



# **Bredbury Battery Energy Storage System**

**Ecological Appraisal Update Report to support Section 73 Application** 

**EDF** Renewables

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SLR Project No.: 405.064963.00001

Client Reference No: BRE-PP

16 October 2023

Revision: 01

## **Revision Record**

Revision	Date	Prepared By	Checked By	Authorised By	
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# **Acronyms and Abbreviations**

BESS	Battery Energy Storage System	
CIEEM	Chartered Institute of Ecology and Environmental Management	
EcIA	Ecological Impact Assessment	
GCN	Great Crested Newt	
GMEU	Greater Manchester Ecology Unit	
JNCC	Joint Nature Conservation Committee	
LEMP	Landscape Ecological Management Plan	
NERC	Natural Environment and Rural Communities	
NGR	National Grid reference	
SUDs	Sustainable Drainage System	



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## 1.0 Introduction

SLR Consulting Ltd. (SLR) was commissioned by EDF Renewables (EDF-R) to undertake an updated Ecological Appraisal (EcIA) for an area of land (c. 2.10 Ha in size), located off Stockport Road West, Bredbury, Stockport, Greater Manchester, SK6 2BP (centroid National Grid reference (NGR): SJ 91181 90968) to accompany an application to amend an existing planning permission (Section 73 application). The Site benefits from a permission to construct and operate a new Battery Energy Storage System (BESS). The Site red line boundary remains the same as the approved red line boundary and will hereafter be referred to as the Site.

This report constitutes an updated ecological report identifying if any changes have occurred to the site since the previous survey and assessment was undertaken. If there are any identified changes, the report identifies any steps recommended to address them. A site visit to update the habitat baseline on site was undertaken on 6 September 2023. The habitat survey followed JNCC Phase 1 methodology to enable direct comparison to the previous survey. Survey extended to 30 metres beyond the site boundary and included a search for evidence of any protected species.

## 1.1 Background

This proposal relates to the proposed construction of a Battery Energy Storage System (BESS) by EDF Renewables alongside the National Grid Bredbury Substation, Stockport, SK6 2BS. The ecology for the site was previously surveyed in 2021 and EDF-R commissioned an updated ecological survey and assessment to accompany minor material amendment application for an amended layout (by seeking to vary the planning conditions attached to planning permission reference DC/082085, under Section 73 of the Town and Country Planning Act 1990).

Tetra Tech (formerly WYG) was commissioned in January 2021 to undertake an update Ecological Appraisal at a site known as Bredbury Substation Battery in support of a planning application (ref DC/082085) for this site. This found that the site comprises semi-improved neutral grassland, dense scrub, tall ruderal, scattered trees, bare ground and structures/buildings, and that the habitat had the potential to support the following species of ecological importance, including species of principal importance and legally protected species: reptiles, foraging and commuting bats, badgers, nesting birds and hedgehog.

An Ecological Appraisal (EcIA) was undertaken in 2019 (WYG, 2019) for a wider survey area comprising the non-operational area of National Grid's landownership (15.2 ha) to identify potential constraints and inform the project location and design.

A Phase 1 Ecological Appraisal (Stockport Metropolitan Borough Council, 2016) was undertaken in 2016 for a proposed cycleway and bridleway (DC/063049). The proposed route comprised three sections with Section 2 running south of the application site / Bredbury Substation. Site access was not permitted at the time and therefore the report uses TEP (2012) survey data to inform the assessment. The scheme was granted permission in March 2017 with a number of Planning Conditions relating to ecology.

An Ecological Assessment (TEP, 2013: Chapter 6) was undertaken in 2013 as part of the Bredbury Substation Planning Statement and Environmental Report, associated with a planning application for a replacement substation (DC/054135).

A Phase 1 Habitat assessment (TEP, 2012: Appendix 6C Habitat Form) was undertaken in 2012 as part of the Bredbury Substation Planning Statement and Environmental Report, associated with a planning application for a new substation (DC/050733).



## 1.2 Site Description

The Site is an area of land (c. 2.10 Ha in size), located off Stockport Road West, Bredbury, Stockport, Greater Manchester, SK6 2BP (centroid National Grid reference (NGR): SJ 91181 90968). It is located to the East of the Town of Stockport, 580m south of the major roadway M60 and currently comprises an electricity substation with associated access infrastructure and areas of land managed as habitat. The surrounding area is a mix of former industrial buildings now used as retail outlets to the west, residential areas to the north and east, and the River Goyt and Woodbank Park to the south.

## 1.3 Details of the Proposed Development

The works involve the development of battery storage facility. The proposed red line boundary is shown in the site layout plan (BRE-PP-TCL-DRG-P001-AG, in Appendix A).

The works include construction of:

- Battery compound comprising of 84 energy blocks with associated cooling systems; 7
  transformers; 14 inverters; spares container; 33kV switchgear kiosk; control room
  kiosk; National Grid incomer substation; earthing and auxiliary transformers; and LV
  board. All units set on concrete slab foundations.
- 4m acoustic fencing.
- 2.4m security fencing and 2.4m double leaf site security gate.
- Point of connection cable corridor.
- Private wire cable corridor.
- Landscape planting and perimeter hedge planting.
- Six CCTV cameras and masts.
- Access track from National Grid service road and permeable stone site surfacing around site track and concrete slab foundations.

Four small parcels of grassland to the south are included within the red line boundary. These have been identified as on-site biodiversity compensation for the Biodiversity Net Gain (BNG) approach which was agreed at the grant of planning permission for Bredbury BESS (Ref: DC/082085). The BNG off site contribution for this consent was included in a section 106 agreement and payment in full has been made by EDF-R to the Council.

## 1.4 Purpose of this Report

This report presents the findings of the updated Ecological Appraisal. The report seeks to:

- establish change to baseline conditions and determine the importance of ecological features present (or those that could be present), as far as is possible;
- to identify changes to potential ecological constraints to the proposed development and make initial recommendations to avoid potentially significant effects on important ecological features, where possible;
- to identify changes to potential requirements for mitigation, where possible, including mitigation measures that will be required and those that may be required (depending on results of further surveys or final scheme design);
- to establish any requirements for more detailed surveys; and
- to identify further opportunities for biodiversity enhancements as part of the project.



## 1.5 Evidence of Technical Competence and Experience

The Phase 1 survey was undertaken in early September 2023 by Mark Nelson BSc (Hons) MSc, an Associate Ecologist with SLR. Mark is a Member of CIEEM. He has over ten years' professional experience within ecological consultancy during which time he has worked on many development projects, conducted several Ecological Impact Assessments, and led numerous surveys. This report has been written by Mark Nelson. The report has been subject to technical review by Bob Edmonds BSC (Hons) MCIEEM CEnv, Technical Director at SLR. Bob is an ecologist with over 20 years' experience in consultancy, specializing in ecological impact assessment, biodiversity net gain and protected species mitigation.

## 1.6 Relevant Legislation and Policy

Relevant national legislation1 and local policy can be found summarized in Appendix 1.

## 1.7 Baseline Data Collection

## 1.7.1 Desk Study

## **Previous Desk Study Results**

Information was requested from the Greater Manchester Ecology Unit (GMEU) in 2019 for information on any nature conservation designations and protected or notable species records within 2 km of the wider survey area. The data received in 2019 is comprehensive and considered to be valid for the assessment for records up to 2019.

The data search covered:

- Non-statutory designated sites for nature conservation, such as Local Wildlife Sites (LWS).
- Legally protected species, such as great crested newts (GCN) *Triturus cristatus*, bats and badger *Meles meles*.
- Notable habitats and species, such as those listed as Habitats of Principal Importance (HPIs) or Species of Principal Importance (SPIs); and Priority habitats or species within the Greater Manchester Local Biodiversity Action Plan.
- A search for relevant information was also using MAGIC (www.magic.gov.uk) –
  DEFRA's interactive, web-based database for statutory designations and information
  on any EPSL applications that have been granted in the local area. The study area
  was extended to include any Natura 2000 sites for which the site falls within the zone
  of influence (which varies between sites).

The data search identified ten Site of Biological Importance (SBIs) and three LNRs within 2 km, one of which, Woodbank Park (also an SBI), is adjacent to the southern boundary.

The desk study returned records of great crested newt, slow worm *Anguis fragilis*, bats, badger, otter *Lutra lutra*, birds, white letter-hairstreak *Satyrium w-album*, mud snail *Omphiscola glabra*, hedgehog *Erinaceus europaeus* and a protected or notable species of plant within 2 km of the site.

## **Additional Desk Study Results**

<sup>1</sup> SLR is not a legal practice, and the summary is provided as a reference only to directly relevant legislation that informed the scope of the ecological appraisal.

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Updated records were requested from GMLRC in October 2023. Records collected from 2019 onwards were checked to identify any additional species noted or those with closer proximity than found previously.

## **Previous Reports**

An Ecological Appraisal (Tetra Tech, 2021) was undertaken on behalf of Pivot Power (now part of EDF-R) in 2021 on non-operational land at Bredbury Sub Station. This assessment considered the same survey area and development proposal. Tetra Tech's field survey was completed in January 2021, which is outside of the optimal survey period for habitats.

The survey identified the following habitat types within the Site: Scrub, Semi-Improved Neutral Grassland, Tall Ruderal, Bare Ground, Buildings, Hardstanding and Scattered Trees. These habitats were found to have the potential to support the following species of biodiversity importance:

- Badger
- Reptiles
- Breeding Birds
- Hedgehog
- Bats, (assessed as low value for foraging and commuting bat use only)
- An assemblage of terrestrial invertebrates

No invasive non-native species were identified on site.

Recommendations from the survey include a Biodiversity Net Gain Assessment; a Protected Species Compliance Report detailing measures to protect Badgers, Reptiles and Breeding Birds that have the potential to inhabit the site and a Habitat and Landscape Management Plan.

## 1.7.2 Field Survey(s)

On 6<sup>th</sup> September 2023 a site visit was undertaken by Mark Nelson, an Associate Ecologist at SLR Consulting Limited, accompanied by Isla Nevitt, an ecology intern at SLR Consulting Ltd.

## **Extended Phase 1 Habitat Survey**

Update ecological surveys were undertaken by Mark Nelson, Associate Ecologist on 6<sup>th</sup> September 2023.

Habitats were recorded in the field to prepare a habitat map. The habitats were mapped using the information gathered from the ecological walkover, following the UK industry standard Joint Nature Conservation Committee (JNCC) Phase 1 Habitat Methodology (JNCC, 2010), and extended to include targeted searches for field signs of, and habitat suitability for, species that could constitute a material consideration in planning terms, such as protected or notable plant or faunal species protected species. Terrestrial habitats within the surrounding environment were assessed for their suitability for invertebrates, amphibians, reptiles, breeding birds and rare plants. Searches were also made for nonnative invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), such as Japanese knotweed *Fallopia japonica* and Himalayan balsam *Impatiens glandulifera*.

The results of the habitat survey are presented in Figure 2 (Appendix B). Habitat descriptions of principal habitat types, supported by photographs, were recorded. Features of interest were recorded on the field map using target notes.



The survey covered the application site and immediately adjacent habitats to ensure any ecological constraints within 30m of construction works were identified.

Whilst not a full botanical or protected species survey, the 'Extended Phase 1' method of survey enables experienced ecologists to obtain an understanding of the ecology of a site such that it is possible either:

- to confirm the conservation significance of the site and assess the potential for impacts on habitats or species likely to represent a material consideration in planning terms; or
- to establish the scope and extent of any additional specialist ecological surveys that will be required before such confirmation can be made.

## 1.7.3 Limitations

## 1.7.3.1 Desk Study

Desk study data is unlikely to be exhaustive, especially in respect of species, and is intended mainly to set a context for the study. It is therefore possible that important habitats or protected species not identified during the data search do in fact occur within the vicinity of the site. Interpretation of maps and aerial photography has been conducted in good faith, using recent imagery, but it has not been possible to verify the accuracy of any statements relating to land use and habitat context outside of the field study area.

## 1.7.3.2 Field Survey(s)

Areas within the confines of the electricity substation itself were not entered due to safety restrictions and were outside the scope of the current assessment. The substation was enclosed within high wire fencing, which is considered likely to prevent significant movement by larger animal species. Habitats were viewed from outside the fenced enclosure and found to be largely hardstanding. No significant constraints relating to the lack of access to the substation in relation to ecological interest features have been identified.

## 1.8 Evaluation Approach

The ecological evaluation approach used in this report is based on Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland ("CIEEM guidelines") (CIEEM, 2018). It is limited to those required to accompany an amendment submission to the granted planning application (Section 73 amendment) and completion of tasks to address planning conditions and implementation of site works.

## 1.8.1 Important Ecological Features

Ecological features can be important for a variety of reasons and the rationale used to identify them is explained in the text. Importance may relate, for example, to the quality or extent of the site or habitats therein; habitat and/ or species rarity; the extent to which such habitats and/or species are threatened throughout their range, or to their rate of decline.

## 1.8.1.1 Determining Importance

The importance of an ecological feature should be considered within a defined geographical context. The following frame of reference has been used in this case, relying on known/published accounts of distribution and rarity where available, and professional experience:

- International
- National (i.e., UK/ England, etc.)



- 16 October 2023 SLR Project No.: 405.064963.00001
- Regional (i.e., Greater Manchester, Lancashire, Cheshire, Merseyside)
- County (i.e., Greater Manchester)
- Local (i.e., within circa 5km)

The above frame of reference is applied to the ecological features identified during the desk study and surveys to inform this report.

The value of habitats has been measured against published selection criteria where available. Examples of relevant criteria include: descriptions of habitats listed on Annex 1 of the Habitats Directive; descriptions of habitats of principal importance for biodiversity under Section 41 of Natural Environment and Rural Communities (NERC) Act 2006; Local Wildlife Site Selection Criteria; and Habitat Action Plans (HAPs) contained within Local Biodiversity Action Plans.

In assigning a level of importance to a species, it is necessary to consider its distribution and status, including a consideration of trends based on available historical records. Reference has therefore been made to published lists and criteria where available. Examples of relevant lists and criteria include: species of European conservation importance (as listed on Annexes II, IV and V of the Habitats Directive or Annex 1 of the Birds Directive); species of principal importance for biodiversity under Section 41 of the NERC Act 2006 and Birds of Conservation Concern<sup>1</sup>.

For the purposes of this report, ecological features of Local importance or greater and/or subject to legal protection have been subject to detailed assessment. Effects on other ecological features are considered unlikely to be significant in legal or policy terms. The purpose of an EcIA is to identify and report significant effects upon ecological resources and therefore any ecological features that are of less than Local importance are not taken forward into further assessment.

## 1.9 Impact Assessment

The impact assessment process involves the following steps:

- identifying and characterising potential impacts;
- incorporating measures to avoid and mitigate (reduce) these impacts;
- assessing the significance of any residual effects after mitigation;
- identifying appropriate compensation measures to offset significant residual effects (if required); and
- identifying opportunities for ecological enhancement.

When describing impacts, reference has been made to the following characteristics, as appropriate:

- beneficial, negligible or adverse;
- extent;
- magnitude;
- duration (short term <5years, mid-term 5-10 years, long term >10 years);
- timing;
- frequency; and
- reversibility.



The impact assessment process considers both direct and indirect impacts:

- Direct ecological impacts are changes that are directly attributable to a defined action, e.g., the physical loss of habitat occupied by a species during the construction process.
- Indirect ecological impacts are attributable to an action, but which affect ecological
  resources through effects on an intermediary ecosystem, process or feature, e.g., the
  interruption of water courses which cause hydrological changes, which, in the
  absence of mitigation, could lead to the drying out of downstream habitats.

## 1.9.1 Significant Effects

The concept of ecological significance is addressed in paragraphs 5.24 through to 5.28 of the CIEEM guidelines. Significance is a concept related to the weight that should be attached to effects when decisions are made. For the purpose of an EcIA, a 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. Conservation objectives may be specific (e.g., for a designated site) or broad (e.g. national/local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local and the scale of significance of an effect may or may not be the same as the geographic context in which the feature is considered important.

Paragraphs 5.29 – 5.34 of the CIEEM guidelines cover how significant effects are determined. To summarise:

- For designated sites effects may be significant if they are likely to undermine the
  conservation objectives of the site; or positively or negatively affect the conservation
  status of species or habitats for which the site is designated; or may have affect the
  condition of the site or its interest/qualifying features.
- For ecosystems effects may be significant if the project is likely to result in a change in ecosystem structure and function. Consideration should be given as to whether any processes or key characteristics will be removed or changed, if there will be an effect on the nature, extent, structure and function of component habitats or if there is an effect on the average population size and viability of component species.
- For habitats and species consideration of conservation status is important for evaluating the effects of impacts on individual habitats and species and assessing their significance. Conservation status is defined as follows:
- Habitats conservation status is determined by the sum of the influences acting on the habitat that may affect its extent, structure and functions as well as its distribution and its typical species within a given geographical area.
- Species conservation status is determined by the sum of influences acting on the species concerned that may affect its abundance and distribution within a given geographical area.

## 1.9.2 Cumulative Effects

Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location. Cumulative effects can occur where a proposed development results in individually insignificant impacts that, when considered cumulatively with impacts of other proposed or permitted plans and projects, can result in significant effects.



## 1.9.3 Avoidance, Mitigation, Compensation and Enhancement

The purpose of avoidance, impact minimisation and compensation measures are to reduce the extent or magnitude of project impacts. The aim of these measures is to reduce the project's adverse impacts such that there is no net loss of biodiversity as a result of the project. Within EcIA, mitigation measures should be described clearly, and their likely success assessed. There is currently no requirement within EcIA to quantify losses and gains, e.g., using a metric.

When seeking mitigation or compensation solutions, the CIEEM guidelines state that efforts should be consistent with the geographical scale at which an effect is significant. For example, mitigation and compensation for effects on a species population that is significant at a county scale should ensure, wherever possible, there are no adverse effects upon the population status at a county scale. The relative geographic scale at which the effect is significant therefore has a bearing on the required outcome which must be achieved.

Where potentially significant effects have been identified, the mitigation hierarchy has been applied, as recommended in the CIEEM guidelines. The mitigation hierarchy sets out a sequential approach beginning with the avoidance of impacts where possible, the application of mitigation measures to minimise unavoidable impacts and then compensation for any remaining impacts. Once avoidance and mitigation measures have been applied, residual effects are then identified along with any necessary compensation measures, and incorporation of proposals for biodiversity enhancement.

It is important for the EcIA to clearly differentiate between avoidance mitigation, compensation and enhancement and these terms are defined here as follows:

- **avoidance** is used where an impact has been avoided, e.g., through changes in scheme design;
- mitigation, or minimisation, is used to refer to measures to reduce or remedy a specific negative impact in situ;
- **compensation** describes measures taken to offset residual effects, i.e., where mitigation in situ is not possible; and
- **enhancement** is the provision of new benefits for biodiversity that are additional to those provided as part of mitigation or compensation measures, although they can be complementary.



## 2.0 Results

## 2.1 Designated Sites

No additional designated sites have been identified within 2km of the Site beyond those identified in 2019 and described above. No amendments to existing sites are known which would be impacted by the development.

## 2.2 Records search

## 2.2.1 Amphibians

No additional records for GCN were returned by GMLRC. Four records for toad *Bufo bufo* were returned, all from Woodbank Park.

## 2.2.2 Reptiles

No additional records for reptiles were returned by GMLRC.

### 2.2.3 Bats

Nine additional records of common pipistrelle *Pipistrellus* pipistrellus, and brown long-eared *Plecotus auritus*, were returned by GMLRC. None of these were closer than existing known records.

## 2.2.4 Badgers

Four additional records of badger were returned by GMLRC, these included two records of setts. None of these were closer than existing known records.

## 2.2.5 Otter and Water Vole

Two additional records of otter were returned by GMLRC. None of these were closer than existing known records.

No records of water vole Arvicola amphibius within 2 km were returned by GMLRC.

### 2.2.6 Birds

Additional records for eight species of birds were returned by GMLRC. Records for all species were returned in the previous search and none of these were closer than the existing records.

## 2.2.7 Invertebrates

One additional record for invertebrates was returned by GMLRC. This was for cinnabar moth *Tyria jacobaeae* 1 km south of the Site.

## 2.2.8 Hedgehog

Fourteen additional records of hedgehog were returned by GMLRC. None of these were closer than existing known records.

## 2.2.9 Flora

No additional records for flora were returned by GMLRC.

## 2.2.10 Invasive species

No additional records for invasive species were returned by GMLRC.



## 2.3 Habitats

The habitats recorded within the Extended Phase 1 survey area (shown in Appendix B) include the following (listed in approximate order of decreasing extent):

- Neutral Grassland Semi-improved
- Hard Standing
- Dense / Continuous Scrub
- Plantation Broadleaved Woodland
- Poor Semi-improved Grassland
- Ephemeral / Short Perennial
- Buildings
- Fences
- Species Rich Hedgerow Intact

## 2.3.1 Neutral Grassland Semi-improved

Large areas of grassland with no obvious recent management. Grasses dominant and including perennial rye grass *Lolium perenne*, coltsfoot *Dactylis glomerata*, Yorkshire fog *Holcus lanatus* and false oat grass *Arrhenatherum elatius*. Forbs present included creeping thistle *Cirsium arvense*, creeping buttercup *Ranunculus repens*, nettle *Urtica dioica*, bramble *Rubus fruticosus* agg., Michaelmas daisy *Aster amellus*, broad-leaved dock *Rumex obtusifolius*, ragwort *Senecio jacobaea*, red clover *Trifolium pratense*, selfheal *Prunella vulgaris*, greater plantain *Plantago major*, spear thistle *C. Vulgare*, greater burdock *Arctium lappa*. Saplings of sycamore *Acer pseudoplatanus* and butterfly bush *Buddleja davidii* were scattered in places suggesting lack of recent cutting.

This habitat had extended to cover areas of former bare ground and Other Tall Herb and Fern identified in the previous update survey of 2021.

## 2.3.2 Hard Standing

Large areas of concrete and tarmac surfaces as part of the electricity substation, road and pavement infrastructure and footpath.

The habitat is now present as part of a footpath along the south edge of the survey area which the previous update survey shows as a mix of Semi-improved Neutral Grassland and Other Tall Herb and Fern.

## 2.3.3 Dense / Continuous Scrub

Patches dominated by bramble with some tall herb including nettle and broadleaved dock.

This habitat has extended as patches have expanded of previously scattered scrub has coalesced.

## 2.3.4 Plantation Broadleaved Woodland

Two small clumps of mature and semi-mature trees. A mix of species including beech *Fagus sylvatica*, horse chestnut *Aesculus hippocastanum*, sycamore, lime *Tilia x Europaea*, ash *Fraxinus excelsior*. One dead tree remaining as standing deadwood. Ground flora limited to grasses and nettles and little understory.



This habitat was previously mapped as scattered trees however the canopy was continuous at time of the 2023 survey so has been classified as woodland.

#### 2.3.5 **Poor Semi-improved Grassland**

One area consisting of a Sustainable Drainage System (SUDs) of a length of shallow drain 1.5m wide and 1m deep, and another area of access track now vegetated over. Both dominated by grasses including creeping bent Agrostis stolonifera with creeping buttercup, ribwort plantain Plantago lanceolata, red clover and cock's-foot, with the SUDs feature also containing ribbed melilot Melilotus officinalis.

This habitat was previously mapped as bare ground but has now vegetated over.

#### 2.3.6 **Ephemeral / Short Perennial**

An area of packed gravel now partially vegetating particularly at the margins. Creeping and other grasses, greater and ribwort plantain, scentless mayweed Tripleurospermum inodorum, lesser trefoil Trifolium dubium.

This habitat was previously mapped as bare ground but is now vegetating over.

#### 2.3.7 **Buildings**

Buildings and structures were present on site, all in good condition.

Two buildings within the centre of the Site have now been removed and have vegetated over.

#### 2.3.8 **Fences**

Mainly wooden fences around the site and separating fields, tall wire fences surrounding the electricity substation.

#### 2.3.9 Species Rich Hedgerow - Intact

One length of intact species rich hedgerow was identified along the northern boundary of the site separating it from the footpath alongside the B6104 Stockport Road West. This was 3-4m high, 1.5m wide, and comprised of sycamore, rowan Sorbus acuparia, hawthorn Crataegus monogyna, elder Sambucus nigra, ash, horse chestnut, willow Salix sp.

This was recorded as a fence with occasional scattered scrub in the previous update.

#### 2.4 Species

#### 2.4.1 **Amphibians**

No new features suitable for amphibians were noted during the survey. Conditions for these is assumed unchanged.

#### **Reptiles** 2.4.2

No evidence for reptiles was observed during survey. Minor habitat changes have occurred but overall potential for these species due to presence of suitable habitat remains unchanged.

#### 2.4.3 **Bats**

No additional habitat or roosting sites for bats was seen during the 2023 survey and the surveyor concurs with earlier appraisal that there are no trees or buildings within the survey areas that are suitable for use by roosting bats. Minor habitat changes have occurred since



earlier surveys, but overall the habitats on site (e.g. scrub, grassland, small area of woodland) are considered to provide low value foraging and commuting habitat for common species of bats. It was noted that more valuable habitat for bats remains outside the study area, e.g., the river and adjacent woodland, and no disturbance to these higher quality habitats is predicted.

## 2.4.4 Badgers

Full details of badger survey results are contained in a separate confidential badger report (SLR Consulting Ltd., 405.064963.00001 Confidential Badger Survey Report). No setts were found on site within the area identified for construction. One burrow initially considered to be a possible sett was found but this was confirmed as not a sett following further inspection. Badger footprints were found, and snuffle holes were frequent with mammal trails criss-crossing the main area of semi-improved neutral grassland within the red line boundary suggesting this area is frequently used by badgers for foraging and commuting.

Habitats generally remain suitable for foraging and sett building.

## 2.4.5 Otter and Water vole

Habitats within the Site remain unsuitable for these species.

## 2.4.6 Breeding birds

No protected or notable bird species were recorded during the survey. Habitats including grassland, woodland and scrub remain suitable for nesting and foraging breeding bird species.

## 2.4.7 Invertebrates

Habitats remain suitable to support assemblages of common and widespread invertebrates, of limited ecological value. Ragwort was present which supports cinnabar moth, a Section 41 species, however this plant is frequent within the area and loss of a small number of plants is unlikely to impact significantly on the presence of cinnabar in the area. Loss of areas of bare ground and lack of recent disturbance and replacement by a relatively even sward layer has overall reduced the value of the site to invertebrates.

## 2.4.8 Protected or notable species of fungi, bryophyte or plant

No protected or notable species of fungi or bryophyte were found during survey. Ragwort, a Section 41 species, was the only notable plant identified. Habitats remain common and unlikely to hold significant species.

## 2.4.9 Other mammals

No rabbits *Oryctolagus cuniculus* were seen during survey although runs were evident. Some patches of grass appeared flattened which may be an indication of use by deer *Cervidae* sp. Habitats in general remain suitable for use by a range of species including hedgehog, rabbit, deer, and fox *Vulpes vulpes*.

## 2.4.10 Invasive species

Himalayan balsam *impatiens glandulifera* was identified along the southern border of the site spreading along the footpath. This was in fruit and seed from this is likely to have spread further than is currently populated.



## 3.0 Ecological Impact Assessment

## 3.1 Introduction

This section describes the predicted effects and proposed mitigation measures of the amended development scheme, focussing on the important ecological features identified above.

Potential impacts relate to direct effects that are typically associated with the construction phase, e.g., including habitat loss to enable construction activities, whereas indirect impacts encompass adverse effects such as environmental noise, or alterations to hydrology or air quality that may occur during operation. Consideration to both stages is given in the following assessment as applicable to the identified ecological feature.

Proposed mitigation measures relate to those embedded in the scheme design. Where any significant residual effects are identified, further compensation may then be required.

Embedded mitigation measures include the following:

- within the design of the proposal good practice environmental and pollution control measures are employed with regard to current best practice guidance such as, but not limited to, the following:
  - CIRIA C532, 'Control of water pollution from construction sites: guidance for consultants and CIRIA C741, 'Environmental good practice on site guide' (2015 4th Ed.).
  - standard good practice for pollution prevention and surface water management.
  - removal of potential nesting bird habitat outside of the breeding season (considered to be April – August inclusive), or where this is not possible a check for the presence of nesting birds by a suitably experienced ecologist in advance of work, and retention of active nests until such time as young fledge.

Impacts to specific features of ecological importance are described below. Any changes to the impacts identified in the ecological impact assessment presented for the consented scheme are clearly highlighted below, otherwise "no change" is stated.

## 3.2 Designated Sites

No change. No impacts to sites of County Importance are predicted.

## 3.3 Amphibians

No change. No impacts to amphibian species are predicted.

## 3.4 Reptiles

**No change.** Measures to protect reptiles are recommended to be included within a Protected Species Compliance Report. This document would provide details regarding proposed mitigation for reptiles, such as:

- outlining the optimal timing of works (when reptiles are least likely to be present);
- any construction works where supervision by an ecological clerk of works is recommended;
- proposals for the phased cutting of vegetation to encourage reptiles to disperse from the site before construction commences; and
- a toolbox talk to be delivered to contractors.



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In the absence of mitigation and avoidance measures, there is potential for minor adverse impacts on these species of Local importance. Through the implementation of the proposed Protected Species Compliance Report, impacts can be reduced and are not predicted to be significant.

## 3.5 Bats

**No change**. No suitable bat roosting habitats would be impacted by the amended development and changes to low value foraging and commuting habitat are not predicted to lead to any significant effects upon local bat populations. In the longer term, the delivery of proposed habitat compensation under the approved Biodiversity Net Gain plan would compensate for the modest loss of foraging and commuting habitat for bats. The minor temporary adverse impact predicted on these species of Local importance is not significant. In the long-term, impacts to bats are considered to be a neutral.

## 3.6 Badgers

No setts were found on site within the area identified for construction. One possible sett was found but this was confirmed to not be a sett following further inspection. As badgers have shown an interest in this location, and it is known that they frequently build setts where other species have previously dug, this hole must be monitored and if found to be enlarged in size at any point this will need reinspection by an experienced ecologist to ensure it is not being used as a sett. It is also proposed that if construction works are delayed by more than 6 months, that a further pre-construction survey is undertaken to ensure no new setts are present prior to vegetation clearance.

In addition to pre-construction surveys, measures to protect badgers during the construction work should be implemented and set out in the Protected Species Compliance Report. These mitigation measures include:

- no open pits or excavations to be left without ramps to allow escape by larger mammals; and
- no storage of material or construction disturbance within a 20m buffer zone of any known setts that are to be retained within the site.

In the event that setts are discovered at any point, additional mitigation for badgers may be required. This may require an application to close a sett to Natural England.

In the absence of mitigation and avoidance measures, there is potential for minor adverse impacts on this species of Local importance. Through the implementation of the proposed Protected Species Compliance Report, and mitigation conducted under licence where necessary, impacts can be reduced and are not predicted to be significant.

## 3.7 Otters and Water Voles

No change. These species are not considered present on site and no impacts are predicted.

## 3.8 Breeding birds

**No change.** Measures to protect birds are to be detailed within a Protected Species Compliance Report which would include:

 nesting bird checks prior to any vegetation removal by a suitably experienced ecologist where clearance cannot avoid the nesting period (March to September inclusive).

In the absence of mitigation and avoidance measures, there is potential for minor adverse impacts on these species of Local importance. Through the implementation of the proposed



Protected Species Compliance Report, impacts can be reduced and are not predicted to be significant.

## 3.9 Invertebrates

**No change.** No impacts on invertebrates are predicted.

## 3.10 Protected or notable species of fungi, bryophyte or plant

No change. No impacts on fungi or lower plants are predicted.

## 3.11 Other mammals

**No change.** No impacts on other mammal species are predicted.

## 3.12 Invasive species

Himalayan balsam was found on site. This was present in quantity in the neighbouring land and therefore prevention of spread of this species from land within the control of the applicant on a localised scale is considered impractical. It is proposed to implement standard biosecurity protocols for the construction works.

Removal of this species is likely to improve the condition of the habitats it is in. However, this plant is likely to be spreading along the River Goyt catchment and without a catchment scale management plan any improvements are likely to be temporary. There is potential for minor beneficial impacts on neighbouring habitats, including the riparian zone of the River Goyt, if a co-ordinated approach to control can be implemented however, it is considered that this would be outside the scope of this application.

## 3.13 Further Opportunities for Biodiversity Enhancements

Areas of land have been highlighted for biodiversity improvements and delivery of biodiversity net gain. A Landscape Ecological Management Plan (LEMP) will be produced which will look at maximising the biodiversity potential for these areas as well as considering further improvements which might be possible in the surrounding areas under the control of the applicant.



## 4.0 Conclusion

There has been a modest change in the habitats present on site, compared to the information presented in the previous ecological appraisal report from 2021. There is a slight increase in the area of semi-improved neutral grassland and a reduction in bare ground. These changes are typical of ecological succession in the absence of regular management and are not considered to lead to any significant change in the habitat value of the site, or the type or number of species likely to be supported by these habitats.

There have been few changes to the baseline conditions in relation to protected and notable species, although the invasive species Himalayan balsam is now known to be present.

Overall, there is little change from the previous update EA Report and recommendations from that report, and those recommendations carried across into the planning conditions and associated legal agreement, remain valid for this proposed amendment to the permitted scheme.



## 5.0 References

CIEEM, (2018), Guidelines for Ecological Impact Assessment, CIEEM: Winchester.

JNCC, (2010), Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit, JNCC: Peterborough.

Stace, C., (2019), New Flora of the British Isles, 4th Edition, C&M Floristics Middlewood Green, Suffolk.

Stockport Metropolitan Borough Council, (2016), Eastern Cycling Links – Phase 1 Ecology Appraisal, Ref: 606.

TEP, (2012), Bredbury Substation Planning Statement and Environmental Report Appendices, Ref: 3309.026.

TEP, (2013), Bredbury Substation Planning Statement and Environmental Report, Ref: 3309.018045.

TetraTech (2021). Bredbury Substation Battery Ecological Appraisal, Ref: 784-B028688.

The National Archives, (2018a), Wildlife and Countryside Act 1981: Schedule 9, [online] Available at https://www.legislation.gov.uk/ukpga/1981/69/schedule/9, Accessed January 2021.

The National Archives, (2018b), Wildlife and Countryside Act 1981: Schedule 1, [online] Available at https://www.legislation.gov.uk/ukpga/1981/69/schedule/1, Accessed January 2021.

WYG, (2019) Ecological Appraisal: Bredbury Substation. Report on behalf of Pivot Power, Project number: A109353.





# Appendix A Relevant Legislation and Planning Policy



## **Relevant Legislation and Planning Policy**

## Legislation

A summary of legislation relevant to (onshore) biodiversity in England and Wales is provided below. Note that the summary provided here is intended for general guidance only and the original legislation should be consulted for definitive information.

Environment Act (2021)

The Environment Act has wide ranging provisions including those around:

- Environmental governance;
- Environmental regulation;
- Waste and resource efficiency:
- Air quality and environmental recall;
- Water:
- Nature and biodiversity:
- Conservation covenants.

Of particular relevance is Part 6 of the Act which introduces "biodiversity gain in planning" and will apply in England to planning applications under the Town & Countryside Act and the Planning Act. Schedule 14 now requires that biodiversity gain be a condition of planning permission in England. These changes will be enacted through subsequent secondary legislation or regulations. This part of the Act also changes the responsibilities that Government or public bodies have by strengthening the existing NERC Act biodiversity duty. Public authorities are now required to seek to conserve and enhance biodiversity in the exercise of their functions.

## Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations) consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law. Under the Habitats Regulations it is an offence to deliberately capture, kill or disturb wild animals listed under Schedule 2 of the Regulations as well as damage or destroy a breeding site or resting place of such an animal (even if the animal is not present at the time). European Sites, including Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), are also protected under the Habitat Regulations, and any proposal that could affect them will require an Habitats Regulations Assessment (HRA).

# The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017

Part 3 of the regulations provide for the protection of areas of habitats or species where maintenance of the status of water is an important factor. Under the regulations additional consideration may need to be given to sites in the form of a Water Framework Directive (WFD) assessment where a project lies in proximity to a water body or to linked water bodies which could be affected. This includes consideration of whether water bodies are WFD receptors in particular those of high status or have high status morphology.



## Natural Environment & Rural Communities (NERC) Act 2006

Section 40 of the NERC Act 2006 places a duty on public authorities to have regard to the purpose of conserving biodiversity in the exercise of their functions. Public authorities include government departments, local authorities and statutory undertakers.

Section 41 of the Act (Section 42 in Wales) requires the publication of a list of habitats and species publish which are of principal importance for the purpose of conserving biodiversity. The Section 41 list is used to guide authorities in implementing their duty to have regard to the conservation of biodiversity.

Note that Sections 40 and 42 were superseded in Wales by the Environment (Wales) Act 2016 (see below).

## **Protection of Badgers Act 1992**

The Protection of Badgers Act 1992 makes it illegal to kill, injure or take a badger or to intentionally or recklessly interfere with a badger sett. Sett interference includes disturbing badgers whilst they are occupying a sett or obstructing access to it.

## Wildlife & Countryside Act 1981

The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way (CRoW) Act 2000 and the Natural Environment and Rural Communities (NERC) Act 2006, consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive), making it an offence to:

Intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act, or its dependent young while it is nesting:

- Intentionally kill, injure or take any wild animal listed under Schedule 5 to the Act;
- intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 to the Act;
- intentionally or recklessly disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection;
- Pick or uproot any wild plant listed under Schedule 8 of the Act; or
- Plant or cause to grow in the wild any plant species listed under Schedule 9 of the Act.

## **Planning Policy**

A summary of national planning policy relevant to (onshore) biodiversity in England and Wales is provided below. Note that the summary provided here is intended for general guidance only and the original policy documents should be consulted for definitive information. For local planning policy relevant to biodiversity the relevant local plans should be consulted.

## **National Planning Policy (England)**

The National Planning Policy Framework (NPPF) sets out guidance for local planning authorities and decision-makers in how to apply planning policies when drawing up plans and making decisions about planning applications. Along with Government Circular 06/052, the broad policy objectives in relation to the protection of biodiversity and geological



conservation in England through the planning system are set out. Specific policies relating to habitats and biodiversity are set out in paragraphs 174 and 179-182 of the NPPF.

## Paragraph 174 states that:

- "Planning policies and decisions should contribute to and enhance the natural and local environment by:
- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development f) should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- F) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate".

## Paragraph 179 states that:

"To protect and enhance biodiversity and geodiversity, plans should:

- a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
- b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity."

## Paragraph 180 states that:

- "When determining planning applications, local planning authorities should apply the following principles:
- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the



features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

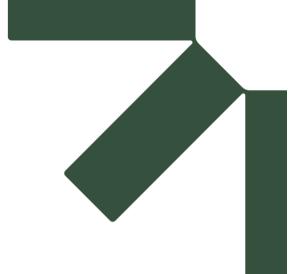
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate."

Paragraphs 181-182 relate to European sites (referred to as habitats sites) and state:

- "The following should be given the same protection as habitats sites:
- a) potential Special Protection Areas and possible Special Areas of Conservation;
- b) listed or proposed Ramsar sites; and
- c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site."





# **Appendix B** Drawings



1. Drawing details and dimensions for planning purposes only.

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AG	Transformer change	01.08.23	SS CH
AF	RLB/cable from rev J(1)/Tx rotated back	17.07.23	SS CH
AE	Transformers rotated	29.06.23	SS CH
AD	Welfare unit aligned with spares	25.04.23	SS CH
AC	Scale corrected	18.04.23	SS CH
AB	MV skids rotated and spaced apart	07.03.23	SS RH
AA	DNO substation removed	02.03.23	SS CH
Z	PE equipment updated	27.02.23	SS CH
Υ	CCTV relocation/PIR lighting added	16.02.23	SS CH
Х	Added 3m/4m acoustic, & Tx, fencing	06.02.23	SS CH
W	Revised equipment positioning	10.01.23	SS CH
V	Repositioned transformer/parking space	08.11.22	SS CH
U	Inverter/transformer swap	13.10.22	SS CH
Т	Layout revised to PE split skid option	20.09.22	SS CH
s	PW easement route revised	18.08.22	SS CH
R	Sheet template revised	19.04.21	SS CB
Q	SMA design 2.0	24.03.21	SS
Р	Tx sep dist. 3m, PW cable route	18.03.22	SS
0	Revised equipment	10.02.22	SS
N	Revised equipment	04.02.22	SS
М	Cable routes amended	26.01.22	SS
L	Compound area & cables added	05.08.21	SS
J(1)	Revision adjustment for submission	19.07.21	SS
K	33kV s/g & control room revised	08.07.21	SS
Rev	Description	Date	Checked

## BRE-PP-TCL-DRG-P001

**Bredbury BESS** 

**Compound Layout Plan** 

1:1250 @A3



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