

Preliminary Ecological Appraisal



Radcliffe, Battery Energy Storage System (BESS), At land to the east of Shore Top Farm, Kearsley Road, Radcliffe, Manchester (M26 1FA)

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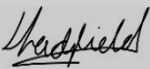
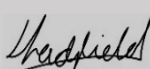
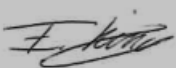
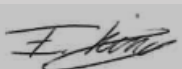
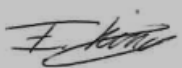
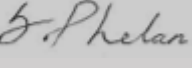
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The information which ADAS has prepared and provided is true and has been prepared and provided in accordance with the CIEEM's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

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Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK ADAS Ltd.

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Summary

ADAS Ecology was commissioned by TAIYO Power and Storage, to undertake a Preliminary Ecological Appraisal (PEA) on a pre-existing path and associated modified grassland parcel, located off Wood Street, Radcliffe, M26 1DN (OS Grid reference: SD774060), hereafter referred to as 'the site', in support of a planning application for a proposed battery energy storage system (BESS) and associated HV cable route. The proposed development route comprises pasture, lowland mixed deciduous woodland, and a pre-existing public footpath. The River Irwell is located approximately 110 m to the north of the site (at its closest point). Two waterbodies are present within 250 m of the site.

Ten statutory and eight non-statutory designated sites of nature conservation importance are located within 2 - 5 km of the proposed development site. No impacts to any designated sites are envisaged as a result of the proposed development.

Lowland mixed deciduous woodland, Bramble scrub, dense scrub, and line of trees on site were considered of local ecological importance. It is understood that these habitats will be retained as part of the proposed plans.

Further surveys in relation to Otter and invasive non-native species (INNS) have been undertaken during April 2024.

Under current proposals, trees on site are expected to be retained; however, if current plans change and trees need removing or pruning then a Ground level Tree Assessment will be required to assess the trees for bat roosting features.

A walkover for Badger should be carried prior to the start of works, since suitable habitat is present within the local landscape.

It is currently understood that only the modified grassland will be impacted by the proposed development. Should impacts be required to adjacent habitats suitable for the terrestrial phase of Great Crested Newt (scrub and woodland understorey), a non-licensed Method Statement with precautionary measures for reptiles should be implemented to mitigate potential impacts to these species. Works should also follow the terms of the previously submitted method statement, in relation to the presence of invasive non-native species that are present adjacent to the site, within the lowland mixed deciduous woodland.

Summary of Recommended Further Survey/Actions

The table below provides information on further surveys, mitigation measures and enhancement measures that are recommended.

Survey/Action	Rationale	When
Nesting bird survey	Habitat on / adjacent the site in the form of dense scrub, bramble scrub, line of trees and a lowland mixed deciduous woodland has the potential to support breeding/nesting birds. It is understood that impacts from the proposed development will be limited to the modified grassland and no suitable nesting bird habitat will be impacted. However, should works require the removal / trimming of suitable nesting habitat, it should be done outside of the nesting season (March to August inclusive), or a nesting bird check will be required.	No more than 24-48 hours prior to vegetation removal.
Emergence / tree climbing surveys	Roosting potential for bats exists within two mature oak trees, the trees have large open scar features close to the HV cable route (grid reference: SD 77552 06043 and SD 77567 06028). Under the current proposals, these trees are expected to be retained, however if current plans change, and these trees are to be removed or subject to resilience works, then emergence / climbing surveys will be required to ascertain if bats are present	Pre-works, May – August.
Badger survey	Habitat on site was considered suitable to support Badger and the excavation of setts, in the form of lowland mixed deciduous woodland and dense scrub, field signs in the form of tracks were identified on site. A pre-works check to assess if there are any new setts/excavations on and adjacent to the site boundary.	Pre-works.
Great Crested Newt Non-licensed Method Statement	Two ponds were located within 250 m, with poor – excellent habitat suitability for Great Crested Newt. It is considered likely that this species could be present within suitable terrestrial habitat on site. Should impacts be required to suitable terrestrial habitat, a non-licensed Method Statement should be	Pre-works / during works.

Survey/Action	Rationale	When
	implemented to mitigate potential impacts to GCN and other amphibians. An ecological clerk of works will oversee implementation of the non-licenced method statement.	
Reptile Method Statement	Dense scrub, Bramble scrub and woodland margins were suitable to support foraging and sheltering reptiles. Should impacts be required to these habitats, precautionary measures (detailed within the non-licenced method statement) should be implemented to mitigate potential impacts to any reptile populations which may be present on site.	Pre-works / during works.
Otter survey	An Otter survey has been undertaken for the site and field signs were identified.	An Otter survey has been undertaken in May 2024.
Opportunities for biodiversity enhancement on site include the creation of neutral grassland and the creation of a native hedgerow. Additionally, the installation of bat roost boxes, bird nest box and habitat provision for invertebrates.	To comply with local planning policy and provide positive enhancements for biodiversity.	Design and post-construction.
Biodiversity Net Gain Assessment	To comply with the Environment Act 2021.	During design
Sensitive lighting strategy for bats	To mitigate the potential impacts of artificial lighting during construction and operation on bats which may utilise suitable habitat on and offsite.	Design, construction and post-construction
Invasive non-native species survey	An invasive non-native species survey has been undertaken for the site, during April 2024. Numerous invasive non-native species were identified. Works should follow the terms of the INNS report provided.	Design, construction and post-construction

1 Introduction

1.1 Background and Survey Objectives

ADAS Ecology was commissioned by TAIYO Power and Storage, to undertake a preliminary ecological appraisal (PEA) on a pre-existing path and associated modified grassland parcel, located off Wood Street, Radcliffe, M26 1DN (OS Grid reference: SD774060), hereafter referred to as 'the site', to support an planning application for a proposed battery energy storage system (BESS) and associated HV cable route.

The aim of the PEA is to identify confirmed or potential ecological constraints to the proposed works and make recommendations for avoidance/mitigation/compensation, and opportunities for enhancement that can be incorporated into the design. The PEA also makes recommendations for further surveys, as required.

The report has been prepared in accordance with guidance produced by the Chartered Institute of Ecology and Environmental Management (CIEEM 2017) and the British Standard 42020:2013.

The objectives of this report are:

- To identify designated nature conservation sites within the vicinity of the site;
- To identify any records and/or populations of protected, notable or scarce species in the vicinity of the site;
- To record habitats or features of ecological interest within or in immediate proximity to the site;
- To record the presence of, or potential for, protected or notable species;
- To make an ecological assessment and highlight potential ecological constraints;
- To outline any further survey work and potential protected species requirements if relevant; and
- To make suggestions for avoidance, mitigation compensation and enhancements in line with planning policies where appropriate.

1.2 Site Description

The site, located off Wood Street in Radcliffe, covered approximately 1.39 ha and comprised modified grassland, lowland mixed deciduous woodland and other developed land. The site was bounded to the south by Ringley Road (A667), to the north and east by Outwood Country Park and to the west by pasture fields for horses. A pre-existing footpath runs from Wood Street, leading up to the substation, and traverses' part of the land within the redline boundary. The footpath also interlinks with paths leading into Oakwood Country Park. Two ponds and the River Irwell are located within 250m of the site boundary.

The site in context of the wider landscape can be seen in Figure 1 below and the indicative BESS footprint can be seen in Appendix 1.



Figure 1: The proposed development site (indicated by the approximate red line boundary). Imagery taken from Bing aerial 2025.

1.3 Description of the Proposed Works

The proposal is for a Battery Energy Storage System (BESS) with a HV cable connecting to an existing substation to the north. The plan provided by the client (Radcliffe BESS Proposed Site Layout 01.04.pdf) proposes a temporary 4 m wide access route for construction purposes, from Wood Street to the construction compound within the pasture. The operational access route to the site is proposed via a public right of way 9SS, to the west of Wood Street. An ecological enhancement area has also been proposed to surround the BESS.

2 Methodology

2.1 Desk Study

A desk study was carried out in February 2023 to identify statutory sites within 5 km and non-statutory designated sites, together with known records of protected and other notable species, within a 2-km radius of the site with the search radius extending to 10 km for sites designated in relation to bats.

Multi-Agency Geographic Information for the Countryside (MAGIC) was used to derive information relating to the location of statutory designated sites of nature conservation importance, priority habitats and waterbodies.

Greater Manchester Local Record Centre (GMLRC) provided details of non-statutory designated sites of nature conservation importance and records of protected and other notable species.

It is important to note that most species are greatly under-recorded and therefore a lack of records for a location should not be taken as an absence of the species concerned. Furthermore, a record for a particular habitat or species does not necessarily confirm its current presence.

2.2 Field Survey

2.2.1 UK Habitat Classification Survey and Protected Species Assessment

A UK Habitat Classification Survey was conducted during the PEA on 15 May 2024 by Lauren Hadfield BSc (Hons), a suitably experienced Ecological Consultant with ADAS, based on the techniques and methodologies described in the UK Habitat Classification User Manual (Butcher *et al.*, 2020), and using standard nomenclature (Stace 2010). The habitats present were recorded on a field map provided in Appendix 2 with written secondary codes providing supplementary information on, for example, habitat mosaics, species composition, structure, and management where relevant (See Appendix 3 for secondary code definitions). This was extended to include notes on habitats which could potentially support protected species. The site was subsequently visited on 06 March 2025 by Emily King BSc (Hons) ACIEEM to complete a DEFRA condition assessment of the habitats present within the red line boundary.

2.2.2 Habitat Suitability Index

A Habitat Suitability Index (HSI) assessment based on criteria developed by Oldham *et al.* (2000) was undertaken for all ponds/waterbodies (where access permitted) identified within 250 m of the site.

The HSI assessment uses ten key habitat criteria and is based on the assumption that habitat quality determines Great Crested Newt population size (Oldham *et al.* 2000). The criteria are as follows:

- SI1 = geographic location,
- SI2 = pond area;

- SI3 = pond permanence;
- SI4 = water quality;
- SI5 = pond shading;
- SI6 = number of waterfowl;
- SI7 = occurrence of fish;
- SI8 = pond density;
- SI9 = proportion of 'newt friendly' terrestrial habitat; and
- SI10 = macrophyte (aquatic plant) content.

The results of the HSI assessment have been compared to categorised HSI scores used by the National Amphibian and Reptile Recording Scheme (Oldham *et al.* 2000) to assess the probability of a pond supporting Great Crested Newt (*Triturus cristatus*).

2.2.3 Ground Level Tree Assessment and Preliminary Roost Assessment

An inspection of trees on site were assessed for their potential to support roosting bats. The survey was undertaken in accordance with Collins (ed.) (2023), surveying for 'Potential Roosting Features' such as knot holes, cracks and lifted bark that are thought able to support roosting bats. Trees were graded in accordance with Table 4.1 of the Good Practice Guidelines (reproduced in Table 1 below) in terms of its suitability to support roosting bats.

Table 1: Tree suitability for roosting bats – Bat Conservation Trust Guidelines.

Suitability	Description of Roosting Habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only - the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

2.3 Assessment and Evaluation

The importance of the features on site were assessed and defined in a geographical context (see Appendix 4). The frame of reference for the habitat features in terms of their geographical importance is in line with guidance set out in CIEEM, 2018.

Species and the potential for habitats to support them are assessed, where appropriate, against best practice guidelines.

As part of the evaluation, further surveys may be recommended based on the suitability of habitats to support protected species, the habitats themselves and potential impacts posed by the proposed works and the legal protection afforded to both habitats and species.

2.4 Zone of Influence

The assessment conducted for this report has considered the area in which ecological features could be subject to significant effects from the proposed development. The area of the potential effects is often wider than the actual perimeter of the development site and is known as the Zone of Influence.

The Zone of Influence varies for different ecological features and each designated site, habitat and species has been considered in relation to their sensitivity to the proposed development, taking into account the nature of the proposed works.

- Special Areas of Conservation (SAC), Special Protection Areas (SPA), Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR) – 5 km. (10 km for sites designated for bats)
- Local Nature Reserves (LNR), County Wildlife Sites (CWS) - 2 km
- Great Crested Newt (GCN) ponds – 250 m
- Badger (*Meles meles*) – 50 m
- Notable birds – site and surrounding land
- Bat roosts and Water Vole (*Arvicola amphibius*) – site and surrounding land
- Otters – 100 m from site
- Other protected and notable species/habitats – site level only

2.5 Mitigation Hierarchy

The main aim of the Preliminary Ecological Appraisal is to inform the client of the potential impacts on ecological features and what next steps are needed to manage these. In order to achieve this aim, the mitigation hierarchy should be adopted so that the following applies:

- **Avoidance** - *Ecological features of importance should be avoided in the first instance through the design process by either designing around them, alternative design or even an alternative location.*
- **Mitigation** – *Adverse impacts that cannot be avoided should be adequately mitigated for to minimise negative impacts on the ecological features. Mitigation measures can either be implemented during the design process or construction phase.*
- **Compensation** – *This should only be used in exceptional circumstances or as a last resort, after all options for avoidance and mitigation have been fully considered. Compensation therefore can be applied to any residual impacts that cannot be avoided or mitigated.*

- **Enhancements** - *Seek to provide net benefits for biodiversity over and above requirements for avoidance, mitigation or compensation.*

2.6 Limitations

The protected species assessment provides a preliminary view of the likelihood of such species occurring on the site. It should not be taken as providing a full and definitive survey of any protected species group.

Even where data for a particular species group are provided in the desk study, a lack of records of a defined geographical area does not necessarily mean that there is a lack of ecological interest; the area may simply be under recorded.

The UK Habitat Classification Survey does not constitute a full botanical survey or provide accurate mapping of invasive non-native plant species.

3 Baseline Ecological Conditions⁹

3.1 Desk Study

3.1.1 Designated Sites

There are ten statutory designated sites of nature conservation importance within 5 km of the site, the closest of which, Chapelfield Local Nature Reserve (LNR), is located 1.2km east of the proposed site. GMLRC provided records of eight non-statutory designated sites of nature conservation importance within 2 km of the study area. Table 2 below provides a summary of the designated sites located within 2 – 5 km of the proposed development site.

Table 2: Statutory and non-statutory designated sites located within 5 km and 2 km of the survey site.

Site Name	Description	Designations	Distance from site
Statutory Designated Sites (5 km)			
Chapelfield	This site includes 5.5 hectares of land containing woodland, grassland and a reservoir which is awarded as a Site of Biological Importance (SBI) due the variety of aquatic plants present including the rare Water Violet (<i>Hottonia palustris</i>). The site is also important for water wading birds.	LNR	1.2 km east
Ashclough	An important site for geology along the banks of the River Irwell.	SSSI	1.2 km west
Clifton Country Park	This park is approximately 48 hectares containing open woodland, meadows and lakes which are all important for the local wildlife.	LNR	1.4 km south
Nob End	This site is designated as a nationally rare habitat of calcareous grassland which features rare orchids and wildflowers like Bee Orchid (<i>Ophrys apifera</i>), Marsh Helleborine (<i>Epipactis palustris</i>), Autumn Gentian (<i>Gentianella amarella</i>) and Blue-eyed Grass (<i>Sisyrinchium bellum</i>).	SSSI and LNR	2.4 km west
Philips Park	This LNR is noted for it's mosaic of habitats important for invertebrate communities including semi-natural woodland, ancient woodland, species rich meadows with willow scrub.	LNR	2.7 km southeast
Mere Clough	This site contains 5.46 hectares of woodland which are important for the local bird populations.	LNR	2.8 km southeast
Moses Gate	This site offers a variety of habitats such as; broad-leaved woodland, wildflower meadows, marshland, and heathland which are important habitats that	LNR	3.0 km west

Site Name	Description	Designations	Distance from site
	support dragonflies, damselflies, amphibians and birds.		
Blackleach Country Park	The mosaic of habitats on site support many invertebrates and bird species.	LNR	3.4 km southwest
Hollins Vale	Hollins Vale is primarily a farmland reserve, with areas of woodland and wetland important for the local invertebrate and bird species.	LNR	4.5 km northeast
Levenhulme	A LNR that includes open meadow habitats, broad-leaved woodland, Bradshaw Brook, ponds and wetlands.	LNR	4.6 km northwest
Non-statutory Designated Sites (2 km)			
Manchester, Bolton and Bury Canal (East)	This canal is 15 miles long and is hydrologically linked to the River Irwell. It is important for a variety of aquatic plants and animal species.	SBI	600 m north
Ringley Woods (West & East)	An important site for an array of bird species including nuthatches, great-spotted woodpecker (<i>Dendrocopos major</i>), buzzards (<i>Buteo buteo</i>), sparrowhawks (<i>Accipiter nisus</i>) and tree creepers. The large expanse of ancient woodland includes many native tree species consisting of English Oak, Ash, Birch, Alder, Elm (<i>Ulmus procera</i>), Beech (<i>Fagus sylvatica</i>), Willow (<i>Salix spp</i>), Sycamore, Hawthorn, Rowan (<i>Sorbus aucuparia</i>), Holly (<i>Ilex aquifolium</i>) and Hazel (<i>Corylus avellana</i>).	SBI	800 m south
Shore Top Reservoir	A series of three reservoirs containing a variety of aquatic habitats such as fens, swamps and reedbeds which are important for breeding and wintering birds as well as a variety of UK Biodiversity Priority Species of invertebrates.	SBI	850 m west
Woodland Near Ringley Bridge	No information available	SBI	1.2 km west
Clifton Country Park	This park is approximately 48 hectares containing open woodland, meadows and lakes which are all important for the local wildlife.	SBI	1.4 km south
Manchester, Bolton and Bury Canal (West)	This canal is 7 miles long and is hydrologically linked to the River Irwell where it joins Nob End SSSI. It is important for a variety of aquatic plants and animal species.	SBI	1.6 km west
Unity Brook	No information available	SBI	1.7 km south
Nob End	This site is designated as a nationally rare habitat of calcareous grassland which features rare orchids and	SBI	2.4 km west

Site Name	Description	Designations	Distance from site
	wildflowers like Bee Orchid, Marsh Helleborine, Autumn Gentian and Blue-eyed Grass.		

LNR = Local Nature Reserve; SBI = Sites of Biological Importance

3.1.2 Species

Table 3 presents a summary of the results of the biological records search provided by GMLRC.

Table 3: Records of selected protected or notable species within 2 km of the site.

Species	Summary of Biological Records Search
Birds	A significant number of records of species listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 and common bird species were identified within 2 km of the site including House Sparrow (<i>Passer domesticus</i>), Linnet (<i>Linaria cannabina</i>), Starling (<i>Sturnus vulgaris</i>), Song Thrush (<i>Turdus philomelos</i>), Bullfinch (<i>Pyrrhula pyrrhula</i>), Dunnock (<i>Prunella modularis</i>) and Curlew (<i>Numenius arquata</i>). There were also a few records of Schedule 1 species recorded within 2 km of the site but not associated with the work site.
Bats	Thirty-seven bat roost records within 2 km were provided by GMLRC, the closest record to the site was located approximately 1 km south associated with Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>) and Common Pipistrelle (<i>Pipistrellus pipistrellus</i>) roosts. Additional bat activity records were supplied associated with Common Pipistrelle, Soprano Pipistrelle, Daubentons Bat (<i>Myotis daubentonii</i>) and Noctule (<i>Nyctalus noctule</i>), the closest record to site was associated with Yew Tree Farm 200m southwest and 200m southeast associated with Oatwood Country Park. Three European Protected Species Mitigation (EPSM) licences for bats have been granted within a 2 km radius of the site, the closest of which was associated with a Common Pipistrelle 500 m north of the site.
Badger	Two recent records of Badger setts were supplied within 2 km of the site, the closest of which was an active sett located 450 m south of the site.
Otter	Six records of Otter (<i>Lutra lutra</i>) were returned from the data search, all associated with the River Irwell, which is located 200 m from the site at its nearest point. The closest record of Otter was located 1.2 km from the site. Brown trout records were also returned indicating that there may be good food source for Otters along the River Irwell.
Water Vole	One record of Water Vole was supplied within 1.2 km of the site.
Great Crested Newt	Eighteen records for Great Crested Newt were returned from the data search, the closest of which was associated with a pond 400 m south of the site. Additional records of Great Crested Newt were provided, in the form of a European Protected Species Mitigation (EPSM) licence, to permit the destruction of a resting place of Great Crested Newt viewable on MAGIC. There are three Great Crested Newt Class Survey Licence Returns within 2km of the site, closest being 1.2 km away.

Species	Summary of Biological Records Search
	Records of other amphibians were also supplied by GMLRC including Common Toad (<i>Bufo bufo</i>) within 1.1 km northwest of the site.
Reptiles	No records of reptiles were supplied within 2 km of the site.
White-clawed Crayfish	No records of White -clawed Crayfish (<i>Austropotamobius pallipes</i>) species were supplied within 2 km of the site.
Invertebrates	Records of White-letter Hairstreak (<i>Satyrrium w-album</i>) and S.41 moth species were returned by the data search.
Invasive Non-native Species	No records of INNS were returned from GMLRC.

3.2 Field Survey

The primary habitats identified within the UK Habitat Classification Survey are listed and described below. All habitats are marked on the survey map in Appendix 2 with a description of the relevant secondary codes provided in Appendix 3, and each habitat type is illustrated with a photograph in Appendix 5. Since the update of the red line boundary the following habitats are now located off site; Dense scrub, Line of Trees and Bramble scrub, however, have been included for completeness.

On site:

- Modified grassland (g4)
- Lowland mixed deciduous woodland (w1f)
- Other developed land (u1b6)
- Offsite:
- Dense scrub (h3h)
- Line of trees (w1g6)
- Bramble scrub (h3d)

3.2.1 Habitats

3.2.1.1.1 Modified grassland (g4)

The dominant habitat on site comprised of modified grassland (Appendix 5: Photograph 1). Much of the habitat on site comprised of pasture with a short sward due to being intensely grazed by horses. The grassland contained dominant Creeping buttercup (*Ranunculus repens*) Clover (*Trifolium*), and Thistle (*Cirsium*) species.

Secondary codes: 61 (horse grazed), 1011 (pasture or meadow)

3.2.1.1.2 Line of trees (w1g6)

A linear compartment running parallel to the pre-existing bare track which contained a variety of native tree species including; Oak (*Quercus robur*), Alder (*Alnus glutinosa*), Silver Birch (*Betula pendula*), Sycamore (*Acer pseudoplatanus*), Ash (*Fraxinus excelsior*), White Poplar (*Populus alba*), Hazel (*Corylus avellana*), Hornbeam (*Carpinus betulus*) and Field Maple (*Acer campestre*) with an understorey of Bramble (*Rubus fruticosus* agg) and Bracken (*Pteridium aquilinum* (Appendix 5: Photograph 2).

Secondary codes: 10 (scattered scrub), 47 (native)

3.2.1.1.3 Bramble scrub (h3d)

Bramble scrub was present along the western side of the pre-existing track, leading off Wood Street and scattered amongst the understorey of the woodland and line of trees. Tall ruderal vegetation and rank grasses were also present (Appendix 5: Photograph 2).

Secondary codes: 11 (scattered trees)

3.2.1.1.4 Lowland mixed deciduous woodland (w1f)

This habitat is associated with Outwood Country Park which borders the eastern boundary of the work site. There was also a small woodland in the middle of the site, along the proposed access road, which comprised mainly of; Oak and Alder with occasional Silver Birch and scrub layer of Hawthorn (*Crataegus monogyna*), Blackthorn (*Prunus spinosa*) and Bramble (Appendix 5: Photograph 3).

Secondary codes: 10 (scattered scrub), 47 (native), 61 (horse grazed)

3.2.1.1.5 Dense scrub (h3h)

This habitat is located next to the small woodland, where the HV cable and access route join on the proposed plans. The species present included Hawthorn and Bramble scrub with scattered semi-mature Oak and Alder trees (Appendix 5: Photograph 4).

Secondary codes: 11 (scattered trees), 61 (horse grazed)

3.2.1.1.6 Other developed land (u1b6)

Approximately 500 metres of a pre-existing track was present which started from Wood Street and continued north until it reached the substation (Appendix 5: Photograph 5). This public footpath also interlinked with other footpaths associated with Outwood Country Park.

3.2.2 Species

3.2.2.1.1 Birds

Habitats on site such as line of trees, lowland mixed deciduous woodland, dense scrub and Bramble scrub provide good habitat to support notable nesting bird species of conservation concern in the UK during the breeding season (March – August inclusive).

Shore Top Reservoir which is located 850 m west of the site, states that wintering birds are a qualifying feature for SBI status. However, the habitat on site (modified grassland) is not considered to be of notable value as a foraging resource to wintering and migratory birds due to its relatively small scale and presence of higher quality habitats in the wider area. The woodland, trees and scrub on site and within the surrounding area also provide optimal nesting and foraging opportunities for both common birds and potentially those listed as species of principle importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 including those identified within the desk study, which favour ‘woody’ habitats for nesting. A Tawny Owl (*Strix aluco*) chick was found on the side of the substation by ADAS, on a previously unrelated survey.

The site was considered suitable as breeding habitat for the majority of species listed on Schedule 1 of the Wildlife and Countryside Act 1981.

3.2.2.1.2 Bats

The habitats within the site and the surrounding land are considered of moderate value to bats as a foraging and commuting resource due to the large expanse of lowland mixed deciduous woodland which creates a valuable habitat corridor connecting to various grasslands, hedgerows, ponds and the River Irwell within the surrounding area. The majority of the small section of lowland mixed deciduous woodland within the centre of the site contained mature Oak trees with scattered Hawthorn and Bramble scrub.

In addition, a number of trees were identified with a low - high bat roost potential (Appendix 5: Photograph 8 & 9) and whilst a thorough assessment of the trees in surrounding woodland was not undertaken it is considered likely, given their quantity, age and structure, that many trees on site have some level of bat roost potential. No buildings were present within the proposed development boundary.

3.2.2.1.3 Badger

Habitat in the form of large expanses of lowland mixed deciduous woodland located along the boundary of the site, was considered suitable to support Badger (*Meles meles*) and in some areas, their setts. Mammal tracks were observed at various locations across the site (following public footpaths) but no setts, or other signs such as latrines, snuffle holes, guard hairs or push-throughs were observed during

the time of the survey. Opportunities for foraging and commuting are available throughout the wider area.

3.2.2.1.4 Water Vole

No ponds, ditches or other waterbodies were recorded on site. The River Irwell is located 250 m from site however this watercourse was noted as being unsuitable to support Water Vole as the river was very fast flowing and the channel was very wide, approximately 40 m. (Appendix 5: Photograph 10). It is therefore considered that Water Vole are likely absent on site and will not be affected by the proposed works.

3.2.2.1.5 Otter

During the PEA survey, The River Irwell, which is located 150 m north of the site, was considered suitable to support Otter. This watercourse provided foraging, commuting and holt construction opportunities for this species with dense bankside vegetation in places along the river, providing suitable areas of shelter. During the survey, fisherman were present, indicating presence of fish species within the river. Fish species within the River Irwell include Brown Trout (*Salmo trutta*), Roach (*Rutilus rutilus*), Dace (*Leuciscus leuciscus*), Chub (*Squalius cephalus*), Bream (*Abramis brama*), Pike (*Esox Lucius*) and Perch (*Perca*).

Following an Otter survey undertaken by ADAS in May 2024 (ADAS 2025a), it was determined that although signs were present, no holts or resting places were recorded during the survey. It is therefore considered unlikely that Otter would be present on site.

3.2.2.1.6 White-clawed Crayfish

No watercourses present on site therefore the presence of this species can be discounted. The River Irwell was noted as being unsuitable to support this species due to the lack of rocky substrate available on the riverbed and fast flowing water. Combined with no records returned from the data search and the distance the River Irwell is from the works site, it is anticipated there will be no impacts to this species.

3.2.2.1.7 Reptiles

The majority of the site presented was generally optimal habitat to support species of reptiles. Tree cover, dense scrub and woodland margins within the site and surrounding land provided sheltering, basking and foraging opportunities for reptiles including the Common Lizard (*Zootoca vivipara*) and Slow-worm (*Anguis fragilis*). No reptiles, or evidence of them, was seen during the survey.

3.2.2.1.8 Amphibians

Sections of habitat on site provided suitable terrestrial habitat for Great Crested Newt. The woodland understorey, scrub and woodland boundary vegetation provided abundant foraging, refuge and hibernation opportunities for Great Crested Newt, and also facilitated connectivity to areas of suitable terrestrial habitat in the wider area. The modified grassland is unlikely to provide foraging, refuge or

hibernation opportunities for this species as it was intensely grazed by horses and was subject to high levels of ground disturbance. Two ponds were identified within 250 m to the site which may provide suitable aquatic habitat to support Great Crested Newt or other amphibians. Table 4 below provides descriptions of the ponds.

Table 4: Description of ponds within 250 m of the site.

Pond code	Description
P1	A moderately sized pond located approximately 200 m west of the site, in the middle of fields of pasture. The pond was vegetated with dense Bulrush (<i>Scirpoides holoschoenus</i>) in the north section of the pond with Great Willowherb (<i>Epilobium hirsutum</i>), Soft Rush (<i>Juncus effusus</i>) and other tall ruderal vegetation scattered around the perimeter of the pond. There were a few young Goat Willow (<i>Salix caprea</i>) trees scattered around the pond which created a minimal amount of shade. Wildfowl such as Moorhen (<i>Gallinula chloropus</i>) were present during the survey. Appendix 5: Photograph 6
P2	A large pond located 150 m east of the site, within a residential garden associated with Yew Tree farm. The banks around the pond were relatively shallow sloping and vegetated with numerous ornamental plants. The terrestrial habitat surrounding the pond consisted of numerous native trees species, some broad-leaved and some coniferous. There was a good amount of submerged aquatic vegetation within the pond. Other aquatic plants such as; Common Reed (<i>Phragmites australis</i>), Bulrush and various sedges dominated the perimeter of the ponds. Moorhen were present during the survey. Appendix 5: Photograph 7

A Habitat Suitability Index (HSI) assessment for Great Crested Newt was undertaken on all ponds within 250 m, the results of which are detailed in Table 5 below.

Table 5: Habitat Suitability Index of the ponds on site.

SI Description		P1	P2
1	Geographic location	A	A
2	Pond area	300 m ²	500 m ² – 700 m ²
3	Pond Permanence	Rarely dries	Never dries
4	Water quality	Poor	Moderate
5	Shade	0-60%	0-60%
6	Waterfowl effect	Absent	Absent
7	Fish presence	Absent	Possible
8	Pond density	4	4
9	Terrestrial habitat	None	Moderate

SI Description		P1	P2
10	Macrophyte cover	16-20%	36-40%
HSI score		0.48	0.81
Pond suitability		Poor	Excellent

The HSI assessment concluded that P1 has an 'poor' suitability, and P2 has a 'excellent' suitability to support Great Crested Newt. Combined with the data search results and returned ESPM licences associated with some of the ponds within 2 km, it is considered likely that Great Crested Newt breed within P2 and utilise suitable terrestrial habitat on site. The proposed works are not likely to have any direct effect on the ponds or suitable terrestrial habitat.

3.2.2.1.9 Invertebrates

Habitats on site (woodland, trees and scrub) are likely to support a range of common invertebrates and potentially more notable species which require expanses of 'woody' vegetation during their life cycle or utilise specific scrub and tree species found in abundance on site. No notable invertebrates were identified during the field survey. Habitats on site are common and widespread in the wider area and with extensive areas of good habitat surrounding the site, it is unlikely that the proposed development would impact long-term on local invertebrate populations through habitat loss.

3.2.2.1.10 Non-native invasive plants

Three species of non-native invasive plant species are present on / adjacent to site. These include Giant Hogweed (*Heracleum mantegazzianum*) identified adjacent to the site (grid reference: SD 77495 06116, SD 77488 06186 and SD 77570 06219), Japanese Knotweed (*Reynoutria japonica*) identified adjacent to the substation (north) off site (grid reference: SD 77601 06241) and Himalayan Balsam (*Impatiens glandulifera*) identified throughout the lowland mixed deciduous woodland adjacent to and 'on site' (area of Himalayan Balsam within the site boundary to be horizontal directional drilled beneath due to being within the woodland habitat).

4 Planning Policy and Legislation

4.1 Local Planning Policy

Table 6 details the policies within Greater Manchester Combined Authority - Places for Everyone Joint Development Plan Document for Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford And Wigan 2022 to 2039 (21 March, 2024) which are relevant to the ecological features.

Table 6: Summary of relevant local planning policy – Places for Everyone Joint Development Plan 2024.

Policy	Description
Policy JP-G2 Green Infrastructure Network	A strategic approach will be taken to the protection, management and enhancement of our Green Infrastructure in order to protect and enhance the ecosystem services which the Green Infrastructure Network provides, including flood management, climate change mitigation and adaptation. Alongside this primary function an enhanced Green Infrastructure network will support wider public health benefits, including promotion of active travel, food growing and recreational opportunities. Development which involves the removal of land from the Green Belt (including allocations proposed in this plan) will be required to offset the impact of removing land from the Green Belt through identifying and delivering compensatory improvements to the environmental quality and accessibility of remaining Green Belt in the vicinity of the site. Details of specific sites and projects will be established in discussion with the relevant Local Authority. 8.23 Our Green Infrastructure Network is enormously diverse, both in terms of the type and character of features and the various functions that they perform. At a broad level, the priority green infrastructure can be split into different character areas, although these are not completely discrete and there is some overlap between them: • <i>River valleys and waterways</i> • <i>Lowland wetlands and mosslands</i> • <i>Uplands</i> • <i>Urban green spaces</i> 8.24 Trees and woodland are further vital elements of the green infrastructure network, permeating through these broad areas and often appearing as key features within them. 8.25 Each type of green infrastructure is important in its own right, adding to the distinctiveness of the local area and Greater Manchester as a whole. However, it is the combination of, and interrelationships between, them that is particularly significant. Views between the various elements are a key part of the character of the area, and collectively they enable the movement of species throughout the sub-region and beyond. Although this categorisation helps to understand the overall network, it should also be recognised that there are considerable differences within as well as between them. These broad areas are complemented by other green infrastructure features especially within urban areas, such as gardens, ponds, green roofs and verges.
Policy JP-G3: River Valleys and Waterways	River valleys and waterways will be protected and improved as central components of our Green Infrastructure Network and a vital part of a Nature Recovery Network, making a major contribution to local identity, quality of life and the natural environment.

Policy	Description
	In making planning decisions and carrying out other associated activities, we will seek to deliver the following priorities: <i>1. Retain the remaining open character of the river valleys, avoiding their fragmentation and prominent development on valley edges;</i> <i>2. Promote public enjoyment of the river valleys, including as key features connecting urban areas to the countryside, providing opportunities for active travel, and enhance their high recreational value as green fingers through densely populated areas;</i> <i>3. Protect and enhance the mosaic of semi-natural habitats, including: riparian (waterside), clough, broadleaved and ancient woodland; wet and semi-natural grassland; meadow; and lakes and ponds;</i> <i>4. Retain existing pockets of relative tranquillity and seclusion, especially within the more tightly enclosed and wooded valleys;</i> <i>5. Reduce flood risk, through Natural Flood Management (NFM), including careful land management and a catchment-wide approach;</i> <i>6. Improve water quality, including through land decontamination and the management of diffuse pollution from industry and agriculture;</i> <i>7. Return rivers to a more natural state where practicable, including through deculverting and the re-naturalisation of riverbanks and flood plains;</i> <i>8. Where compatible with the requirements of commercial and freight use, increase the use of canals and watercourses for active travel, with improved and extended rights of way alongside the water providing walking and cycling routes for both recreation and commuting, thereby increasing access to natural green space; and</i> <i>9. Ensure that development relates positively to nearby rivers and other waterways, taking advantage of opportunities to integrate green infrastructure through:</i> <i>a. High quality frontages to the water; and</i> <i>b. Public realm alongside the water for both recreation use and maintenance access.</i>
Policy JP-G7: Trees and Woodland	We will work to deliver the aims and objectives of the Greater Manchester Tree and Woodland Strategy, aiming to significantly increase tree cover, protect and enhance woodland, and connect people to the trees and woodland around them. This will be done through local planning and associated activities such as: <i>1. Protecting and expanding the mosaic of woodland habitats, linking fragmented areas of woodland, in particular wooded cloughs and pockets of ancient and riverside (riparian) woodland;</i> <i>2. Encouraging habitat diversity through conserving and managing existing woodland and trees that are of heritage, cultural and/or aesthetic value, including ancient woodland and veteran trees;</i> <i>3. Aiming to plant a tree for every resident in the plan area over the next 25 years as part of the City of Trees initiative;</i> <i>4. Targeting tree-planting at the areas of greatest need where the green infrastructure benefits can be maximised, whilst avoiding the loss of, or harm to, other priority habitats, including encouraging woodland planting schemes on areas of low-grade agricultural land and land in need of remediation;</i> <i>5. Establishing a new City Forest Park in Salford, Bolton and Bury, which will provide a vast urban forest close to the City Centre;</i>

Policy	Description
	6. Considerably increasing the provision of street trees within urban areas; 7. Promoting the provision of community orchards to increase fruit consumption; 8. Promoting the opportunity for woodland conservation to raise awareness for the sustainable use of timber; 9. Securing a diversification of broadleaved species, in order to increase biodiversity and disease resilience; 10. Improving public access to woodland and trees particularly by sustainable travel models to capture the health and wellbeing benefits whilst managing the associated pressures; 11. Encouraging the positive management of woodland to bring it into a more productive state, improve habitat diversity, and more effectively contribute to important green infrastructure functions such as flood risk management, urban cooling and carbon storage/sequestration; And through development as follows: 12. Where development would result in the loss of existing trees, requiring replacement on the basis of two new trees for each tree lost, or other measures that would also result in a net enhancement in the character and quality of the treescape and biodiversity value in the local area, with a preference for on-site provision; and 13. Protecting trees and woodland during the construction phase of development.
Policy JP-G8: A Net Enhancement of Biodiversity and Geodiversity	Through local planning and associated activities a net enhancement of biodiversity resources will be sought, including, where relevant, by: 1. Increasing the quality, quantity, extent and diversity of habitats, particularly priority habitats identified in national or local biodiversity action plans and those that support priority species; 2. Improving connections between habitats, to protect and enhance the provision of corridors, ecological networks (including Nature Recovery Networks) and steppingstones that enable the movement of species, especially as the climate changes; 3. Enhancing the management of existing habitats, including through habitat restoration, avoiding habitat fragmentation and combating invasive species; 4. Protecting sites designated for their nature conservation and/or geological importance, with the highest level of protection given to international and then national designations; 5. Facilitating greater access to nature, particularly within urban areas; 6. Supporting the development and implementation of the Great Manchester Wetlands Nature Recovery Network; and 7. Safeguarding, restoring and sustainably managing our most valuable soil resources, tackling soil degradation/erosion and recovering soil fertility, particularly to ensure protection of peat-based soils and safeguard 'best and most versatile' agricultural land. Development will be expected to: a. Follow the mitigation hierarchy of: i. Avoiding significant harm to biodiversity, particularly where it is irreplaceable, through consideration of alternative sites with less harmful impacts, then ii. Adequately mitigating any harm to biodiversity, then iii. Adequately compensating for any remaining harm to biodiversity b. Avoid fragmenting or severing connectivity between habitats; c. Achieve a measurable net gain in biodiversity of no less than 10%

Policy	Description
	d. <i>Make appropriate provision for long-term management of habitats and geological features connected to the development;</i> e. <i>Where appropriate, development should: mitigate air pollution impacts on Manchester Mosses SAC; mitigate urban edge, functionally linked land and recreation disturbance impacts on the South Pennine Moors SAC/SPAs; and assess and potentially mitigate boat movement, water pollution, and light spillage and shading impacts on the Rochdale Canal SAC; and</i> f. <i>Development proposals should be informed by the findings and recommendations of the appropriate biodiversity/ecological assessment(s) in the PfE evidence base and/or any updated or appropriate biodiversity/ecological assessments submitted as part of the planning application process.</i>

4.2 National Planning Policy

The National Planning Policy Framework (NPPF) (Department for Levelling Up, Housing and Communities, 2024) is a policy framework document which provides a range of important principles. Paragraph 187 of the NPPF states that decisions should contribute to and enhance the natural local environment by:

‘Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs.’

Paragraph 188 goes on to state:

‘... take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.

When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles (paragraph 193):

- ‘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.’

5 Relevant Legislation

5.1 National Legislation

5.1.1 The Wildlife and Countryside Act 1981

The Wildlife and Countryside Act 1981 (as amended) 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) in Great Britain.

5.1.2 The Natural Environment and Rural Communities Act 2006

Section 40 of the NERC Act 2006 places a duty upon all local authorities in England to promote and enhance biodiversity in all of their functions. Section 41 lists habitats and species of principal importance to the conservation of biodiversity. Fifty-six habitats and 943 species of Principal Importance for Conservation are included on the Section 41 list and draws upon the UK BAP List of Priority Species and Habitats.

5.1.3 The Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law and transpose elements of the EU Wild Birds Directive in England and Wales. The Regulations provide for the designation and protection of 'European sites' (Special Areas of Conservation (SACs) and Special Protection Areas (SPAs)), the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European Sites.

5.1.4 The Environment Act 2021

Paragraph 2 (3) of Schedule 14 of The Environment Act 2021 makes it mandatory for all new developments (with some limited exceptions) to achieve a biodiversity net gain (BNG) of at least 10% by the time the development is completed compared to the pre-development biodiversity value of the onsite habitat. This percentage may be amended in the future by the Secretary of State. Please note that some Local Policies stipulate a higher target than this.

The Act allows three methods for securing biodiversity net gains:

1. enhancement of the biodiversity of land to which the planning permission relates;
2. the allocation of registered offsite biodiversity gain to any development for which the planning permission is granted; and
3. the purchase of biodiversity credits for any such development.

A biodiversity gain statement must set out whether, and if so how, the biodiversity gain objective applies in relation to development where the onsite habitat is irreplaceable, how the development will minimise any adverse effects to the onsite habitat, and what evidence must be produced to show how the biodiversity net gain has been met upon completion of the development. Biodiversity gains will need to be maintained for at least 30 years after the development is completed. The client will submit a Biodiversity Net Gain Report and statutory metric as part of the application submission.

5.2 Species Specific Legislation

5.2.1 Birds

Breeding wild birds are protected under the Wildlife and Countryside Act 1981 (as amended). Under the Wildlife and Countryside Act, a wild bird is defined as any bird of a species that is resident in or is a visitor to the European Territory of any member state in a wild state. Game birds however are not included in this definition (except for limited parts of the Act). They are covered by the Game Acts, which fully protect them during the close season.

All birds, their nests and eggs are protected, and it is thus an offence, with certain exceptions to:

- intentionally kill, injure or take any wild bird;
- intentionally take, damage or destroy the nest of any wild bird whilst it is in use or being built;
- intentionally take or destroy the egg of any wild bird;
- have in one's possession or control any wild bird, dead or alive, or any part of a wild bird, which has been taken in contravention of the Act or the Protection of Birds Act 1954;
- have in one's possession or control any egg or part of an egg which has been taken in contravention of the Act or the Protection of Birds Act 1954;
- use traps or similar items to kill, injure or take wild birds; and
- have in one's possession or control any bird of a species occurring on Schedule 4 of the Act unless registered, and in most cases ringed, in accordance with the Secretary of State's regulations.

Additionally, for some species listed in Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) it is an offence to intentionally or recklessly disturb the adults while they are in and around their nest or to intentionally or recklessly disturb their dependent young.

5.2.2 Bats

Bats are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended). Under the Wildlife and Countryside Act 1981 it is illegal to:

- Kill or injure bats;
- Cause disturbance at their resting places; or
- To block access to, damage or destroy their roost sites.

Under the Conservation of Habitats and Species Regulations 2017, as amended, it is an offence to:

- Deliberately capture or kill a bat;
- To damage or destroy a breeding site or resting place of any bat. (This is an absolute offence and intent or recklessness does not have to be proved); and
- Deliberately disturb a bat (this applies anywhere, not just at its roost).

5.2.3 Badgers

The Protection of Badgers Act (1992) (as amended) affords protection to Badgers and their setts. This legislation, as well as outlawing the persecution of Badgers, also makes it an offence, amongst others, to disturb Badgers whilst they are using a sett or to damage or block a sett.

5.2.4 Otters

Otters are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended). Under the Wildlife and Countryside Act 1981 it is illegal to:

- Kill or injure an Otter;
- Cause disturbance at their resting places; or
- To block access to, damage or destroy their resting place.

Under the Conservation of Habitats and Species Regulations 2017, as amended, it is an offence to:

- Deliberately capture or kill an Otter;
- To damage or destroy a breeding site or resting place of any Otter (This is an absolute offence and intent, or recklessness does not have to be proved); and
- Deliberately disturb an Otter.

5.2.5 Great Crested Newt

Great Crested Newts are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended). Under the Wildlife and Countryside Act 1981 (as amended) it is illegal to:

- Kill or injure Great Crested Newts;
- Cause disturbance at their resting places; or
- To block access to, damage or destroy their place of shelter.

- Under the Conservation of Habitats and Species Regulations 2017 (as amended) it is an offence to:
- Deliberately capture or kill a Great Crested Newt;
- To damage or destroy a breeding site or resting place of a Great Crested Newt. (This is an absolute offence and intent or recklessness does not have to be proved).

5.2.6 Reptiles

Adder (*Vipera berus*), Slow-worm, Grass Snake (*Natrix helvetica*) and Common Lizard are protected under the Wildlife and Countryside Act 1981 (as amended). It is illegal to kill or injure them.

Smooth Snake (*Coronella austriaca*) and Sand Lizard (*Lacerta agilis*) also receive legal protection under the Conservation of Habitats and Species Regulations 2017 (as amended). For these species, the following is prohibited:

- deliberate capturing, injuring or killing
- deliberate disturbance; Disturbance of animals includes in particular any disturbance which is likely- (i) to impair their ability to survive, to breed or reproduce or to rear or nurture their young; or (ii) to impair the ability of hibernating or migratory species, to hibernate or migrate; or (iii) to affect significantly the local distribution or abundance of the species to which they belong;
- deliberate taking or destroying the eggs of such an animal; or
- damaging or destroying a breeding site or resting place of such an animal and/or (ii) intentionally or recklessly - (a) disturbing any such animal while it is occupying a structure or place which it uses for shelter or protection; or (b) obstructing access to any structure or place which any such animal uses for shelter or protection.

5.2.7 Invasive Non-native Plants

It is an offence to “plant or otherwise cause to grow in the wild any plant which is included in Part II of Schedule 9 of The Wildlife and Countryside Act 1981 (as amended)”. Schedule 9 includes a list of non-native invasive plants. In addition, The Environmental Protection Act 1990 (EPA 1990) contains several legal provisions concerning “controlled waste”, which are set out in Part II. Any contaminated soil or plant material that may contain a plant listed in Part II Schedule 9 of The Wildlife and Countryside Act 1981 (as amended) is likely to be classified as controlled waste.

6 Evaluation of Ecological Features/Further Survey

Table 7 below provides an evaluation of the ecological features on site, identifying which are of sufficient importance to be taken forward for further consideration; where there is insufficient evidence, further surveys will be recommended to be able to assess the ecological importance of that feature in relation to the site and the proposed works. Where further surveys are not considered necessary, an assessment of likely value has been made. In some instances, a level of site importance has been identified for features which have a very localised scale. Any ecological feature that is identified as of negligible importance will not be considered further.

Table 7: Evaluation of Ecological Feature

Ecological Feature	Justification	Level of Importance / Likely Value
Modified grassland	A common and widespread habitat of little ecological importance.	Negligible Importance
Line of trees	A relatively common habitat nationally and in Bury, not associated with the local plan nevertheless, this habitat is connected to deciduous woodland in the wider area and is therefore considered of local importance. This habitat is no longer within the red line boundary and is not anticipated to be affected by works.	Negligible Importance
Bramble scrub	A common and widespread habitat however is considered of high ecological value for bird populations. This habitat is no longer within the red line boundary and is not anticipated to be affected by works.	Negligible Importance
Lowland mixed deciduous woodland	A priority habitat consisting of a variety of tree species and ages of trees. This habitat may qualify as a habitat of principle importance under the NERC Act 2006 and are therefore considered of local importance. Since the cable will be installed underground via Horizontal Directional Drilling, it is not anticipated that this habitat would be affected by works.	Negligible Importance
Dense scrub	A common and widespread habitat within the site and surrounding land. The scrub was dense with various native species present, this habitat is considered ecologically valuable to bird and invertebrate populations. This habitat is no longer within the red line boundary and is not anticipated to be affected by works.	Negligible Importance
Other developed land	The pre-existing earth track offers little ecological importance.	Negligible Importance
Birds	The dominant habitat on site (modified grassland) has low potential to support notable species of ground nesting bird during the bird breeding season (March – August inclusive). Due to the size and scale of the development, along with the habitats to be impacted, no notable foraging habitat for wintering and migratory birds will be lost. Although the	Site Importance

Ecological Feature	Justification	Level of Importance / Likely Value
	woodland, bramble scrub, dense scrub and line of trees are likely to support nesting birds, it is not anticipated that any suitable nesting vegetation would be affected by proposed works.	
Bats	The woodland and scrub habitats on site are considered to be suitable for foraging and commuting bats which may also allow movement off site and to potentially better-quality feeding grounds. Two mature Oak trees, a couple of metres from the pre-existing track, were identified as having moderate bat roost potential however these are not expected to be affected by the current plans.	Site importance
Badger	The site and land within 30 m of the site, provided ample foraging and sett creation opportunities for Badger within the woodland, line of trees, dense scrub and Bramble scrub. Field signs in the form of footprints were recorded during the survey.	Site importance
Water Vole	No watercourses were recorded on site, the River Irwell, located 250 m from site, was deemed unsuitable to support this species.	Negligible Importance
Otter	No watercourses were recorded on site however the River Irwell is located 250 m north of the site which was deemed suitable to support this species. Following a survey for this species, field signs were present, however no resting places or holts were identified and as such, the proposed development is not considered likely to affect this species.	Negligible importance
White-clawed Crayfish	No watercourses on site that would support this species.	Negligible Importance
Reptiles	Habitat for reptiles on site was recorded within the scrub, field boundaries and woodland margins. The modified grassland is considered negligible to support reptiles.	Site importance
Amphibians	Two ponds were present within 250 m of the site with poor and excellent suitability to support Great Crested Newt and other amphibians. All suitable terrestrial habitat present on site in the form of scrub, tree cover and woodland will be retained and protected.	Unknown – further consideration required.
Invertebrates	The habitat on site is considered likely to support a range of common invertebrates and potentially notable species which require expanses of ‘woody’ vegetation during their life cycle.	Negligible importance
Non-native invasive plant species	Three non-native invasive species were apparent on site. The proposed development should follow the terms of the invasive non-native invasive method statement, previously submitted by ADAS (ADAS 2025b).	Site importance

7 Ecological Constraints, Opportunities and Recommendations

7.1 Designated Sites

Ten statutory designated site of nature conservation importance are located within 5 km of the proposed development site, the closest of which are, Chapelfield LNR located 1.2 km east and Ashclough SSSI located 1.2 km west of the site. Given the distance between the site and statutory designations, and the qualifying / notified features for which these sites are designated, no impacts as a result of the proposed development are envisaged.

Eight non-statutory designated sites of nature conservation importance are located within 2 km; the closest being Manchester, Bolton and Bury Canal (East) SBI located 600 m north of the site. Given the distance between the site and non-statutory designations, no impacts as a result of the proposed development are envisaged.

7.2 Habitats

The dominant habitat on site, modified grassland, is considered of negligible ecological importance, and is therefore not considered further. Lowland deciduous mixed woodland is not anticipated to be affected by works since the proposed cables will be undergrounded. The Line of trees, Bramble scrub and Dense scrub are no longer within the red line boundary based off the updated site plans and are no longer anticipated to be affected by proposed works.

7.3 Species and Species Groups

7.3.1 Birds

While it is not considered proportionate to undertake further breeding/wintering bird surveys given the dominant habitat on site and size of the site, it is recommended that the works follow precautionary working methods outlined below.

It is advised that if any vegetation clearance of suitable nesting habitat is required, including trees (any age) and scrub, clearance is undertaken outside of nesting bird season (March – August inclusive). If this is not possible, the habitat should be subject to a pre-works check. This should be carried out no more than 48 hours before vegetation is cleared, by a suitably qualified ecologist. Any active nests found should be left undisturbed, with a minimum 5 m buffer of vegetation left around them (if applicable) until the young have fledged and left the nest. Any buffers established as a result of the initial nesting bird check must be subjected to a second check after the original nesting attempt is completed, before vegetation clearance (if applicable) can be removed during the breeding bird season.

Bird boxes are recommended to be installed on retained trees on site within the survey boundary or in the woodland within the site boundary. Likewise, areas of dense scrub or hedgerows could be created

elsewhere on site, potentially along the field or site boundaries, to create connectivity between a variety of habitats.

7.3.2 Bats

A Ground level Tree Assessment (GLTA) of trees on and adjacent to the site to identify potential roost features (PRF) for bats was undertaken as part of this assessment. The trees on site were of a variety of ages along the line of trees with mature aged trees in the lowland mixed deciduous woodland. The GLTA revealed two mature oak trees, shown on Appendix 2, as having moderate bat roost potential (Collins, 2016). If these trees are to be removed / pruned to facilitate the proposed works, further survey is recommended to determine presence/likely absence of roosting bats within the tree.

Survey visits should be completed between 01 May and 30 September with a total of up to three separate survey visits. If bats are found to be present, then a European Protected Species (EPS) licence would be required from Natural England before any works to remove the trees commence, so as to avoid disturbance to bats or their roosts. If the current proposals change and further vegetation removal is required then a GLTA survey should be undertaken to establish whether any other trees contain notable roosting features for bats.

The habitats on site present good foraging and commuting opportunities for several bat species, particularly the scrub and linear trees. These habitats may also form commuting routes to and from suitable feeding habitats within the wider area. Furthermore, the rivers, deciduous woodlands and its edge, in the surrounding area are also likely to provide good foraging and commuting habitat. These habitats are not anticipated to be affected by the proposed works. As the proposed works are only impacting the modified grassland, no significant impacts upon foraging and commuting bats are envisaged.

Any proposed lighting required in both the construction and operational phases of the proposed development, must follow the protocols outlined in the Institution of Lighting Professionals Guidance note 08/23 “Bats and Artificial Lighting at night” (2023) to minimise disturbance, light spill and sky-glow across the site and particularly towards the woodland area. By installing lighting during the construction phase, the lighting level and directionality can be controlled to ensure that lighting remains appropriate and sensitive.

7.3.3 Badger

While no active Badger setts were identified during the field survey, field signs in the form of footprints were present, furthermore, the data search revealed active setts are within 400 m of the site. All suitable habitat bordering the site was not fully assessed due to time pressure therefore, the presence or absence of Badger cannot, at this stage, be confirmed. Areas where vegetation is anticipated to be removed were fully surveyed however Badgers are highly mobile animals and may excavate a new sett within a short period of time. Similarly, the large expanse of lowland mixed deciduous woodland associated with

Outwood Country Park was not fully surveyed and could contain active Badger setts. It is therefore recommended that a pre-works check for new setts/excavations, within and adjacent to the site, is undertaken by a suitably qualified ecologist.

7.3.4 Otter

The River Irwell was deemed likely to support Otters due to the number of Otter sightings and field records returned by the data search. Following an Otter survey, it was concluded that although the River Irwell was suitable for this species and likely forms part of an active territory, no holts or resting places were present and therefore risk to this species can be discounted. Further details are included within the Otter Report produced by ADAS (ADAS 2024a).

7.3.5 Great Crested Newt

Two ponds with poor and excellent suitability to support breeding Great Crested Newt were present within 250 m of the site. No direct impact to the ponds or suitable terrestrial habitat are anticipated. However, should proposed works change and impacts to suitable terrestrial habitats become unavoidable, it is recommended that a Non-licensed Method Statement is issued to cover vegetation clearance works on site, to be supervised by an ecological clerk of works.

7.3.6 Reptiles

Habitat on site was considered suitable to support reptiles within the Bramble scrub and woodland margins. These habitats are proposed to be retained and protected during the development, should proposed works change and impacts to suitable habitat become unavoidable, then precautionary measures for reptiles should be included in the Non-licensed Method Statement to mitigate potential impacts to any reptile populations which may be present on site.

7.3.7 Invasive non-native species

Three invasive species were present on site, with Himalayan Balsam present being the most prolific of the three and present within the adjacent lowland mixed deciduous woodland. Giant Hogweed was also present in three locations adjacent the site boundary, all within the lowland mixed deciduous woodland. A single dense stand of Japanese Knotweed was also present, adjacent the northern boundary of the existing substation, outside the red line boundary. Works should follow the terms of the invasive non-native species method statement, previously submitted by ADAS (ADAS 2025b).

7.4 Other Enhancement Opportunities

Additional enhancement options on site include:

- Provision of bat roost boxes and bird nest boxes on retained trees on site and within the surrounding area;
- Incorporation of an invertebrate 'hotel' and Bumblebee boxes;

- Dead wood collected following any vegetation clearance is retained on site to create dead wood piles;
- Seed the site with a wildflower seed mix, increasing biodiversity benefitting, insects bats, birds etc;
- Other Neutral grassland and native hedgerow will be created to replace the loss of modified grassland, and;
- A Biodiversity Net Gain assessment is required to comply with the Environment Act 2021.

8 Conclusions

The purpose of this assessment aims to support a planning application for a proposed battery energy storage system (BESS) and associated HV cable route, off Wood Street, Radcliffe, M26 1DN. The site boundary was reduced and therefore the report updated to reflect the change.

Ten statutory and eight non-statutory designated sites of nature conservation importance are located within 2-5 km of the proposed development site. No impacts to any designated site are envisaged as a result of the proposed development.

It is anticipated under current plans, the only habitat lost will be modified grassland. The woodland will be retained since the proposed cable will be undergrounded via horizontal directional drilling.

Nesting birds checks may be required if vegetation clearance of suitable habitat takes place during nesting bird season between March – August inclusive.

If the current plans change and woodland clearance is required, then emergence / climbing surveys should be undertaken on the trees identified to have potential bat roosting features, to establish the effect of tree removal on roosting bats.

Badger activity was confirmed within proximity of the site, due to the amount of suitable habitat for sett construction, it is recommended that a pre-works check for Badgers, prior to works on and adjacent to the site is undertaken by an ecologist.

The Otter survey undertaken by ADAS during May 2024, concludes that although the River Irwell likely forms part of a currently active territory, no holts or resting places were apparent and as such, no impacts are considered likely to this species, as a result of the proposed development.

All works should be undertaken under the terms of the invasive non-native species method statement (ADAS 2025b) previously submitted for the site, given the prolific nature of the INNS identified on / adjacent the site, and the extent of those aforementioned species.

If proposed works change and impacts to suitable terrestrial habitat for Great Crested Newt is unavoidable, a Non-licensed Method Statement (with precautionary measures for reptiles) should be implemented and followed with an ecological clerk of works present.

The adoption of biodiversity enhancements as part of the design of the proposed development are recommended to comply with national / local planning policy. A '*Biodiversity Net Gain (BNG) Assessment*' will be undertaken to comply with The Environment Act 2021.

The wildlife value of a site can change. This report is based on field surveys and assessments undertaken in February 2023. Any appreciable delay to the commencement of the works may result in the requirement for an update of the surveys to be carried out at the appropriate time of year. In addition,

should revisions to the proposed scheme plan be made, an ecologist should be consulted for advice as further assessments may be required.

9 References

ADAS Otter Report (2025a) WNT69105-1860 (00)_Radcliffe BESS_Otter Survey Report_April 2025

ADAS INNS Report (2025b) WNT69105-1860 (00)_Radcliffe BESS_Invasive Non-native Species Survey Report_April 2025

Bats and Artificial Lighting at Night (2023) Guidance Note 08/23

Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). *The UK Habitat Classification User Manual Version 1.1* at <http://www.ukhab.org/>

Chartered Institute of Ecology and Environmental Management (2017). *Guidelines for Ecological Preliminary Ecological Appraisal. Technical Guidance Series.* www.cieem.net

Chartered Institute of Ecology and Environmental Management (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine.* Technical Guidance Series www.cieem.net

Collins (2016). Bat Conservation Trust's Bat Surveys for Professional Ecologists: Good Practice Guidelines.

Dean, M., Stratchan, R., Gow, D. and Andrews, R. (2016). *The Water Vole Mitigation Handbook* (The Mammal Society Mitigation Guidelines Series). Eds Fiona Mathews and Paul Chanin. The Mammal Society, London.

Greater Manchester Combined Authority, (2024). *Places for Everyone Joint Development Plan Document for Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford And Wigan 2022 to 2039* (21 March, 2024) [online] available at <https://www.greatermanchester-ca.gov.uk/media/9578/places-for-everyone-joint-development-plan-document.pdf>

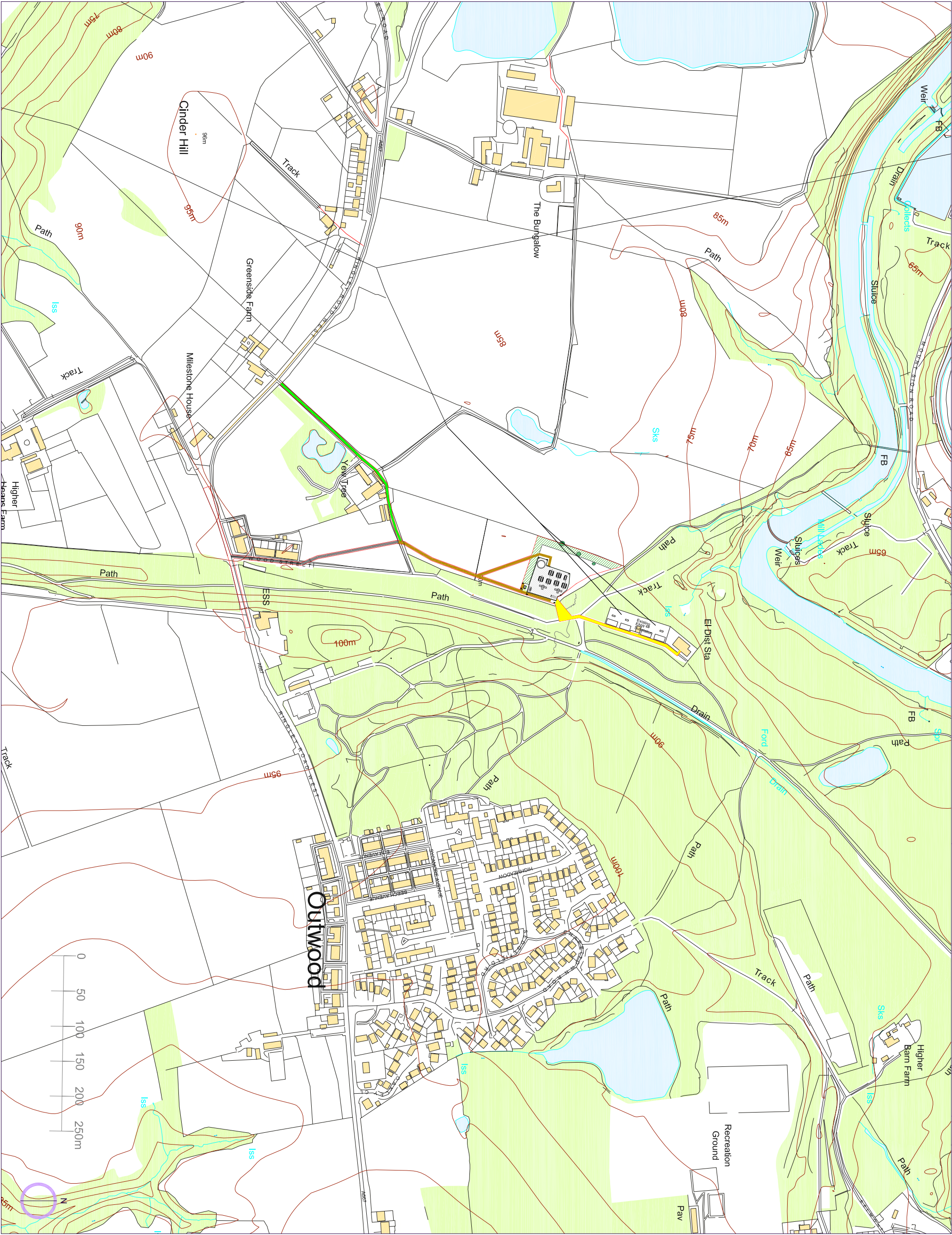
Oldham, R.S., Keeble, J., Swan, M.J.S. & Jeffcote, M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal*, 10: 43-155.

Stace. C. (2019). *New British Flora of the British Isles.* 4th Edition. Cambridge University Press.

UKHab (2020). UK Habitat Classification User Manual V1-1.

Appendix 1: Proposed Site boundary, BESS and HV cable route

See following page



Notes

1. If no comment is received against the submitted document within 10 working days from the date of issue, the client is deemed to have approved.

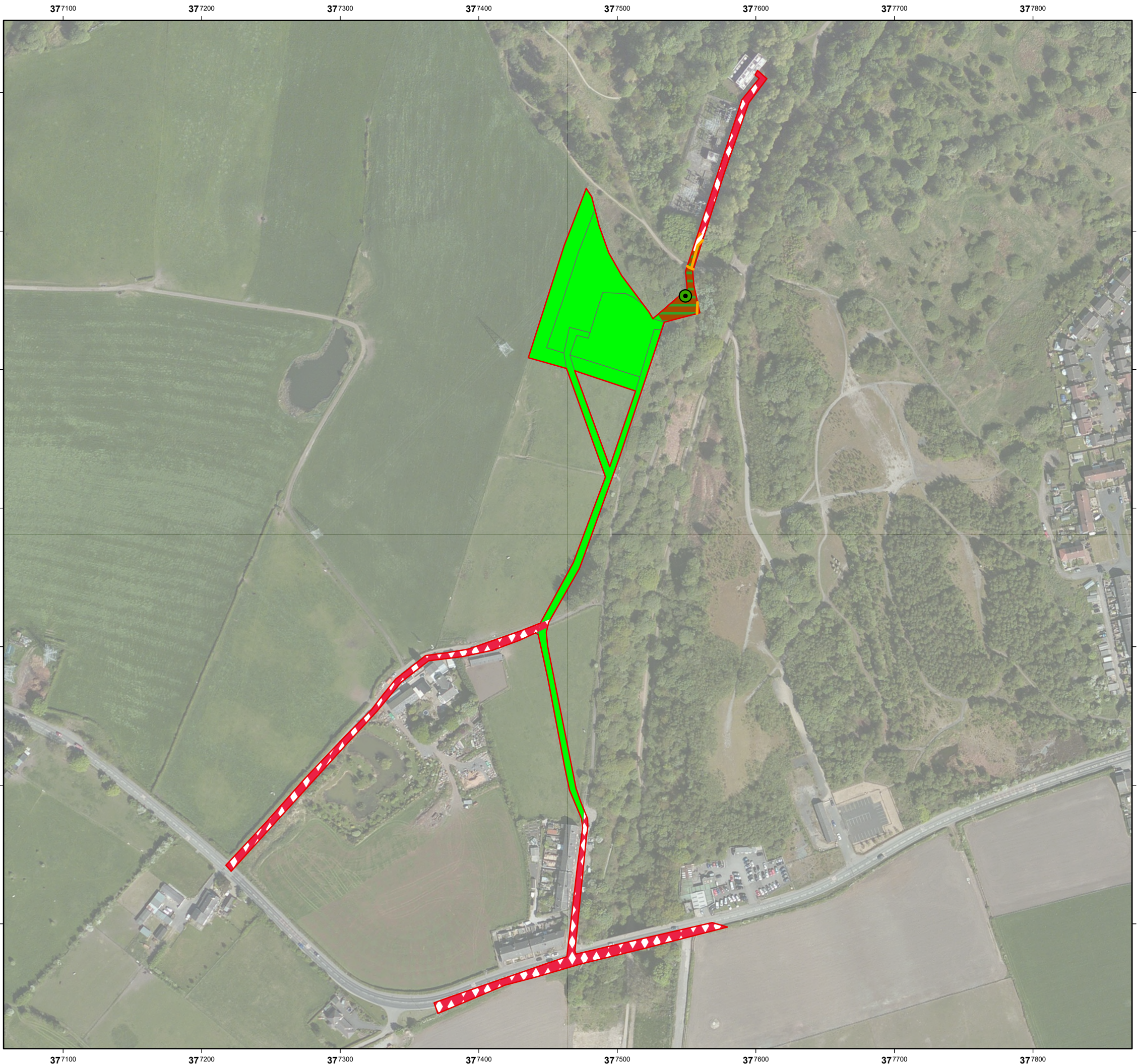
THIS DRAWING IS NOT FOR CONSTRUCTION

- Red Line Boundary
- Security Fence
- Cable Route/ Corridor
- Access Track
- Temporary Access Track
- Maintenance Access
- Overhead Line
- Compound Area Hardcore
- Landscape Buffer
- Tree
- Battery Container
- Transformer/ Inverters
- Storage
- Customer Substation
- DNO Substation
- CCTV
- Gate
- Water Tank

PROJECT		REV	
Radcliffe BESS		014	
TITLE		Proposed Site Layout	
CLIENT		Taiyo Power & Storage Ltd.	
STATUS			
Drawn By	PC	Checked By	PC
MS/TP	PC	Approved By	PC
Date	20.03.2025	Approved By	PC
PROJECT			
Sheet No	Overall Plan	Sheet Size	A3
ENTERSHEETNO	1	Drawing Number	121-10003
Scale			1:5000

Appendix 2: UK Habitat Classification Survey Map

See following pages



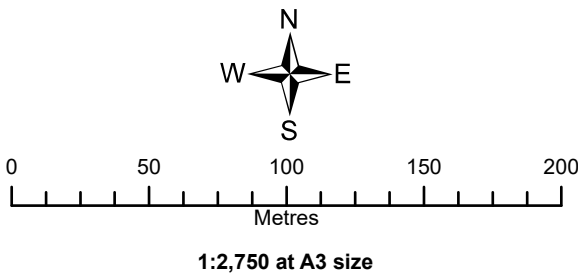
Taiyo Power and Storage

Radcliffe BESS,
Kearlsey Road, Radcliffe,
Greater Manchester

UK Habitat Classification

- Site Boundary
- g4 - Modified Grassland
- h3h - Dense Scrub
- u1b6 - Other Developed Land
- w1f - Lowland Mixed Deciduous Woodland
- Public Footpath
- Tree with Bat Roost Potential (BRP)

Drawn by Lewis Palmer 01/04/2025, Verified by Seb Phelan 01/04/2025



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Appendix 3: UK Habitat Classification Secondary Code Definitions

Secondary Code	Definition
10	Scattered scrub
11	Scattered trees
15	Rushes dominant
16	Tall herb
47	Native
61	Horse grazed
73	Bare-ground
115	Track
421	Walking/cycling route
1231	Permeable pavement

Appendix 4: Frame of Reference for Geographical Context

Geographical context	Examples
International and European	Ramsar Sites, Special Protection Areas, Biosphere Reserves, Special Areas of Conservation. Sites supporting populations of internationally important species. Any regularly occurring population of an internationally important species, which is threatened or rare in the UK. i.e., it is a UK Red Data Book species or listed as occurring in 15 or fewer 10km squares in the UK (categories 1 and 2 in the UK BAP) or of uncertain conservation status or of global conservation concern in the UK BAP. A regularly occurring, nationally significant population/number of any internationally important species.
National	SSSIs or non-designated Sites meeting SSSI selection criteria, NNRs, Marine Nature Reserves, NCR Grade 1 Sites. Sites containing viable areas of key habitats identified in the UK Biodiversity Action Plan. Any regularly occurring population of a nationally important species which is threatened or rare in the region or county (see local BAP). A regularly occurring, regionally or county significant population/number of any nationally important species.
Regional	Sites containing viable areas of threatened habitats listed in a Regional BAP (or some Natural Areas), comfortably exceeding SINC criteria, but not exceeding SSSI criteria. Any regularly occurring, locally significant population of a species listed as being nationally scarce which occurs in 16-100 10km squares in the UK or in a Regional BAP or relevant Natural Area on account of its regional rarity or localisation; A regularly occurring, locally significant number of a regionally important species.
County /Metropolitan	Sites meeting the criteria for county or metropolitan designation (SINC, CWS, etc.). Ancient semi-natural woodland, LNRs or viable areas of key habitat types listed in county BAPs/Natural Areas. Any regularly occurring, locally significant population of a species which is listed in a County/Metropolitan “red data book” or BAP on account of its regional rarity or localisation; A regularly occurring, locally significant number of a County/Metropolitan important species.
Local	Undesignated Sites or features considered to appreciably enrich the habitat resource in the District or Borough or within a zone of influence. A population of a species that is listed in a District/Borough BAP because of its rarity in the locality or in the relevant Natural Area profile because of its regional rarity or localisation; A regularly occurring, locally significant number of a District / Borough important species during a critical phase of its life cycle.

Appendix 5: Photographs



Photograph 1: Horse-grazed field where the BESS is proposed.



Photograph 2: Line of trees on the right and Bramble scrub on the left.



Photograph 3: A small section of lowland mixed deciduous woodland.



Photograph 4: Dense scrub



Photograph 5: Pre-existing track



Photograph 6: Pond 1 in the middle of arable/horse-grazed fields



Photograph 7: Pond 2, within back garden associated with Yew Tree Farm.



Photograph 8: Oak tree with BRP.



Photograph 9: Oak tree with BRP.



Photograph 10: The River Irwell located 250 m north of the site.