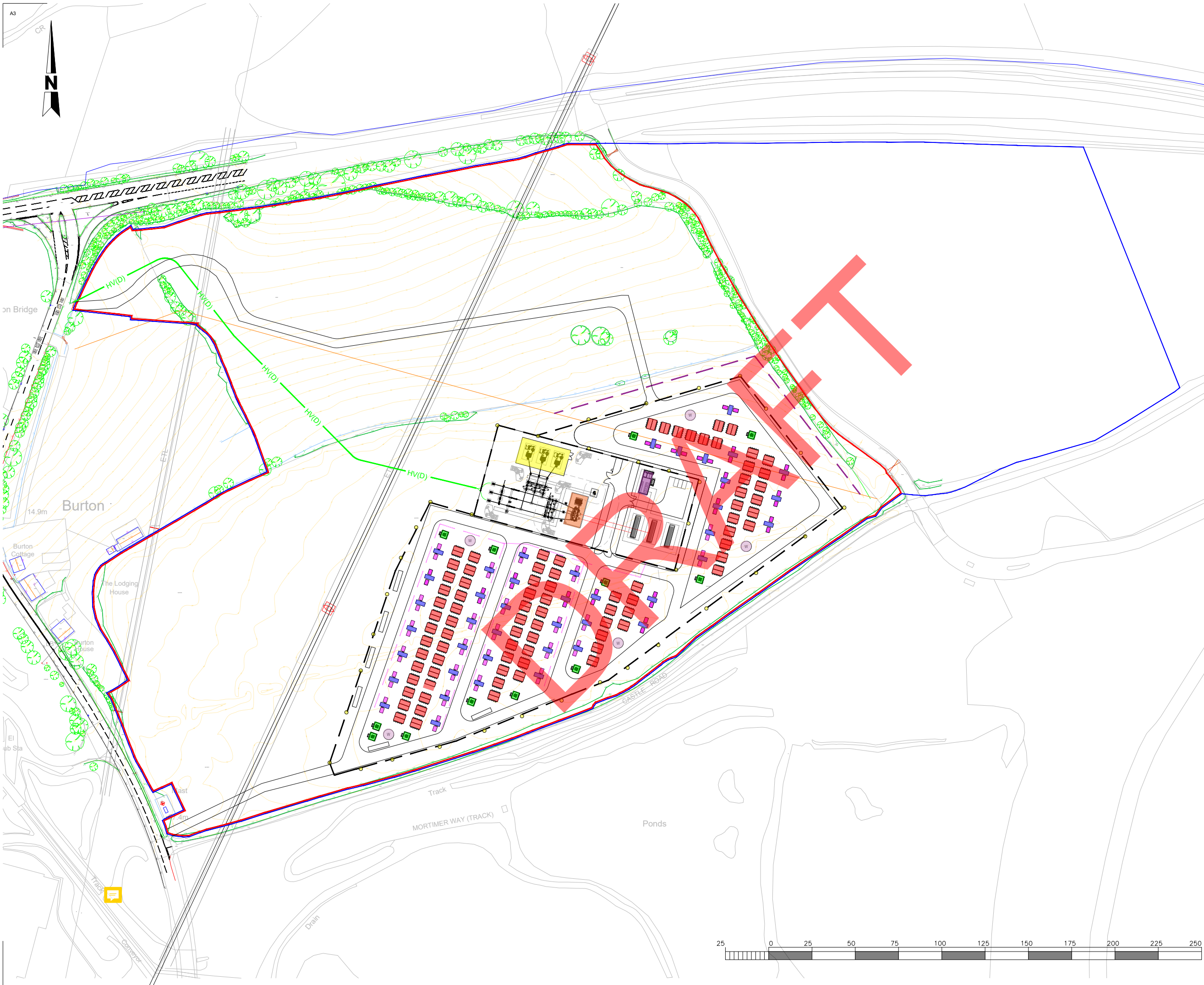


Photograph 18: Example of mature hawthorn on Site.

Appendix 1: Site Layout (Drawing: WIN-BES-08-DR-03-03-01, Rev. 06)

(overleaf)

DRAFT



- NOTES:
1. ALL DIMENSIONS TO BE CONFIRMED ON SITE PRIOR TO INSTALLATION
 2. ALL DIMENSIONS ARE INDICATIVE AND IN METERS (M) UNLESS STATED OTHERWISE

- LEGEND:
- BESS CONTAINER
 - TWIN SKID INVERTER
 - TWIN SKID TRANSFORMER
 - AUXILIARY TRANSFORMER
 - SWITCHGEAR
 - HARMONIC FILTERS
 - HV 33/400KV TRANSFORMER
 - CONTROL ROOM
 - RED LINE BOUNDARY
 - FENCELINE
 - MV CABLING INDICATIVE
 - 275KV CABLE INDICATIVE
 - CCTV POLE
 - EXISTING PROW
 - PROPOSED PROW DIVERGENCE
 - WATER TANK

Windel Energy

S10 Blyth Workspace, Commissioners Quay, Quay Road, Blyth NE24 3AG
Phone: +44 (0) 191 406 6209
www.windelenergy.co.uk

CLIENT

REWE 7 LTD

PROJECT TITLE

CASTLE ROAD BATTERY ENERGY STORAGE SYSTEM

DRAWING TITLE

SITE LAYOUT PLAN

SCALE @ A3

1:7500

JOB No.	REV.
08	06

DRAWING No.

WIN-BES-08-DR-03-01

Appendix 2: Summary of international and national designated sites within 2 km of the Site.

Statutory Designated Sites		
Site name and designation ¹⁷	Key interest features/comments	Distance / direction from the Site at closest point
East Aberthaw Coast SSSI	It supports a range of habitats making it one of the richest coastal wildlife sites in the county. Rocky and sandy shore, shingle spits, saltmarsh, relict sand dunes and Liassic limestone cliffs all support species of plants and animals that are of a limited distribution in the county. Land and littoral invertebrates are particularly rich in this area and include <i>Phanacis caulicola</i> , <i>Brachinus crepitans</i> and <i>Lima pontia</i> .	1.4 km south
Priority Habitats and NRW Priority Areas		
Coastal Saltmarsh	One area which includes part of the Site.	On Site
Open mosaic habitat of previous developed land	Approximately 12 parcels of designated land representing three main areas within 2 km of the Site.	15 m south
Lowland fens and reedbeds	Approximately six parcels of designated land representing three main areas within 2 km of the Site.	100 m north west
Ancient Semi-Natural and Replanted Woodland	Approximately 39 parcels of designated land representing 14 main areas within 2 km north of the Site.	110 m north
Semi-natural broadleaved woodland	Approximately 43 parcels of designated land representing 32 main areas within 2 km of the Site.	200 m north west
Coastal and Floodplain Grazing Marsh	Approximately 13 parcels of designated land representing eight main areas within 2 km of the Site.	220 m north west
Traditional Orchard	Approximately seven parcels of designated land representing three main areas within 2 km of the Site.	600 m south
Purple moor grass and rush pasture	One area within 2 km of the Site.	1.3 km north west
Lowland calcareous grassland	Approximately two parcels of designated land representing one main area within 2 km of the Site.	1.3 km south
Saline Lagoon	Aberthaw lagoon. One area within 2 km of the Site.	1.3 km south
Enclosed Farmland	Approximately six parcels of land representing two main areas within 2 km of the Site.	1.4 km north
Maritime cliff and slopes	Approximately four parcels of designated land representing three main areas within 2 km of the Site.	1.5 km south
Coastal vegetated shingle	Approximately two parcels of designated land representing one main area within 2 km of the Site.	1.6 km south
Non-statutory Designated Sites		

¹⁷ Site of Special Scientific Interest (SSSI), Site of Important Nature Conservation (SINC).

Castle Wood SINC	Castle Woods is comprised of two areas of ancient semi-natural woodland with veteran trees. Species include pedunculate oak, ash, beech, sycamore and elm. The understory is comprised of holly, hazel, elder, and spindle. The woodland floor is carpeted with bluebell, dog's mercury, primrose, wood anemone and toothwort. The woodland is rich in mosses and lichens, including the large lungwort. The breeding bird assemblage includes great spotted, lesser spotted and green woodpecker, treecreeper, nuthatch, redstart, pied and spotted flycatcher. Resident birds of prey include sparrowhawk, buzzard and tawny owl. The floodplain grassland below the wood holds numbers of roosting wildfowl including goosander, mallard, pochard, shoveler, teal, tufted duck with pintail, whooper swan and wigeon, in winter. Butterflies are well represented, including comma, silver-washed fritillary and speckled wood and mammals include fallow deer and badger.	190 m
Land South of Llancadle SINC	Designated for its coastal grazing marsh.	280 m
Lower Thaw Valley SINC	Coastal grazing marsh of the Lower Thaw Valley. A collection of small and large fields dissected by drainage ditches, channels and embankments.	400 m
Land adjacent to Burton Plantation SINC	Designated for its lowland calcareous grassland.	440 m
North of Aberthaw Cement Works SINC	Designated for its neutral lowland meadows	555 m
Coed Llancadle SINC	Native lowland mixed deciduous woodland, dominated by ash with a relatively open character supporting an abundance of English bluebell (<i>Hyacinthoides non-scripta</i>). Coed Llancadle forms part of a network of interconnected woodland sites associated with the Lower Thaw Valley considered likely to be important for bats and potentially dormice	600 m
Land at East Aberthaw SINC	A mosaic of habitats including a brackish lagoon, marsh, rank grassland, calcareous grassland, scrub and developing woodland located between a spoil-tip and active railway line, supporting adder and round-mouthed snail (<i>Pomatias elegans</i>)	615 m
East Aberthaw Former Quarry SINC	Species-rich calcareous grassland community within the base of a former limestone quarry.	625 m
Llancadle SINC	Mosaic of neutral and calcareous lowland grasslands.	660 m
Llancadle Gorse SINC	Native lowland mixed deciduous woodland, dominated by ash (<i>Fraxinus excelsior</i>), on the steep northern slopes of the Kenson Valley	700 m
East Orchard Wood SINC	Ash-dominated woodland with frequent hazel (<i>Corylus avellana</i>). A rich ground flora is present including bluebell, primrose (<i>Primula vulgaris</i>), sanicle (<i>Sanicula europaea</i>), wood anemone,	740 m

	ramsons (<i>Allium ursinum</i>), hairy-brome (<i>Bromus ramosus</i>) and wood speedwell (<i>Veronica chamaedrys</i>) suggesting ancient woodland origins.	
Ox Moor SINC	Designated for coastal grazing marsh.	1 km
Land adjacent to Kenson Wood SINC	Designated for neutral lowland meadows.	1 km
Oxmoor Wood SINC	Designated for ancient woodland and a mosaic of young woodland, scrub and calcareous grassland.	1.1 km
Kenson Wood SINC	Native lowland mixed deciduous woodland, dominated by ash and wych elm, on the steep northern slopes of the Kenson Valley.	1.2 km
Land South West of Llanbethery SINC	Designated for its lowland calcareous grassland.	1.5 km
Cliff Wood SINC	Mixed woodland which has a canopy of pedunculate oak, ash, maple and yew. The ungrazed ground flora and wooded cliff areas include purple gromwell which is restricted to a very small number of sites in the county.	1.7 km
Land West of Pen-Doines SINC	Designated for calcareous grassland.	1.8 km
Pen-Doines SINC	A small rectangular sloped area of native lowland mixed deciduous woodland.	1.9 km
Land West of Llandbydderi Moor SINC	Wet grassland community of Flemingston Moor dominated by reed sweet-grass (<i>Glyceria maxima</i>). Floodplain grazing-marsh and rush pasture with occasional bare/disturbed patches and waterlogged ditches.	1.9 km
South Pant y Coed SINC	Scrub woodland habitat located on south-facing slopes of the Pant y Coed Valley (a minor valley of the Afon Thaw) north of Llanbydderi. Supporting species including linnet (<i>Linaria cannabina</i>) and yellowhammer (<i>Emberiza citrinella</i>).	1.9 km
Land West of Pen Onn Farm SINC	A small area of native lowland mixed deciduous woodland occupying part of the steep east-facing scarp slope south-east of Llancarfan.	2 km
Church Hill Wood SINC	A linear semi-natural woodland running 2.5km east to west along the steep southern (north-facing) side of the River Waycock valley. Part of the western section of the wood is open to cattle grazing and is severely poached. The eastern end (Mill Wood) is also open to cattle but have there is a very attractive wood pasture with many veteran English oaks (<i>Quercus robur</i>). The rest of the wood is fenced and has good structure. The River Waycock forms the northern boundary for much of the 2.5km length.	2 km
Land South West of Pant y Coed SINC	Designated for neutral lowland meadows.	2 km

Appendix 3: Summary of relevant Notable and/or protected species

Species / Habitat ¹⁸	Date of most recent record	Location of most recent record	Afforded protection	Comments
Birds¹⁹				
Cetti's warbler <i>Cettia cetti</i>	2024	1.2 km (1 km grid reference)	Schedule 1 of the WCA 1981 (as amended)	Total of 50 records. Closest 940 m (2021; 1 km grid reference). Peak count: 2.
Chough <i>Pyrrhocorax pyrrhocorax</i>	2007	2.3 km (1 km grid reference)	Schedule 1 of the WCA 1981 (as amended)	Total of one record. Peak count: 2.
Crossbill <i>Loxia curvirostra</i>	2021	1.2 km	Schedule 1 of the WCA 1981 (as amended)	Total of two records. Peak count: 1.
Goshawk <i>Accipiter gentilis</i>	2018	1.8 km (1 km grid reference)	Schedule 1 of the WCA 1981 (as amended)	Total of four records. Peak count: 1.
Peregrine	2023	230 m (1 km grid reference)	Schedule 1 of the WCA 1981 (as amended)	Total of 90 records. Closest 140 m from Site (2019). Peak count: 5.
Red kite <i>Milvus milvus</i>	2023	1.2 km (1 km grid reference)	Schedule 1 of the WCA 1981 (as amended)	Total of 19 records. Closest 140 m from Site (2018). Peak count: 2.
Bullfinch	2023	850 m (1 km grid reference)	Section 7 of the Environment (Wales) Act 2016	Total of 175 records. Peak count: 12.
Dunnock <i>Prunella modularis</i>	2024	2.6 km (1 km grid reference)	Section 7 of the Environment (Wales) Act 2016	Total 443 records. Closest 140 m from Site (2018). Peak count: 30.
Kestrel <i>Falco tinnunculus</i>	2024	1.2 km (1 km grid reference)	Section 7 of the Environment (Wales) Act 2016	Total of 198 records. Closest 140 m from Site (2011). Peak count: 2.

¹⁸ All bat roost records were provided with a 1 km grid reference. WCA=Wildlife and Countryside Act.

¹⁹ A total of 113 Schedule 1 Section 1 of the WCA 1981 (as amended), Section 7 of the Environment (Wales) Act 2016 and Red list in Birds of Conservation Concern 5 (2021) bird species were returned; the most relevant species for the Site have been mentioned.

Species / Habitat ¹⁸	Date of most recent record	Location of most recent record	Afforded protection	Comments
Lesser redpoll <i>Acanthis cabaret</i>	2022	850 m (10 km grid reference)	Section 7 of the Environment (Wales) Act 2016	Total of eight records. Peak count: 27.
Nightjar <i>Caprimulgus europaeus</i>	1994	2.2 km (1 km grid reference)	Section 7 of the Environment (Wales) Act 2016	Total of four records. Closest 850 m (1971; 1 km grid reference). Peak count: 1.
Pied flycatcher <i>Ficedula hypoleuca</i>	1998	1.2 km (1 km grid reference)	Section 7 of the Environment (Wales) Act 2016	Total of nine records. Closest 850 m from Site (1996; 1 km grid reference). Peak count: 5.
Reed bunting	2022	940 m (1 km grid reference)	Section 7 of the Environment (Wales) Act 2016	Total of 158 records. Closest 140 m (2021). Peak count: 50.
Song thrush	2024	1.2 km (1 km grid reference)	Section 7 of the Environment (Wales) Act 2016	Total of 235 records. Closest 140 m from Site (2018). Peak count: 15.
Cuckoo <i>Cuculus canorus</i>	2017	1.2 km (1 km grid reference)	Red list in Birds of Conservation Concern 5 (2021)	Total of 14 records. Peak count: 1.
Grasshopper warbler <i>Locustella naevia</i>	2006	2.5 km (1 km grid reference)	Red list in Birds of Conservation Concern 5 (2021)	Total of 11 records. Closest 1.2 km from Site (2003; 1 km grid reference). Peak count: 1.
Greenfinch <i>Chloris chloris</i>	2023	940 m (10 km grid reference)	Red list in Birds of Conservation Concern 5 (2021).	Total of 135 records. Closest 230 m from Site (2018; 1 km grid reference). Peak count: 100.
House sparrow <i>Passer domesticus</i>	2024	2.6 km (1 km grid reference)	Red list in Birds of Conservation Concern 5 (2021)	Total of 228 records. Closest 500 m from Site (1974). Peak count: 60.

Species / Habitat ¹⁸	Date of most recent record	Location of most recent record	Afforded protection	Comments
Lesser spotted woodpecker <i>Dryobates minor</i>	1980	2 km (1 km grid reference)	Red list in Birds of Conservation Concern 5 (2021)	Total of one record. Peak count: 2.
Linnet <i>Linaria cannabina</i>	2024	2.5 km (1 km grid reference)	Red list in Birds of Conservation Concern 5 (2021).	Total of 425 records. Closest 140 m (2022). Peak count: 1500.
Mistle thrush <i>Turdus viscivorus</i>	2024	2.6 km (1 km grid reference)	Red list in Birds of Conservation Concern 5 (2021).	Total of 46 records. Closest 230 m from Site (2021; 1 km grid reference). Peak count: 15.
Skylark <i>Alauda arvensis</i>	2023	880 m	Red list in Birds of Conservation Concern 5 (2021)	Total 437 records. Closest 230 m from Site (2019). Peak count: 950.
Spotted flycatcher <i>Muscicapa striata</i>	2023	850 m (1 km grid reference)	Red list in Birds of Conservation Concern 5 (2021)	Total of 39 records. Peak count: 8.
Starling <i>Sturnus vulgaris</i>	2023	880 m	Red list in Birds of Conservation Concern 5 (2021)	Total 213 records. Closest 310 m from Site (1978). Peak count: 16000.
Tree pipit <i>Anthus trivialis</i>	2007	1.2 km (1 km grid reference)	Red list in Birds of Conservation Concern 5 (2021)	Total of 14 records. Peak count: 4.
Willow tit <i>Poecile montanus</i>	2006	1.6 km	Red list in Birds of Conservation Concern 5 (2021)	Total of three records. Closest 1.4 km from Site (1990; 1 km grid reference). Peak count: 1.
Wood warbler <i>Phylloscopus sibilatrix</i>	2022	1.8 km	Red list in Birds of Conservation Concern 5 (2021)	Total of four records. Closest 1.2 km from Site (1991; 1 km grid reference). Peak count: 1.
Woodcock <i>Scolopax rusticola</i>	2006	2.5 km (1 km grid reference)	Red list in Birds of Conservation Concern 5 (2021).	Total of six records. Closest 850 m from Site (1984; 1 km grid reference). Peak count: 1.

Species / Habitat ¹⁸	Date of most recent record	Location of most recent record	Afforded protection	Comments
Yellowhammer <i>Emberiza citrinella</i>	2023	2.2 km (1 km grid reference)	Red list in Birds of Conservation Concern 5 (2021)	Total of 139 records. Closest 680 m from Site (2017). Peak count: 120.
Mammals (excluding bats)				
Hazel dormouse	2015	2.3 km	Conservation of Habitats and Species Amendment) (EU Exit) Regulations 2019 and Schedule 5 WCA 1981 (as amended).	Total of two records. Closest record 1.8 km from the Site (2009).
Otter	2024	1.8 km	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedules 5 & 6 WCA 1981 (as amended).	Total of 22 records. Closest record 320 m from Site (2021).
Badger	2009	1.2 km	Protection of Badgers Act (1992) and Schedule 6 WCA 1981 (as amended).	Total of two records. Two records of setts >1km away from the Site.
Water vole	1980	330 m	Schedule 5 WCA 1981 (as amended).	Total of five records
Brown hare	2023	140 m	Section 7 of the Environment (Wales) Act 2016	Total of 11 records
Harvest mouse	2021	2.3 km (1 km grid reference)	Section 7 of the Environment (Wales) Act 2016	Total of four records. Closest 850 m from Site (1973; 1 km grid reference).
Polecat	2015	1.8 km (1 km grid reference)	Section 7 of the Environment (Wales) Act 2016	Total of one record

Species / Habitat ¹⁸	Date of most recent record	Location of most recent record	Afforded protection	Comments
West European hedgehog	2024	2.3 km (1 km grid reference)	Section 7 of the Environment (Wales) Act 2016	Total of 30 records. Closest 230 m from Site (2005; 1 km grid reference).
Mammals (bats)				
Brown long-eared bat	2016	2 km	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedules 5 & 6 WCA 1981 (as amended).	Total of six records. Closest 1.1 km (2011). Records of three roosts >1 km from Site.
Common pipistrelle	2024	2.3 km (1 km grid reference)	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedules 5 & 6 WCA 1981 (as amended).	Total of 17 records. Closest 800 m from Site (2006). Records of two roosts >1 km from Site.
Daubenton's bat	2013	1.2 km	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedules 5 & 6 WCA 1981 (as amended).	Total of one roost record
Lesser horseshoe bat	2017	1.2 km (1 km grid reference)	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedules 5 & 6 WCA 1981 (as amended).	Total of 55 records. Closest 1 km from Site (1997). Records of six roosts >1 km from the Site. Peak count: 400.
Long-eared bat species <i>Plecotus</i> sp.	2015	2 km	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedules 5 & 6	Total of one record.

Species / Habitat ¹⁸	Date of most recent record	Location of most recent record	Afforded protection	Comments
			WCA 1981 (as amended).	
<i>Myotis</i> spp. bat	2016	2 km	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedules 5 & 6 WCA 1981 (as amended).	Total of four records. Closest 1.2 km (2013). A record of one roost >1 km from Site.
Natterer's bat	2013	1.2 km	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedules 5 & 6 WCA 1981 (as amended).	Total of three records. Closest 800 m (2006). Two records of roosts >1 km from Site; peak count: 30.
Noctule	2015	1.6 km	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedules 5 & 6 WCA 1981 (as amended).	Total of nine records. Closest 1.2 km (2013).
<i>Pipistrellus</i> spp.	2015	2 km	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedules 5 & 6 WCA 1981 (as amended).	Total of five records. Closest 920 m from Site (2005). Records of two roosts >1 km from Site.
Serotine	2015	2 km	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedules 5 & 6 WCA 1981 (as amended).	Total of six records. Closest 1.1 km from Site (2011). Record of two roosts >1 km from the Site; peak count: 2.

Species / Habitat ¹⁸	Date of most recent record	Location of most recent record	Afforded protection	Comments
Soprano pipistrelle	2020	1.4 km	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedules 5 & 6 WCA 1981 (as amended).	Total of 19 records. Closest 850 m (2005). Record of one roost >1 km from the Site; peak count: 9.
Plants²⁰				
Bluebell	2022	1.8 km (1 km grid reference)	Schedule 8 WCA 1981 (as amended).	Total of 30 records (closest 785 m from Site in 2009).
Purple ramping-fumitory <i>Fumaria purpurea</i>	1975	2 km	Section 7 of the Environment (Wales) Act 2016	Total of two records
Red hemp-nettle <i>Galeopsis angustifolia</i>	2019	2.5 km	Section 7 of the Environment (Wales) Act 2016	Total of two records
Wild cotoneaster <i>Cotoneaster cambricus</i>	2020	2.2 km (1 km grid reference)	Schedule 8 WCA 1981 (as amended).	Total of one record
Reptiles and amphibians				
Adder <i>Vipera berus</i>	2024	1.7 km	Schedule 5 Section 9 of the WCA 1981 (as amended), partial protection - from killing and injury only	Total of 50 records. Closest <500 m from Site (2009)
Grass snake <i>Natrix helvetica</i>	2021	1.7 km	Schedule 5 Section 9 of the WCA 1981 (as amended), partial protection - from killing and injury only	Total of six records
Great crested newt	2021	2.5 km	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedule	Total of 126 records. Closest 1.5 km from Site (2005).

²⁰ A total of nine Schedule 8 of the WCA 1981 (as amended) and Section 7 of the Environment (Wales) Act 2016 plant species were returned; the most relevant species for the Site were mentioned.

Species / Habitat ¹⁸	Date of most recent record	Location of most recent record	Afforded protection	Comments
			5 of the WCA 1981 (as amended).	
Slow worm <i>Anguis fragilis</i>	2024	140 m	Schedule 5 Section 9 of the WCA 1981 (as amended), partial protection - from killing and injury only	Total of 145 records
Common toad <i>Bufo bufo</i>	2023	1.6 km	Section 7 of the Environment (Wales) Act 2016	Total of 22 records. Closest 230 m (2010; 1 km grid reference)

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Appendix 4: Summary of relevant invasive non-native species as listed in Schedule 9 WCA 1981 (as amended)

Species / Habitat	Date of most recent record	Location of most recent record	Afforded protection	Comments
Birds²¹				
Ring-necked parakeet <i>Psittacula krameri</i>	2018	2.2 km (1 km grid reference)	Schedule 9 WCA 1981 (as amended).	Total of four records. Closest 1.2 km from Site (2008; 1 km grid reference). Peak count: 1.
Mammals (excluding bats)				
Eastern grey squirrel <i>Sciurus carolinensis</i>	2023	2.2 km (1 km grid reference)	Schedule 9 WCA 1981 (as amended).	Total of 26 records. Closest 785 m from Site (2009).
Plants²²				
Cotoneaster <i>Cotoneaster</i> sp.	2021	730 m	Schedule 9 WCA 1981 (as amended).	Total of two records
Entire-leaved cotoneaster <i>Cotoneaster integrifolius</i>	2014	2.2 km (1 km grid reference)	Schedule 9 WCA 1981 (as amended).	Total of two records
Himalayan balsam <i>Impatiens glandulifera</i>	2021	1.2 km (1 km grid reference)	Schedule 9 WCA 1981 (as amended).	Total of five records
Japanese knotweed <i>Fallopia japonica</i>	2021	1.2 km (1 km grid reference)	Schedule 9 WCA 1981 (as amended).	Total of four records
Japanese rose <i>Rosa rugosa</i>	2023	1.5 km	Schedule 9 WCA 1981 (as amended).	Total of four records
Montbretia <i>Crocasmia pottsii</i> <i>x aurea</i> = <i>C. x crocosmiiflora</i>	2015	2.3 km (1 km grid reference)	Schedule 9 WCA 1981 (as amended).	Total of one record
Wall cotoneaster <i>Cotoneaster horizontalis</i>	2020	2.2 km (1 km grid reference)	Schedule 9 WCA 1981 (as amended).	Total of four records.

²¹ A total of ten Schedule 9 of the WCA 1981 (as amended) bird species were returned; the most relevant species for the Site have been mentioned.

²² A total of ten Schedule 9 of the WCA 1981 (as amended) plant species were returned; the most relevant species for the Site have been mentioned.

Appendix 5: Summaries of Relevant Policy, Legislation and Other Instruments

- 8.1 This section briefly summarises the legislation, policy and related issues that are relevant to the main text of the report. The following text does not constitute legal or planning advice.

Environment (Wales) Act 2016

- 8.2 The Environment (Wales) Act 2016 passed into law in March 2016. Part 1 of the 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.
- 8.3 Section 6 of the Act places a 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'. The duty replaces the section 40 duty in the Natural Environment and Rural Communities Act 2006 in relation to Wales, and applies to those authorities that fell within the previous duty.
- 8.4 Public authorities will be required to report on the actions they are taking to improve biodiversity and promote ecosystem resilience. This is expanded on in sub-section (2):
- 8.5 In complying with subsection (1), a public authority must take account of the resilience of ecosystems, in particular the following aspects—
- diversity between and within ecosystems;
 - the connections between and within ecosystems;
 - the scale of ecosystems;
 - the condition of ecosystems (including their structure and functioning);
 - the adaptability of ecosystems.
- 8.6 Section 7 concerns biodiversity lists and the duty to take steps to maintain and enhance biodiversity. It replaced 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.
- 8.7 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.

Planning Policy Wales 12

- 8.8 Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Government. It is periodically revised. The latest iteration is PPW version 12 (February 2024). Chapter 6 (Distinctive and Natural Places) sets out how the planning system in Wales meets the challenges set out in the Global Biodiversity Framework²³, the Biodiversity Deep Dive recommendations developed in response to this (Welsh Government, 2022), and the Duty, under Section 6 of the Environment (Wales) Act 2016, to maintain and enhance biodiversity and ecosystem resilience in Wales.
- 8.9 The primary objective of PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales, as required by the Planning (Wales) Act 2015, the Well-being of Future Generations (Wales) Act 2015 and other key legislation and resultant duties.

²³ See: <https://www.cbd.int/gbfi/>

Biodiversity and Ecological Networks

- 8.10 PPW sets out to outline the planning system's role 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. The following are key principles:
- Biodiversity and resilience considerations should be taken into account at an early stage in both development plan preparation and when proposing or considering development proposals.
 - All reasonable steps must be taken to maintain and enhance biodiversity and promote the resilience of ecosystems and these should be balanced with the wider economic and social needs of business and local communities. Where adverse effects on biodiversity and ecosystem resilience cannot be avoided, minimised or mitigated/restored and, as a last resort, compensated for, it will be necessary to refuse planning permission.
 - Development plan strategies, policies and development proposals must consider the need to:
 - support the maintenance and enhancement of biodiversity and the resilience of ecosystems;
 - ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats, including the most recent targets set out in the 2022 UN Global Biodiversity Framework;
 - ensure statutorily and non-statutorily designated sites and habitats are properly protected and managed and their role at the heart of resilient ecological networks is safeguarded;
 - safeguard protected species and species of principal importance and existing biodiversity assets from direct, indirect or cumulative adverse impacts that affect their nature conservation interests and compromise the resilience of ecological networks and the components which underpin them, such as water, air and soil, including peat; and
 - secure the maintenance and enhancement of ecosystem resilience and resilient ecological networks by improving diversity, extent, condition, and connectivity.

The Section 6 Duty

- 8.11 PPW further sets out that planning authorities must demonstrate that they have sought to fulfil the duties and requirements of Section 6 of the Environment Act by taking all reasonable steps to maintain and enhance biodiversity in the exercise of their functions. PPW set out that this means development should not cause any significant loss of habitats or populations of species, locally or nationally and must provide a net benefit for biodiversity.
- 8.12 In doing so planning authorities must also take account of and promote the resilience of ecosystems, in particular the following aspects:
- diversity between and within ecosystems
 - the extent and scale of ecosystems
 - the condition of ecosystems including their structure and functioning;
 - the connections between and within ecosystems, and
 - the adaptability of ecosystems.
- 8.13 In fulfilling this duty, planning authorities must have regard to:
- the list of habitats and species of principal importance for Wales, published under Section 7 of the Environment (Wales) Act 2016;
 - the SoNaRR, published by NRW;

- any Area Statement that covers all or part of the area in which the authority exercises its functions; and,
- guidance given to public authorities by Welsh Ministers under Section 6 of the Environment (Wales) Act.

Designated Sites

- 8.14 PPW states 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. PPW sets out:
- That statutorily and non-statutorily designated sites and habitats should be properly protected and managed and their role at the heart of resilient ecological networks is safeguarded.
 - Both statutorily and non-statutorily designated sites make a vital contribution to protecting biodiversity, maintaining the resilience of ecosystems and are important in providing opportunities for achieving wider well-being objectives.
 - All designated sites must be able to continue to protect the biodiversity and features for which they were designated and contribute to the resilience of ecosystems at the appropriate scale. This ability should not be compromised by inappropriate development or other activity.
 - Special Areas of Conservation, Special Protection Areas, RAMSAR sites, Sites of Special Scientific Interests, and National Nature Reserves comprising statutory designations carry greatest weight, and there is a presumption against all forms of development within such designated sites (that are not necessary for the management of the site) as a matter of principle. This presumption should be appropriately reflected in development plans and development management decisions.
 - Non-statutory designated sites should be given adequate protection in development plans and the development management process and should be considered in line with a 'step-wise' approach. Before authorising development likely to damage a local wildlife designation, planning authorities should give notice of the proposed operation to the County Ecologist and third sector environmental organisations. Policies for non-statutory sites should make it clear that such designations do not preclude appropriate developments, where there are no adverse impacts on the features for which a site is designated.

Green Infrastructure

- 8.15 PPW states that a Green Infrastructure Statement should be submitted with all planning applications. The Green Infrastructure Statement should be proportionate to the scale and nature of the Proposed Development and describe how green infrastructure has been incorporated into the proposal. PPW envisages the Green Infrastructure Statement as being an effective way of demonstrating positive multi-functional outcomes which are appropriate to the Site, and also demonstrate how the step-wise approach has been applied.
- 8.16 PPW notes that the Green Infrastructure Statement should highlight any baseline data considered and surveys and assessments undertaken, including habitats and species surveys, arboricultural surveys and assessments, and landscape and ecological management plans. Development proposals should be informed by the priorities identified in green infrastructure assessments and locally based planning guidance.

Maintaining and Enhancing Biodiversity

- 8.17 PPW states that development should not cause any significant loss of habitats or populations of species, locally or nationally and, must working alongside nature and it must provide a net benefit for biodiversity and improve, or enable the improvement of, the resilience of ecosystems.
- 8.18 A step-wise approach should be worked through iteratively, with the result being a scheme of enhancement secured through the Proposed Development to provide a net benefit for biodiversity, with the improvement of ecosystem resilience, particularly improving the connectivity to the

immediate surroundings, being a key contribution to on-site avoidance, minimisation, and mitigation strategies and enhancement

- 8.19 A net benefit for biodiversity is the concept that development should leave biodiversity and the resilience of ecosystems in a significantly better state than before, through securing immediate and long-term, measurable and demonstrable benefit, primarily on or immediately adjacent to the Site. The step-wise approach is the means of demonstrating the steps which have been taken towards securing a net benefit for biodiversity.
- 8.20 In doing so, regard must also be given to promoting the resilience of ecosystems, through the DECCA framework, which is framed as such:
- Diversity between and within ecosystems;
 - The extent or scale of ecosystems;
 - The condition of ecosystems including their structure and functioning;
 - The connections between and within ecosystems; and
 - Adaptability of ecosystems including their ability to adapt to, resist and recover from a range of pressures likely to be placed on them through climate change, for example.
- 8.21 PPW notes that a proactive and creative approach facilitating the delivery of biodiversity and ecosystem resilience outcomes must be taken by all those participating in the planning process, as all interventions contribute to a national scale resilience. The step-wise approach will help in securing a net benefit for biodiversity, with the onus on applicants to bring forward proposals in a way which will achieve a net benefit for biodiversity and demonstrate how they have used the step-wise approach.
- 8.22 Furthermore, PPW notes that *'all development must deliver a net benefit for biodiversity and ecosystem resilience from the baseline state (proportionate to the scale and nature of the development proposed). Even if the biodiversity value has been maintained, there must still be a proactive process to look for and secure enhancement through the design and implementation of the development'*.

Protected Species

- 8.23 With regard to protected species PPW states:
- A species protected under European or UK legislation, or under Section 7 of the Environment (Wales) Act 2016 is a material consideration when a planning authority is considering a development proposal which, if carried out, would be likely to result in disturbance or harm to the species or its habitat and to ensure that the range and population of the species is sustained.
 - Planning authorities should advise anyone submitting a planning application that they must conform with any statutory species protection provisions affecting the site, and potentially the surrounding area, concerned.
 - An ecological survey to confirm whether a protected species is present and an assessment of the likely impact of the development on a protected species may be required in order to inform the development management process. It is considered best practice that screening to determine the presence of protected species should be carried out by a competent ecologist on the basis of data provided by the relevant Local Environmental Record Centre.
- 8.24 Developments are always subject to the legislation covering European protected species. Proposals for which development works would contravene the protection afforded to European protected species require derogations from the provisions of the Habitats Directive. A derogation may only be authorised if there is no satisfactory alternative and if the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in its natural range.

Trees, Woodland and Hedgerow

8.25 PPW sets out:

- Planning authorities must promote the planting of new trees, hedgerows, groups of trees and areas of woodland as part of new development, and should have regard to local authority tree strategies or SPG and the Green Infrastructure Assessment.
- Permanent removal of woodland should only be permitted where it would achieve significant and clearly defined public benefits. Where woodland or trees are removed as part of a proposed scheme, developers will be expected to provide compensatory planting.
- Replacement planting shall be at a ratio equivalent to the quality, environmental and ecological importance of the tree(s) lost and this must be preferably onsite, or immediately adjacent to the site, and at a minimum ratio of at least 3 trees of a similar type and compensatory size planted for every 1 lost.
- Where a woodland or a shelterbelt area is lost as part of a proposed scheme, the compensation planting must be at a scale, design and species mix reflective of that area lost. In such circumstances, the planting rate must be at a minimum of 1600 trees per hectare for broadleaves, and 2500 trees per hectare for conifers.
- 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.

TAN 5 Nature Conservation and Planning (Wales only)

8.26 Technical Advice Note (TAN) 5 supplements Planning Policy Wales and provides advice about how the land use planning system in Wales 'should contribute to protecting and enhancing biodiversity and geological conservation.'

8.27 The TAN provides guidance to local planning authorities on: 'the key principles of positive planning for nature conservation; nature conservation and Local Development Plans; nature conservation in development management procedures; development affecting protected internationally and nationally designated sites and habitats; and, development affecting protected and priority habitats and species.'

8.28 In section 2.4 when deciding planning applications that may affect nature conservation, 'local authorities should:

- contribute to the protection and improvement of the environment...seeking to avoid irreversible harmful effects on the natural environment;
- ensure that appropriate weight is attached to designated sites of international, national and local importance;
- protect wildlife and natural features in the wider environment, with appropriate weight attached to priority habitats and species in Biodiversity Action Plans;
- ensure that all material considerations are taken into account and decisions are informed by adequate information about the potential effects of a development on nature conservation;
- ensure that the range and population of protected species is sustained;
- adopt a stepwise approach to avoid harm to nature conservation, minimise unavoidable harm by mitigation measures, offset residual harm by compensation measures and look for new opportunities to enhance nature conservation; where there may be significant harmful effects local planning authorities will need to be satisfied that any reasonable alternative sites that would result in less or no harm have been fully considered.'

- 8.29 At section 3.3.2 regarding Local Development Plans policies the guidance states that a policy should be included in respect of the application of the precautionary principle.
- 8.30 Section 4 includes specific and detailed guidance, expanding on the principles set out in 2.4, in respect of the development control process including pre-application discussions, preparing planning applications, requests for further information and ecology in respect of Environmental Impact Assessment (EIA). The broad principles of development control requirements are set out as follows:
- ‘adopting the five-point approach to decision-making – information, avoidance, mitigation, compensation and new benefits;
 - ensuring that planning applications are submitted with adequate information, using early negotiation, checklists, requiring ecological surveys and appropriate consultation;
 - securing necessary measures to protect, enhance, mitigate and compensate through planning conditions and obligation;
 - carrying out effective planning enforcement; and
 - identifying ways to build nature conservation into the design of new development.’

European protected species (Animals)

- 8.31 The Conservation of Habitats and Species Regulations 2017 (as amended) consolidates various amendments that have been made to the original (1994) Regulations which transposed the EC Habitats Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Council Directive 92/43/EEC) into national law.
- 8.32 “European protected species” (EPS) of animal are those which are shown on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended). They are subject to the provisions of Regulation 43 of those Regulations. All EPS are also protected under the Wildlife and Countryside Act 1981 (as amended). Taken together, these pieces of legislation make it an offence to:
- a. Intentionally or deliberately capture, injure or kill any wild animal included amongst these species
 - b. Possess or control any live or dead specimens or any part of, or anything derived from a these species
 - a. deliberately disturb wild animals of any such species
 - b. deliberately take or destroy the eggs of such an animal, or
 - c. intentionally, deliberately or recklessly damage or destroy a breeding site or resting place of such an animal, or obstruct access to such a place
- 8.33 For the purposes of paragraph (c), disturbance of animals includes in particular any disturbance which is likely—
- a. to impair their ability—
 - i. to survive, to 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; or
 - b. to affect significantly the local distribution or abundance of the species to which they belong.
- 8.34 Although the law provides strict protection to these species, it also allows this protection to be set aside (derogated) through the issuing of licences. The licences in England are currently determined by Natural England (NE) for development works and by Natural Resources Wales in Wales. In accordance with the requirements of the Regulations (2017, as amended), a licence can only be issued where the following requirements are satisfied:
- a. The proposal is necessary ‘to preserve public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment’

- b. 'There is no satisfactory alternative'
- c. The proposals 'will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.'

Definition of breeding sites and resting places

- 8.35 Guidance for all European Protected Species of animal, including bats and great crested newt, regarding the definition of breeding and of breeding and resting places is provided by The European Council (EC) which has prepared specific guidance in respect of the interpretation of various Articles of the EC Habitats Directive.²⁴ Section II.3.4.b) provides definitions and examples of both breeding and resting places at paragraphs 57 and 59 respectively. This guidance states that 'The provision in Article 12(1)(d) [of the EC Habitats Directive] should therefore be understood as aiming to safeguard the ecological functionality of breeding sites and resting places.' Further the guidance states: 'It thus follows from Article 12(1)(d) that such breeding sites and resting places also need to be protected when they are not being used, but where there is a reasonably high probability that the species concerned will return to these sites and places. If for example a certain cave is used every year by a number of bats for hibernation (because the species has the habit of returning to the same winter roost every year), the functionality of this cave as a hibernating site should be protected in summer as well so that the bats can re-use it in winter. On the other hand, if a certain cave is used only occasionally for breeding or resting purposes, it is very likely that the site does not qualify as a breeding site or resting place.'

Competent authorities

- 8.36 Under Regulation 7 of the Conservation of Habitats and Species Regulations 2017 (as amended) a "competent authority" includes "any Minister of the Crown..., government department, statutory undertaker, public body of any description or person holding a public office."
- 8.37 In accordance with Regulation 9, "a competent authority must exercise their functions which are relevant to nature conservation, including marine conservation, so as to secure compliance with the requirements of the [Habitats and Birds] Directives. This means for instance that when considering development proposals, a competent authority should consider whether EPS or European Protected Sites are to be affected by those works and, if so, must show that they have given consideration as to whether derogation requirements can be met."

Birds

- 8.38 All nesting birds are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition to this, for some rarer species (listed on Schedule 1 of the Act), it is an offence to disturb them whilst they are nest building or at or near a nest with eggs or young, or to disturb the dependent young of such a bird.
- 8.39 The Conservation of Habitats and Species Regulations 2017 (as amended) places duties on competent authorities (including Local Authorities and National Park Authorities) in relation to wild bird habitat. These provisions relate back to Articles 1, 2 and 3 of the EC Directive on the conservation of wild birds (2009/147/EC, 'Birds Directive'²⁵) (Regulation 10 (3)) requires that the objective is the 'preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the United Kingdom, including by means of the upkeep, management and creation of such habitat, as appropriate, having regard to the requirements of Article 2 of the new Wild Birds Directive...' Regulation 10 (7) states: 'In considering which measures may be appropriate for the purpose of security or contributing to the objective in [Regulation 10 (3)] Paragraph 3, appropriate account must be taken of economic and recreational requirements'.
- 8.40 In relation to the duties placed on competent authorities under the 2017 Regulations, Regulation 10 (8) states: 'So far as lies within their powers, a competent authority in exercising any function

²⁴ Guidance document on the strict protection of animal species of Community interest under the Habitats Directive 92/43/EEC. (February 2007), EC.

²⁵ 2009/147/EC Birds Directive (30 November 2009. European Parliament and the Council of the European Union.

[including in relation to town and country planning] in or in relation to the United Kingdom must use all reasonable endeavours to avoid any pollution or deterioration of habitats of wild birds (except habitats beyond the outer limits of the area to which the new Wild Birds Directive applies).’

Badger

- 8.41 Badger is protected under the Protection of Badgers Act 1992. It is not permitted to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so; or to intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it. A badger sett is defined in the legislation as “a structure or place, which displays signs indicating current use by a badger”.
- 8.42 ODPM Circular 06/2005²⁶ provides further guidance on statutory obligations towards badger within the planning system. Of particular note is paragraph 124, which states that “The likelihood of disturbing a badger sett, or adversely affecting badgers’ foraging territory, or links between them, or significantly increasing the likelihood of road or rail casualties amongst badger populations, are capable of being material considerations in planning decisions.”
- 8.43 Natural England provides Standing Advice²⁷, which is capable of being a material consideration in planning decisions. Natural England recommends mitigation to avoid impacts on badger setts, which includes maintaining or creating new foraging areas and maintaining or creating access (commuting routes) between setts and foraging/watering areas.

Reptiles

- 8.44 All native reptile species receive legal protection in Great Britain under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Viviparous lizard, slow-worm, grass snake and adder are protected against killing, injuring and unlicensed trade only. Sand lizard and smooth snake receive additional protection as “European Protected species” under the provisions of the Conservation of Habitats and Species Regulations 2017 (as amended) and are fully protected under the Wildlife and Countryside Act 1981 (as amended).
- 8.45 All six native species of reptile are included as ‘species of principal importance’ for the purpose of conserving biodiversity under Section 41 (England) of the NERC Act 2006 and Section 7 of the Environment (Wales) Act 2016.
- 8.46 Current Natural England Guidelines for Developers²⁸ states that ‘where it is predictable that reptiles are likely to be killed or injured by activities such as site clearance, this could legally constitute intentional killing or injuring.’ Further the guidance states: ‘Normally prohibited activities may not be illegal if ‘the act was the incidental result of a lawful operation and could not reasonably have been avoided’. Natural England ‘would expect reasonable avoidance to include measures such as altering development layouts to avoid key areas, as well as capture and exclusion of reptiles.’
- 8.47 The Natural England Guidelines for Developers state that ‘planning must incorporate two aims where reptiles are present:
- To protect reptiles from any harm that might arise during development work;
 - To ensure that sufficient quality, quantity and connectivity of habitat is provided to accommodate the reptile population, either on-site or at an alternative site, with no net loss of local reptile conservation status.’

²⁶ ODPM Circular 06/2005. *Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impacts within the Planning System* (2005). HMSO Norwich.

²⁷ <http://www.naturalengland.org.uk/ourwork/planningdevelopment/spatialplanning/standingadvice/specieslinks.aspx>

²⁸ English Nature, 2004. *Reptiles: guidelines for developers*. English Nature, Peterborough. <https://webarchive.nationalarchives.gov.uk/20150303064706/http://publications.naturalengland.org.uk/publication/76006>

Water vole

- 8.48 Water vole is protected under the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to kill, injure or take any water vole, damage, destroy or obstruct access to any place of shelter or protection that the animals are using, or disturb voles while they are using such a place. Water vole is listed as a Species of Principal Importance under the provisions of the NERC Act 2006 in England and under the provisions of the Environment (Wales) Act 2016.

Wild mammals in general

- 8.49 The Wild Mammals (Protection) Act 1996 (as amended) makes provision for the protection of wild mammals from certain cruel acts, making it an offence for any person to intentionally cause suffering to any wild mammal. In the context of development sites, for example, this may apply to rabbits in their burrows.

Invasive non-native species

- 8.50 An invasive non-native species is any non-native animal or plant that has the ability to spread causing damage to the environment.
- 8.51 Under the Wildlife and Countryside Act 1981 (as amended) it is an offence to release, or to allow to escape into the wild, any animal which is not ordinarily resident in and is not a regular visitor to Great Britain in a wild state or is listed under Schedule 9 of the Act.
- 8.52 It is an offence to plant or otherwise cause to grow in the wild invasive non-native plants listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

Hedgerows

- 8.53 Article 10 of the Habitats Directive²⁹ requires that 'Member States shall endeavour...to encourage the management of features of the landscape which are of major importance for wild fauna and flora. Such features are those which, by virtue of their linear and continuous structure...or their function as steppingstones...are essential for the migration, dispersal and genetic exchange of wild species'. Examples given in the Directive include traditional field boundary systems (such as hedgerows).
- 8.54 The aim of the Hedgerow Regulations 1997³⁰, according to guidance produced by the Department of the Environment³¹, is "to protect important hedgerows in the countryside by controlling their removal through a system of notification. In summary, the guidance states that the system is concerned with the removal of hedgerows, either in whole or in part, and covers any act which results in the destruction of a hedgerow. The procedure in the Regulations is triggered only when land managers or utility operators want to remove a hedgerow. The system is in favour of protecting and retaining 'important' hedgerows.
- 8.55 The Hedgerow Regulations set out criteria that must be used by the local planning authority in determining which hedgerows are 'important'. The criteria relate to the value of hedgerows from an archaeological, historical, wildlife and landscape perspective.

²⁹ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

³⁰ Statutory Instrument 1997 No. 1160 – The Hedgerow Regulations 1997. HMSO: London

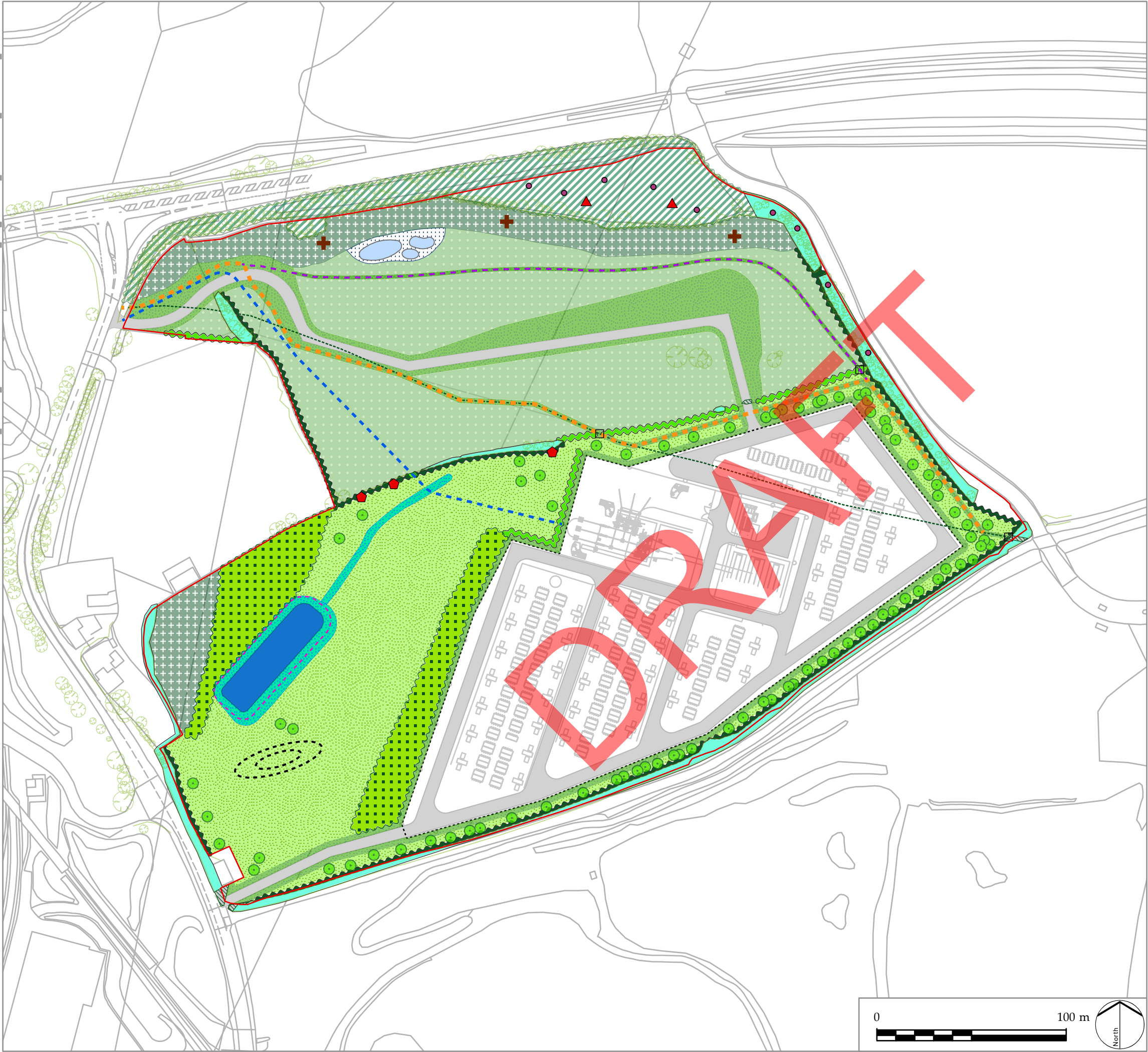
³¹ The Hedgerow Regulations 1997: a guide to the law and good practice, HMSO: London

Appendix 6: LDA Design's Landscape Plan (DWG: 8919_100)

(overleaf)

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- LEGEND
- Site Boundary
 - Cable Route
 - Development Area Fence
 - Existing Tree and other Vegetation to be Retained
 - Existing Hedgerow
 - Existing Broadleaf Woodland
 - Hedgerow Removal
 - Hedgerow Removal and Reinstatement after Cabling Installation
 - Existing Footpath Alignment
 - Proposed Footpath Alignment
 - Proposed Permissive Path Alignment
 - Proposed / Replaced Stile
 - Proposed Drainage Basin Maximum Fill Level
 - Drainage Basin Maintenance Strip
 - Proposed Drainage Basin and Swale, Planted with Flood-tolerant Wildflower Mix
 - Proposed Neutral Grassland
 - Proposed 15 Metre Woodland Edge Ecotone
 - Proposed Pond
 - Proposed Marginal Planting Around Ponds
 - Proposed Scrub Mosaic
 - Proposed Native Double Staggered Hedgerow
 - Proposed Wildflower Area
 - Proposed Native Broadleaf Woodland
 - Hedgerow Enhancement / Reinforcement
 - Proposed Tree
 - Proposed Bat Box (indicate location woodland or hedgerow)
 - Proposed Dormice Box (indicative location within woodland or hedgerows)
 - Proposed Log/Compost Pile (indicative location within woodland ecotone)
 - Bird Box (indicative south facing location within hedgerow)
 - Proposed South-facing Mound

LD A DESIGN

PROJECT TITLE

CASTLE ROAD BATTERY ENERGY STORAGE SYSTEM (BESS)

DRAWING TITLE

Landscape Plan

ISSUED BY	Bristol	T: 0117 203 3628
DATE	February 2025	DRAWN BF
SCALE @A3	1:2,000	CHECKED RF
STATUS	Draft	APPROVED RF

DWG. NO. 8919_100

No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site.
Area measurements for indicative purposes only.

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Sources: Ordnance Survey, DataMapWales

