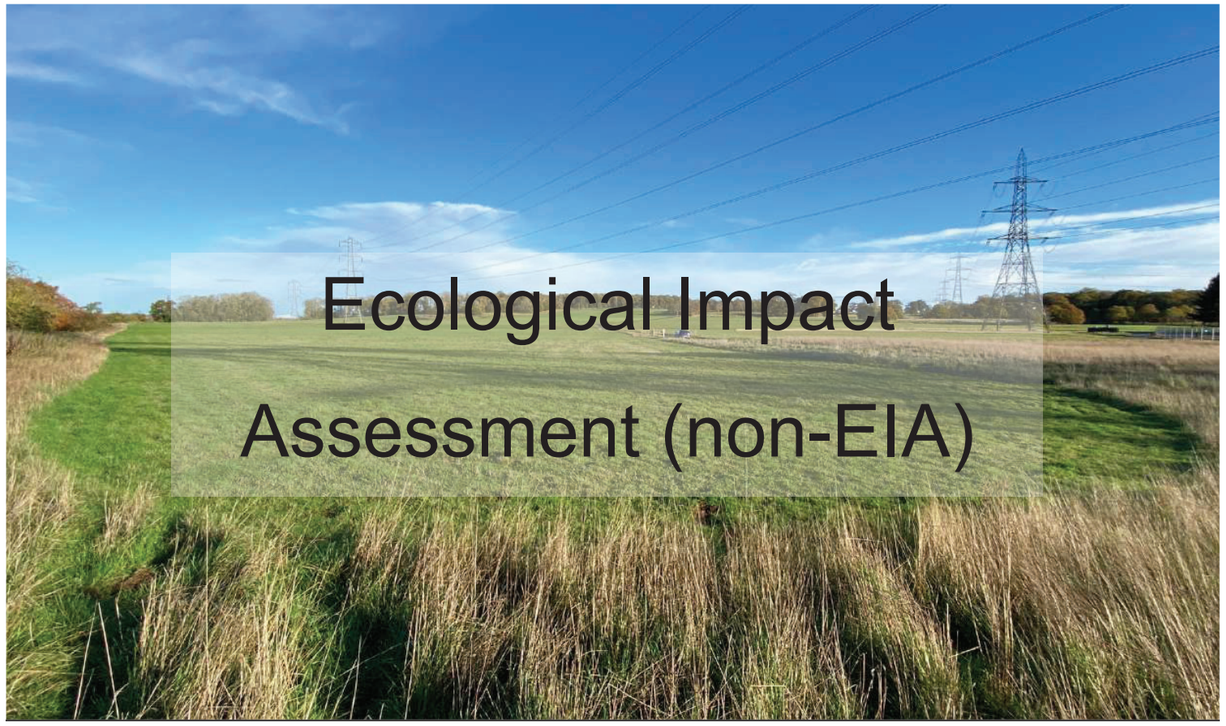
Appendix: Ecology and Biodiversity

Annex 1: Ecological Impact Assessment

Annex 2: Biological Impact Assessment



Ecological Impact Assessment (non-EIA)

Culham Battery Storage

On behalf of Statera Energy

April 2024 (Version 6)

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Project Code	Title	Date of Issue
EBD02513	Culham Battery Storage	11 April 2024

	Name	Date
Prepared by	Laura Grant BSc (Hons), MCIEEM	21 November 2022
Checked by	Ben Gardner BSc (Hons), MCIEEM, CEnv	22 November 2022
v5 Updated by	Anna Spence BSc (Hons), MSc, MCIEEM	20 February 2024
v6 Updated by	Anna Spence BSc (Hons), MSc, MCIEEM	11 April 2024

Contents

1 Executive Summary

Report purpose	This report identifies the potential ecological impacts, mitigation, compensation and enhancement measures for development of a battery energy storage system (BESS) connected directly to the National Grid, with the BESS compound area, National Grid cable sealing end compound, substation upgrading works and associated infrastructure works including access, drainage and landscaping.
Date and methods of survey	Surveys of the site were conducted throughout July-November 2022 and January 2024 including: • An extended habitat survey; • Daytime tree assessments for bats; and • Monitoring of potential badger setts.
Key findings	The site, situated north of Culham Science Centre is approximately 27ha in extent and includes four fields and a portion of a fifth field containing modified grassland, two areas and margins of other neutral grassland, hardstanding, scattered trees and scattered scrub. There are no ponds within the site or 500m of the site (aside from north of the River Thames which is 130m north of the site). Protected and priority species present or potentially present include: • Badger setts at five or six locations and four latrines; • Brown hare within the grassland habitats; • Potential for common species of reptiles on the site boundaries and within the other neutral grassland habitat; • Potential for foraging and commuting bats on the site boundaries (there are no opportunities for roosting within the site); • Opportunities for nesting birds within the scattered trees and scrub; and • Negligible opportunities for other protected or priority species.
Potential impacts	Habitats within the site are of negligible intrinsic ecological interest due to being common and widespread, however, they are of biodiversity value, having a baseline value of 68.89 habitat units. In the absence of mitigation, habitat loss to accommodate the proposals would result in a loss of biodiversity habitat units and potentially reduce suitability of the site for badger, brown hare and reptiles.
Measures to avoid and/or reduce impacts and deliver biodiversity enhancements	• A badger licence will be required to progress with closure of the badger sett in the east of the site; • The Statutory Metric has been used to identify the baseline habitat value and inform the design scheme to deliver a gain of 40.74 habitat units i.e. 59.14% increase and 5.10 hedgerow units; • Habitats of value to wildlife potentially present within the local landscape will be created including woodland, scrub, species-rich grassland and ponds. These habitats will represent enhancements for badger, nesting birds, reptiles and brown hare; • Tree and scrub clearance will be conducted sensitively to protect nesting birds; • Two log piles will be installed in the north of the site for reptiles and invertebrates; and • Features for nesting birds and roosting bats will be installed on mature scattered trees.

2 Introduction

2.1 Background and Site Description

2.1.1 Ecology by Design Ltd was commissioned by Statera Energy to undertake a Preliminary Ecological Appraisal (PEA) of a potential battery storage facility north of Culham Science Centre Thames Lane, Culham, OX14 3ES at approximate central grid reference SU 52879 96551.

2.1.2 The site is c.27ha in extent and comprises four large fields and a portion of a fifth field used for non-cereal crops (permanent modified grasslands harvested for hay and silage) and two areas of other neutral grassland. The fields had been mown when the survey was conducted in July 2022, with small strips on the field margins remaining unmown. There are occasional scattered trees and scrub within the site.

2.1.3 In the wider landscape, there is mixed woodland immediately north of the site, the River Thames runs from east to west 130m north of the site, there are additional non-cereal fields to the north and south-west and Culham Science Centre to the south-east.

2.2 Proposed Works

2.2.1 The proposals are for the development of a battery energy storage system (BESS) connected directly to the National Grid, with BESS compound area, National Grid cable sealing end compound, substation upgrade works and associated infrastructure works including access, drainage and landscaping.

2.3 Aims of Report

2.3.1 This report is an Ecological Impact Assessment which presents the approach and findings of the assessment of the potential ecological impacts of the proposed development works in accordance with industry standard guidance (CIEEM, 2019; BSI Standards Limited, 2013). It has been produced following a Preliminary Ecological Appraisal, Daytime Bat Walkover and further surveys for badger in order to be confident in the potential impacts of the proposals and how these could be mitigated. The development does not require an Environmental Impact Assessment (EIA), therefore 'non-EIA' has been included on the title page.

2.3.2 This report will be submitted to South Oxfordshire District Council to inform the planning application.

2.4 Personnel

2.4.1 The site survey was conducted, and report was prepared by Associate Ecologist Laura Grant BSc (Hons) MCIEEM. Laura has been an ecological consultant for 15 years and routinely conducts assessments for sites of this scale.

2.4.2 Review of the report was conducted by Senior Ecologist Anna Spence BSc (Hons), MSc, MCIEEM who has seven years' experience and Director Ben Gardner who has 17 year's experience in ecological consultancy.

3 Methods

3.1 Desk Study

3.1.1 A desk study was carried out to identify:

- internationally protected sites within the potential zone of influence of the site (7km)
- nationally protected sites within 5km of the site
- non-statutory designated sites and records of protected or priority species within 2km of the site

3.1.2 A 2km search radius for species and non-statutory designated sites is justified as an industry standard due to the small-scale category of development proposed at the site. It is thought highly unlikely that species or non-statutory sites outside of the search zone would be negatively impacted by the scale and type of development proposed at the site. A larger search radius is applied for internationally and nationally designated sites as these sites are protected to a higher level and can often be more sensitive to impacts. These search distances are also based on industry standard guidance and exceed the minimum distances recommended for international designated sites.

3.1.3 Sources consulted include:

- Thames Valley Environmental Records Centre (TVERC) (Received: 11 July 2022)
- MAGIC (www.magic.gov.uk) (last accessed 16 January 2024)
- publicly accessible data from Natural England
- local planning policy documents

3.2 Preliminary Ecological Appraisal

3.2.1 A Preliminary Ecological Appraisal (PEA) was conducted on 12 July 2022 by Ecology by Design Associate Ecologist Laura Grant BSc MCIEEM using standard techniques and methodologies (CIEEM, 2017) and the nomenclature of Stace (2019). Weather conditions during the survey were warm (23°C), breezy (wind 2 on the Beaufort scale[1]) and overcast (cloud 8/8[2]).

3.2.2 There was a small extension to the red line boundary proposed in the south of the site, encompassing an area of other neutral grassland, therefore this area was subject to survey by Laura on 16 November 2022. Weather conditions during the further survey were cool (10°C), calm (wind 1 on the Beaufort scale[3]) and bright (cloud 3/8[4]). An update site walkover and survey of an additional parcel of land to the north of the site was conducted by Anna on 11 January 2024. Weather conditions during this survey were cold (3°C), breezy (wind 3 on the Beaufort scale) and partially cloudy (cloud 5/8).

3.2.3 The PEA includes a survey of the habitats utilising the UK Habitat Classification System (UKHab Ltd., 2023). The DAFOR scale was used to provide a quick estimate of the relative abundance of plant species in a given area, where Dominant equates to >75% cover, Abundant is 51-75%, Frequent is 26-50%, Occasional is 11-25% and Rare is 1-10%. Species counts within a specific area were made where required to assess habitat condition. Photographs of the site are given in Appendix 1 and a UKHab habitat map is included in Appendix 2.

3.2.4 Opportunities for or evidence of protected and priority species were also identified. Where potential impacts on features of ecological interest are identified, the PEA is extended to include an assessment of impact. Any further surveys required are outlined and recommendations are made for appropriate avoidance, mitigation, compensation and enhancement measures.

3.3 Ecological Impact Assessment (non-EIA)

3.3.1 Wherever potential impacts as a result of the proposals were identified, an Ecological Impact Assessment (EcIA) was undertaken. The function of the EcIA was to identify, quantify and evaluate the potential effects of the proposed development on designated sites, notable/protected habitats and species. The EcIA was informed by the desk study, PEA, Daytime Bat Walkover, ground level tree assessment, badger survey and Biodiversity Impact Assessment detailed in Sections 3.4-3.7 undertaken with reference to best practice guidelines (CIEEM, 2019) whereby:

- the scope of the EcIA was informed by a desk study and initial site survey;
- importance of ecological features within the site was established and ecological importance identified with reference to known criteria and geographic context where appropriate and available;

[1] The Beaufort scale is an empirical measure from 0-12 which relates wind speed to observed conditions. 0- Calm, 1- Light air, 2- Light breeze, 3- Gentle breeze, 4- Moderate breeze, 5- Fresh breeze etc.
[2] Cloud cover is measured using the system called oktas. The visible sky is divided into eight and cloud presence is determined within each section. A value of one to eight is then assigned (1 okta being cloudless to 8 oktas being total cloud cover).

[3] The Beaufort scale is an empirical measure from 0-12 which relates wind speed to observed conditions. 0- Calm, 1- Light air, 2- Light breeze, 3- Gentle breeze, 4- Moderate breeze, 5- Fresh breeze etc.
[4] Cloud cover is measured using the system called oktas. The visible sky is divided into eight and cloud presence is determined within each section. A value of one to eight is then assigned (1 okta being cloudless to 8 oktas being total cloud cover).

- assessment of potential impacts of the proposed development was made with reference to their significance and geographic context; and
- avoidance, mitigation, compensation and enhancement measures were identified and recommended as appropriate.

3.4 Daytime Bat Walkover

3.4.1 A Daytime Bat Walkover (DBW) survey was conducted by Senior Ecologist Anna Spence (Natural England Level 1 Class Licence 2020-50071-CLS-CLS) during the update walkover survey in January 2024.

3.4.2 During the DBW any habitats suitable for roosting, foraging or commuting bats within or adjacent to the site were noted. This includes recoding structures, habitat features and trees which could be suitable for bats.

Table 3.1: *Categorisation of Potential Suitability of Sites for Bats (Collins, 2023)*

Suitability	Description of Potential Flightpaths and Foraging Habitats
None	No suitable features for flightpaths and foraging.
Negligible	No obvious flightpath or foraging features but cannot be discounted.
Low	Habitats with limited connectivity suitable for use by low numbers of bats.
Moderate	High habitat connectivity including flightpath or foraging habitats features.
High	Well-connected habitats high quality habitats for foraging which is likely to be in regular use.

3.5 Ground Level Tree Assessment

3.5.1 A ground level tree assessment was conducted by Laura Grant (Natural England Licence 2015-10871-CLS-CLS) whilst conducting the habitat surveys. Laura has held a Level 2 bat licence since 2012 and an Earned Recognition licence since 2022.

3.5.2 The surveyor used a high-power torch (LEDLenser Lamp) and 10x42mm binoculars to identify features of interest. Where possible, each aspect of the tree was inspected to identify features with potential to support roosting bats such as woodpecker holes, rot holes, splits, cracks, flaking bark and/or ivy cover. Where any evidence of use by bats such as droppings, staining or scratches around such features were present this was noted.

3.5.3 Each tree or cluster of trees was identified as having high, medium, low or negligible suitability for roosting bats. Collins (2016) categorizes the suitability of trees for roosting bats as follows:

- Negligible = Negligible habitat features likely to be used by roosting bats.
- Low = A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting suitability.
- Medium = 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.
- High = A structure or 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.

3.6 Badger Survey

3.6.1 A badger (*Meles meles*) survey was conducted by Laura Grant and Anna Spence whilst conducting the PEAs. The badger survey involved walking across the site searching for evidence of badgers and badger activity in accordance with standard guidance (Gov.uk, 2015). Any badger setts found were defined as main / annexe / subsidiary / outlier sett as adapted from Neal and Cheeseman (1996) and Harris *et al*. (1989). In addition to badger setts other evidence of badgers was also recorded. This included:

- Live or dead badgers;
- Foraging scrapes (distinctive excavations made by badgers when searching for food);
- Badger dung;
- Dung pits (a badger will often deposit its dung within a small excavated pit);
- Latrines (a collection of dung pits) (Roper, 2010);
- Badger guard hairs;
- Mammal paths; and
- Badger tracks.

3.6.2 Current UK Government guidance (Gov.uk, 2015) suggests that sett entrances should be monitored over an extended period of time, e.g. up to four weeks, to identify whether they are active. Camera traps were used at S1, S2 and S5 and sand was installed at the entrance of setts S1 and S2 (to record footprints), as well as sticks (to see if animals are entering or exiting) to create hair traps. The three wildlife cameras were deployed within the site positioned at entrances to burrows at:

- ///flush.magnetic.masterful (S1);
- ///yards.penned.crinkled (S2); and
- ///crossword.deeds.mimes (S5).

3.6.3 The cameras were deployed from 20 July 2022 until 19 August 2022 at S1 and S2, and 24 August to 18 October 2022 at S5 recording continuously throughout these periods. The cameras were set to trigger photographs and videos. The footage was reviewed to identify the activity of badgers within the site.

3.7 Biodiversity Impact Assessment

3.7.1 Data from the PEA and the proposed site plan were used to complete the Statutory Biodiversity Metric: Calculation tool (DEFRA, 2023b) using the published guidance (DEFRA, 2023). The proposed landscape scheme (Statera Energy Dwg No. SL254_L_X_GA_1) was used to calculate the change in biodiversity on site as a result of the proposed development. The full results of the Biodiversity Impact Assessment are reported on separately (Ecology by Design, 2024). Figures 1-3 in Appendix 2 indicate the baseline habitats, impacts and proposed habitats respectively.

3.8 Limitations/Constraints

3.8.1 The ecological work and surveys undertaken within the site accorded with published good practice methods and guidelines.

3.8.2 The grasslands within the fields were harvested ahead of the habitat survey in July 2022. The surveyor was able to readily identify the species within the sward therefore this is not considered to have constrained the identification of habitats or their condition.

3.8.3 Whilst July is a sub-optimal time of year to conduct ground level tree assessments due to leaves potentially concealing features of interest, this is not considered to be a significant constraint at the site as the majority of trees are immature and/or have open canopies with features readily identified.

4 Results and Interpretation

4.1 Designated Sites

4.1.1 The desk study identified two internationally designated sites of nature conservation importance within 7km of the site, one nationally designated sites of nature conservation importance within 5km and three non-statutory sites within 2km of the site. These sites are detailed in Table 4.1.

Table 4.1: *Records of Statutory and non-statutory designated sites (7km for International, 5km for National designations and 2km for local designations)*

Site Name and Designation *	Distance (km) and direction	Description
International designations		
Little Wittenham SAC SSSI	4.7km SW	69ha designated for it's Great Crested Newt (*Triturus cristatus*) (GCN). Two main ponds within broadleaved and conifer woodland containing a very large GCN population.
Cothill fen SAC	7km NW	43ha of the largest surviving alkaline fen in central England with rare M13 *Schoenus nigricans* vegetation type.
National designations		
Culham Brake SSSI	1.8km W	1.5ha of wet willow woodland by the River Thames containing one of the largest British populations of the summer snowflake (*Leucojum aestivum*) a Red Data Book plant species.
Local non-statutory sites		
Furze Brake LWS	760M NE	17.8ha of woodland, it houses the most important heronry in the upper Thames basin, with nearly 50 active nests.
Radley Gravel Pits LWS	851m NW	171ha of restored gravel works and landfill into large waterbodies with sedge and reedbeds valuable for birds, plants, invertebrates and bats.
Abbey Fishponds LNR	1.65km NW	5.6ha of fen with dry rough grassland banks, tall herb and woodland. Past records for scarce oxford species including devil's-bit scabious (*Succisa pratensis*), purple moor-grass (*Molinia caerulea*), common spotted orchid (*Dactylorhiza fuchsii*) and southern marsh- orchid (*Dactylorhiza praetermissa*). The site contains Water vole, bats and notable birds.

* Where:
SAC= Special Area of Conservation (International Designation, Statutory)
SSSI = Site of Special Scientific Interest (national designation, statutory)
LNR=Local Nature Reserve (local designation, non-statutory)

4.2 Habitats

4.2.1 The following habitats were recorded on site (see habitat map at Appendix 2 and species list at Appendix 4):

Table 4.2: *Habitat types identified during the habitat survey*

Habitat type	Description (including UKHab codes in brackets where relevant)
Modified grassland (g4) / Cropland – Non-cereal crops (c1c)	There are four large fields within the site and a portion of a fifth field which support modified grassland managed by mowing (106) for hay (109) and sheep grazing (102). The grasslands were each very dry (500) during the survey and exhibited poor species-diversity and uniform sward height due to management. Field F1 in the north has been sown with perennial ryegrass (*Lolium perenne*), and includes occasional cock's-foot (*Dactylis glomerata*), sterile brome (*Bromus sterilis*), and Yorkshire fog (*Holcus mollis*), and rarely occurring timothy (*Phleum pratense*), soft brome (*Bromus hordeaceus*) and annual meadowgrass (*Poa annua*). Forbs were rarely offering within the field and included field pansy (*Viola arvensis*), common poppy (*Papaver rhoeas*) and scentless mayweed (*Tripleurospermum inodorum*). See photograph 1. Fields F2-4 (Photographs 2-4) were grass-dominated and 5-10cm height, typically containing frequent Yorkshire fog, cock's-foot, perennial ryegrass and false oatgrass (*Arrhenatherum elatius*), occasional red fescue (*Festuca rubra*), timothy and wall barley (*Hordeum murinum*) and rarely occurring sterile brome. Field F7 is a newly sown perennial ryegrass field with no additional species noted. All modified grassland within the site is in poor condition.
Other neutral grassland (g3c)	The margins of the fields were typically 1-2m wide with a uniform grass-dominated sward of 1m height, with frequent false oatgrass, Yorkshire fog, cock's-foot, perennial ryegrass and yarrow (*Achillea millefolium*), occasional agrimony (*Agrimonia eupatoria*) and wild parsnip (*Pastinaca sativa*), rarely occurring nettle (*Urtica dioica*), hogweed (*Heracleum sphondylium*), curled dock (*Rumex crispus*), wild carrot (*Daucus carota*), field bindweed (*Convolvulus arvensis*), creeping cinquefoil (*Potentilla reptans*) and bramble (*Rubus fruticosus* agg.). Along the central access road white stonecrop (*Sedum album*) was also present. In the east of F3 and north of the access road (F6) are two areas of other neutral grassland which are infrequently managed, resulting in tussocky grassland habitat. The sward heights include some variation due to grazing by rabbits, typically being 5-50cm height with small areas of bare ground where rabbits have foraged. The sward includes frequent false oatgrass, cock's-foot, red fescue (*Festuca rubra*) and ribwort plantain, occasional Yorkshire fog, a vetch (*Vicia* sp.), nettle, yarrow and dove's-foot crane's-bill (*Geranium pusillum*) and rarely occurring teasel (*Dipsacus fullonum*), creeping cinquefoil, dandelion (*Taraxacum officinalis* agg.), bramble, cleavers (*Galium aparine*), white clover (*Trifolium repens*), common stork's-bill (*Erodium cicutarium*), white campion (*Silene latifolia*), wavy hair grass (*Deschampsia caespitosa*) curled dock (*Rumex crispa*), common sorrel, field bindweed and perforate St John's-wort (*Hypericum perforatum*). Field F5 at the north of the site has been left unmanaged and developed a longer sward of approximately 15cm other neutral grassland of similar species composition to above with the addition of stands of maize (*Zea mays*) left from the previous crop grown in this area. All other neutral grassland within the site is in moderate condition.
Mixed scrub (h3h)	In the east of the site is 0.33ha of mixed scrub which appears to have been planted in c. 2010 and is typically 3m height with some already existing pedunculate oak (*Quercus robur*) or faster growing trees cherry (*Prunus* sp.) and douglas fir (*Pseudotsuga menziesii*) being up to 7m height. The scrub is species-rich, containing frequent hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*) and dogwood (*Cornus sanguinea*), occasional hazel (*Corylus avellana*), ash (*Fraxinus excelsior*), wayfaring tree (*Viburnum lantana*), and European larch (*Larix decidua*) and rarely occurring walnut (*Juglans regia*), cherry, sycamore (*Acer pseudoplatanus*) and Scots pine (*Pinus sylvestris*). The understorey is typical of the field margins. See Photograph 8.
Bramble scrub (h3d)	In the south-east of the site is 0.52ha of scrub dominated by bramble c. 1m height including rarely occurring scattered elder (*Sambucus nigra*), hawthorn and rose (*Rosa* sp.). See photograph 9.
Road (800)	Hardstanding roads bisect the site. See Photograph 6.
Scattered tree (32)	There are infrequent scattered trees within the site including turkey oak (*Quercus cerris*), ash, plum (*Prunus* sp.), large-leaved lime (*Tilia platyphyllos*), apple (*Malus* sp.) and pedunculate oak (*Quercus robur*).
Scattered scrub (10)	There is scattered scrub within the site including occasional elder (*Sambucus nigra*) beneath the pylons within the centre of the fields and on the boundaries, English elm (*Ulmus minor*) and hawthorn (*Crataegus monogyna*).

Conclusion

4.2.2 Habitats within the site are of negligible value in accordance with the geographic criteria in Appendix 2, however, the habitats are of biodiversity value, as detailed within Section 4.4.

4.3 Protected Species

4.3.1 In Table 4.3 the findings of the desk study and Preliminary Ecological Appraisal are presented together. Relevant legislation and policy is referred to as appropriate and further details are provided in Section 6. The presence or potential for each species/group to occur within the site is considered.

Table 4.3: *Presence of or potential for protected / notable / invasive species within the site and local area*

Species	Protection or Status *	Presence/potential at the site
Badger (*Meles meles*)	Protection of Badgers Act 1992.	The desk study returned 30 badger records within 2km. 13 records were of badger setts including one recorded on site (S2 on Figure 1) and another c. 40m and 100m south in 2020 (S5 on Figure 1). Low numbers of badger are frequently active within the site. Six badger setts and four latrines have been identified within / adjacent to site. See further details within the *Badger monitoring* section below.
Bats	EPS. Some species are also SPIs. W&CA 1981 Sch5	The desk study returned 754 records of 11 bat species. 711 of them where within 1km of the site and two roost records were within 2km. MAGIC returned three records of European Protected Species Mitigation licenses for bats within 2km of the site. Two were for common pipistrelle (*Pipistrellus pipistrellus*) and one was

		for brown long-eared and Natterer's bat (*Myotis nattereri*). All licences were granted in 2020. The habitats within the site offer no obvious flightpaths for commuting bats or foraging habitats and the site is therefore of negligible potential for foraging and commuting bats. The woodland edge on the northern boundary is likely to be suitable for foraging and commuting bats and there are some trees on the boundary also supporting features with suitability for roosting bats. The scattered trees on site all have negligible potential to support roosting bats.
Birds	W&CA 1981 Sch1 / Sch5	The desk study returned 25,200 records of 107 species of protected or notable bird species. Of these records 313 of 18 species were recorded within the site boundary and 158 are protected species records. The resolution of these records is 1km square. Species with potential to make use of habitats within the site include 75 records of barn owl (*Tyto alba*), 175 records of fieldfare (*Turdus pilaris*), 581 records of red kite (*Milvus milvus*), 426 records of redwing (*Turdus iliacus*) and 614 records of skylark (*Alauda arvensis*). No skylark were audible within this site during the PEA or subsequent surveys throughout July-October 2022. The grassland fields contain limited floristic diversity and comprise single-height swards with no bare ground, limiting the suitability for breeding skylark. The scattered trees and to a lesser extent, scattered scrub, provide suitable habitat for a range of birds associated with farmland habitats.
Dormouse (*Muscardinus avellanarius*)	EPS. SPI. W&CA 1981 Sch5	No records of the species were returned by the desk study. The habitats within the site are unsuitable for the species due to their structure, isolation and/or age.
Otter *(Lutra lutra)*	EPS. SPI. W&CA 1981 Sch5	102 records of otter were returned within 2km of the site. The nearest record was 136m north in the River Thames from 2011. 52 of the records were within 1km of site.
Water vole (*Arvicola amphibius)*	W&CA 1981 Sch5	There were 56 water vole records returned, eight of which were within 1km of the site. The closest record was 300m from the site in 2009. All records are from 2015 or earlier. The
Other wild mammals	Various	No records of brown hare (*Lepus europaeus*) were recorded, however, droppings of the species were recorded within Fields F1 and F2. The desk study returned three records of harvest mouse (*Micromys minutus*) nests all earlier than 2011 and over 1km from site. The narrow arable field margins and areas of unmown grassland are of limited suitability for the species. One record of European hedgehog (*Erinaceus* europaeus) was also recorded in 2020 over 1km away. The grassland habitats provide potential foraging habitat for the species.
Reptiles	ESP W&CA 1981 Sch5	The desk study returned a record of a breeding adder (***Vipera berus***) pair 1.4km from site in 1995. Other reptile records included 46 grass snake (*Natrix natrix*) records, the closest was 124m from site in 2010, and a slow-worm (*Anguis fragilis*) record 1.km from site in 2015.

		The structure of the other neutral grasslands are suitable for common species of reptile.
Great crested newt (*Triturus cristatus*) and other amphibians	EPS. SPI. W&CA 1981 Sch5	382 records were returned within 2km of the site, 361 were within 1km but none were recorded on site. The closest record was 290m north in 2015. MAGIC returned two records of European Protected Species Mitigation licenses for great crested newt within 2km of the site, both with a start date of 2015 and north of the River Thames. The River Thames is c. 50m wide and strongly flowing adjacent to the site therefore this is likely to act as a barrier to dispersal for great crested newts. There are no ponds within 500m of the site south of the River Thames. The species are therefore considered unlikely to be present or impacted by the proposals.
White-clawed crayfish (*Austropotamobius pallipes*)	EPS. SPI. W&CA 1981 Sch5	No records of the species were returned by the desk study. Three records of signal crayfish (*Pacifastacus leniusculus*) were returned from the River Thames therefore it is considered likely that the species is not present either due to competition or introduction of the crayfish plague.
Invertebrates	W&CA 1981 Sch5 & Sch9	The desk study returned 23 records of five Protected butterfly species including white admiral (*Limenitis Camilla*), purple emperor (*Apatura iris*), dingy skipper (*Erynnis tages*) small heath (*Coenonympha pamphilus*), and Grizzled skipper (*Pyrgus malvae*). 19 were recorded within 1km of site however none were recorded on site. 134 protected or notable moth species were also returned with the closest record being a Shaded Broad-bar (*Scotopteryx chenopodiata*) 132m away. There were ten records of three protected bee and wasp species all within 1.3km of the site. The closest was 405 m away in 2011. One record of the protected rugged oil beetle (*Meloe rugosus*) was also returned by the desk study as 906m from site in 2006. The site offers limited opportunities for an assemblage of species typical of arable habitats.
Protected plants	W&CA 1981 Sch8	181 records of 44 species of notable or protected flowering plants were returned by the desk study. Four of the notables were indicated to be present within the site including Common cudweed (*Filago vulgaris),* Field Pepperwort (*Lepidium campestre*), Knotted Clover (*Trifolium striatum*), and Prickly Poppy (*Papaver argemone)*. These species are Red listed or scarce in Oxford. The records range between 1997-2020. No protected or notable plant species were recorded during the PEA and are considered unlikely to be present given the sward composition.
Invasive species	W&CA 1981 Sch9	139 records of invasives were returned by the desk study. Nine species of invasive plants were recorded including Japanese knotweed (*Reynoutria japonica*), Himalayan Balsam (*Impatiens glandulifera*), and Rhododendron (*rhododendron ponticum)*. None of these records are on site but the closest

		was 213m away. 49 records where within 1km. No invasive species were recorded within the site. Records of five aquatic invasive species were returned (predominantly from the River Thames) including signal crayfish, zebra mussel (*Dreissena polymorpha*), American mink (*Neovison vison*), Ruddy Duck (*Oxyura jamaicensis*) and red eared terrapin (*Trachemys scripta elegans*). The site does not provide increased potential for invasive animal species and none were recorded.

* Where:

EPS = European Protected Species under the provisions of the Conservation of Habitats and Species Regulations 2017 (as amended)

SPI = Species of Principal Importance under Section 41 of the NERC Act 2006

W&CA 1981 = Wildlife and Countryside Act 1981 (as amended)

Sch1 = Schedule 1 Birds which are Protected by Special Penalties (W&CA 1981)

Sch5 = Schedule 5 Animals which are Protected (W&CA 1981)

Sch8 = Schedule 8 Plants which are Protected (W&CA 1981)

Sch9 = Schedule 9 Animals and Plants to which Section 14 Applies (W&CA 1981)

Ground level tree assessment

4.3.2 There are two off-site ash trees on the woodland edge in the north-west of the site which were identified as supporting potential roost features; a low suitability torn limb with a downward facing feature and a south-facing rot hole of moderate suitability.

4.3.3 The remainder of trees within or adjacent to the site were identified as having negligible potential to support roosting bats.

Badger monitoring

4.3.4 During the badger monitoring, infrequent activity of badger was recorded in proximity to setts S1 and S2, with no badger recorded entering or leaving the sett entrances and no badger hairs being captured on the sticky traps. There are likely to be additional sett entrances on the embankment west of S2. Badger were recorded squeezing beneath the fence at this location and were actively using a latrine west of the fence.

4.3.5 Camera monitoring of S5 for nearly two months recorded six passes by badger, none of which entered or emerged from the entrances monitored (each entrance was not monitored, and it is recognised there may be additional sett entrances within the bramble scrub). The low level of activity in the vicinity of the sett indicates that it is likely used infrequently by low numbers of badger as an outlier sett.

4.3.6 There is an off-site sett (S6) which includes four active entrances 150-180m south of the site which is likely to be an Annexe sett. Given the proximity of the off-site sett to S3, S3 is considered likely to be an outlier sett. There are latrines north-east and immediately west of

S6. Offsite S3, 50m south of the site, was not subject to monitoring but was of a suitable size for badger. There was no vegetation within the entrance and there was a well-worn path at the entrance along with a single rabbit dropping (see Photograph 8).

4.3.7 In conclusion, the status of the setts is as follows:

- S1 (SU 52793 96495) = Inactive single hole outlier
- S2 (SU 52669 96671) = Inactive single hole outlier
- S3 (off site) (SU 52825 96234) = Active single hole outlier
- S4 (off site) (SU 52796 96220) = Potential single hole outlier
- S5 (off site) (SU 53498 96131) = A former annexe or main sett now used as an outlier sett with five holes identified
- S6 (off-site; SU 52825 96140) = Annexe sett with four active holes

Evaluation

4.3.8 The site is of Local value to brown hare and badger and negligible value to the remainder of other species in accordance with the geographic context set out in Appendix 4.

5 Potential Impacts and Recommendations

5.1 Introduction

5.1.1 This section presents the potential impacts and subsequent recommendations for the proposed development at the site.

Adoption of the Mitigation Hierarchy

5.1.2 In accordance with the National Planning Policy Framework (NPPF) (see Section 6) and British Standard 42020:2013 'Code of Practice for Planning and Development' (BSI Standards Limited, 2013), the 'Mitigation Hierarchy' has been adopted at the site with regards to the potential ecological impacts of the proposals. The mitigation hierarchy outlines a stepwise process as follows:

- **Avoidance** – as a first option, adverse impacts should be avoided through good design, such as retaining and safeguarding important ecological features wherever practicable;
- **Mitigation** – where unavoidable, adverse impacts should be reduced as much as possible, such as reducing land-take of important habitats;
- **Compensation** – where residual effects remain, compensation should be secured to offset adverse impacts, such as through compensatory habitats creation; and
- **Enhancement** – opportunities for net gains in biodiversity should be explored and included wherever appropriate.

5.2 Designated Sites

Potential Impacts

5.2.1 The site is sufficiently distant from the designated sites within the local landscape to avoid direct or indirect impacts as a result of the proposals such as noise, dust, changes to water supply or changes in air quality.

5.3 Habitats

Potential Impacts

5.3.1 The River Thames is 130m north of the site. Assuming standard pollution control measures are specified within a Construction Environmental Management Plan (CEMP) and adopted (see Recommendation R1), the proposals have no potential to directly or indirectly impact upon the river habitat or species supported by it.

5.3.2 Whilst habitats within the site are of negligible intrinsic ecological interest, they contribute to the biodiversity value of the site. Unmitigated habitat loss to accommodate the proposals would therefore result in a loss of biodiversity habitat units. The Statutory Metric has been used to identify the baseline habitat value and inform the design scheme to ensure a net gain for habitat biodiversity. Habitats of value to wildlife potentially present within the local landscape will be created including woodland, species-rich grassland a wildlife pond and attenuation pond. The habitats to be created are indicated within Figure 3, Appendix 2. The methods for creation of these habitats are outlined within the Biodiversity Impact Assessment report (Ecology by Design, 2024). A Landscape and Ecological Monitoring and Management Plan (LEMMP) will be required to specify the long-term management of the habitats to meet their target conditions and deliver long-term benefits for wildlife for 30 years.

Recommendation R1: Construction Environmental Management Plan

5.3.3 A Construction Environment Management Plan (CEMP) will be produced to identify measures to be adopted to ensure protection of valued features during construction. It includes:

1) Details of the licence required to lawfully close badger sett S5 ahead of site clearance.

2) Any update surveys needed prior to site clearance (e.g. a pre-commencement nesting bird and/or badger check).

3) Risk assessment of potentially damaging construction activities.

4) Identification of biodiversity protection zones.

5) Practical measures (both physical measures and sensitive working practices) to avoid, reduce or mitigate the impacts on important habitats and protected species during construction.

6) The location and timing of sensitive works to avoid harm to biodiversity features.

7) The times during construction when specialist ecologists need to be present on site to oversee works.

8) Responsible persons and lines of communication.

9) Use of protective fences, exclusion barriers and warning signs.

Recommendation R2: Landscape and Ecological Management and Monitoring Plan

5.3.4 A LEMMP will be produced with reference to the Biodiversity – Code of Practice for Planning and Development British Standard: BS 42020:2013 (BSI Standards Limited, 2013) and in particular, Section 11.1 which provides details on the content of management plans. This LEMMP will be produced by an ecologist alongside consultation with the developer and landscape architects to ensure the appropriate design and long-term management of mitigation measures to protect and enhance the landscape character and biodiversity. It includes:

1) Review of site potential and constraints.

2) Purpose and conservation objectives for the proposed works.

3) Detail design(s) and/or working method(s) to achieve the stated objectives.

4) Extent and location/area of proposed works on appropriate scale maps and plans (e.g. woodland planting / creation of log piles).

5) Type and source of materials to be used where appropriate (e.g. native species of local provenance, specification etc).

6) Timetable for implementation.

7) Details of initial aftercare and long-term maintenance of ecological habitats (e.g. woodland, hedgerows and grassland areas).

8) Details for monitoring and remedial measures.

9) Persons responsible for implementing the works.

10) Preparation of a work schedule to cover 20 years.

11) Details of the body or organisation responsible for implementation of the plan.

5.4 Protected and Notable Species

Potential Impacts

5.4.1 The proposals will potentially result in the disturbance or destruction of an outlier sett with five holes (S5).

5.4.2 Brown hare currently make use of the site for foraging. In the absence of mitigation, the proposals would reduce the available foraging resource available to the species. However, the retained modified grasslands will be retained and enhanced to increase their species and structural diversity. There are similarly suitable fields to the north-east and south-west and connectivity to these features will be maintained along the northern and southern site boundaries.

5.4.3 The modified grassland habitats within the site are currently unsuitable for reptiles, however, they will be subject to enhancements to increase their species and structural diversity which will increase their suitability for reptiles. The scattered trees felled in the east of the site will be used to create log piles in the north-west of the site.

5.4.4 Clearance of trees and scrub has the potential to result in the destruction of an active bird nest, if present.

5.4.5 Limited lighting will be required within the site for security purposes. Lighting could impact foraging and commuting (there are no opportunities for roosting bats in proximity to the compounds). Lighting will therefore be sensitively designed to ensure no impacts arise. Woodland planting will increase the foraging opportunities for bats and three bat boxes will be installed on scattered trees to create roosting opportunities.

5.4.6 A fence will surround each of the battery compounds for security purposes. The fencing will comprise propriety weld mesh fences 2.5m height with a cranked top 0.5m height supporting three strands of barbed wire. The compounds themselves will be of negligible value for wildlife due to comprising hardstanding, gravel and the batteries themselves. These fences will not prevent access to habitats of value or sever the landscape, therefore no mitigation measures are considered necessary.

5.4.7 Opportunities for nesting birds will be provided by the proposed woodland habitats and three nest boxes will be installed on scattered trees.

Recommendation R3: Badger

5.4.8 Monitoring of sett S5 will be conducted once planning permission is secured to inform a badger licence to enable its lawful destruction should it be confirmed as being active. Some bramble scrub clearance will be required around S5 to enable all sett entrances to be identified. The licence can be implemented between 1st July and 30th November. Implementation will include installation of a one-way gate to enable badger to leave but not re-enter, followed by 21 days of monitoring, closure of the sett and a destructive search of the burrow.

Recommendation R4: Reptile Mitigation and Enhancement

5.4.9 The creation of 10.7127ha of other neutral grassland in moderate condition will represent a significant enhancement for reptiles.

5.4.10 In addition, two log piles 2m length and width and 1.5m height will be installed in the north of the site, alongside the existing other neutral grassland habitat (on the edges of the modified grassland habitat which will be subject to enhancements; see locations on Figure 3, Appendix 2).

Recommendation R5: Safeguarding nesting birds

5.4.11 Any birds' nests are protected whilst in use. Ideally, works to suitable nesting habitat/features should be scheduled to avoid the bird nesting season (March to August inclusive). Should such works take place during March-August inclusive, they must be immediately preceded by a check for any active nests by a suitably qualified ecologist. Any active nests identified during

works (regardless of time of year) would need to be protected and left with a suitable buffer (to be defined by the ecologist) until the nest is no longer active.

Recommendation R6: Bat boxes

5.4.12 Three woodcrete / woodstone bat boxes (e.g. 2F Schwegler Bat Box) suitable for crevice-dwelling species will be installed on the scattered trees in the north-east of the site.

Recommendation R7: Bird boxes

5.4.13 Three woodcrete / woodstone bird boxes suitable for starlings, woodpeckers and nuthatches (e.g. 3S Schwegler Starling Nest Box) or similar will be installed on the scattered trees in the north-east of the site.

5.5 Demonstrating Biodiversity Net Gain

5.5.1 The Statutory Metric has been used to identify the biodiversity change as a result of the proposals.

5.5.2 The habitat values input into the metric indicates that site has a baseline ecological value of 68.89 habitat units. There are no hedgerows or rivers within the site. The proposals (detailed in full within the Biodiversity Impact Assessment (EbD, 2024) result in 109.62 on-site habitat units post-intervention i.e. a 59.14% increase from the baseline. The new hedgerows will deliver 5.10 hedgerow units.

5.5.3 The trading rules are satisfied as a result of the proposals.

5.5.4 Given the proposals are achieving significant biodiversity gain, Statera Energy are exploring the opportunity to bank excess habitat units. The banked units would be used to achieve biodiversity offsetting for other applications within the local area whilst satisfying trading rules and ensuring a minimum 10% gain for habitat units within the site.

6 Relevant Legislation and Policy

6.1 Exit from European Union

6.1.1 The Conservation of Habitats and Species Regulations 2017 (as amended), referred to as the '2017 Regulations,' are one of the pieces of domestic law that transposed the land and marine aspects of the Habitats Directive (Council Directive 92/43/EEC) and certain elements of the Wild Birds Directive (Directive 2009/147/EC) (known as the Nature Directives). Changes to the 2017 Regulations have been made by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (referred to as the '2019 Regulations') to transfer functions from the European Commission to the appropriate authorities in England and Wales.

6.1.2 The amendments prescribed by the 2019 Regulations allow existing protections afforded by current wildlife legislation and transposed EC Council Directives to be operable from 01 January 2021.

6.1.3 The 2019 Regulations protect rare and vulnerable birds and the habitats that they depend upon. This is achieved in part through the classification of Special Protection Areas (SPAs). The Habitats Directive aims to protect plants, habitats and animals other than birds. This is achieved in part through the creation of Special Areas of Conservation (SACs). SPAs and SACs are collectively referred to as the 'National Site Network'.

6.1.4 Designated Wetlands of International Importance (known as Ramsar sites) do not form part of the National Site Network, however, all Ramsar sites remain protected in the same was as SACs and SPAs.

6.2 Local Planning Policy

6.2.1 The South Oxfordshire District Council Local Plan 2035 was adopted on 10 December 2020.

Policy ENV1: Landscape and Countryside

6.2.2 South Oxfordshire's landscape, countryside and rural areas will be protected against harmful development. Development will only be permitted where it protects and, where possible enhances, features that contribute to the nature and quality of South Oxfordshire's landscape, in particular:

- trees (including individual trees, groups of trees and woodlands), hedgerows and field boundaries;
- irreplaceable habitats such as ancient woodland and aged or veteran trees found outside ancient woodland;

- the landscapes, waterscapes, cultural heritage and user enjoyment of the River Thames, its tributaries and flood plains;
- other water course and water bodies;
- the landscape setting of settlements or the special character and landscape setting of Oxford;
- topographical features;
- areas or features of cultural and historic value;
- important views and visually sensitive skylines; and
- aesthetic and perceptual factors such as tranquilly, wilderness, intactness, rarity and enclosure.

6.2.3 The Council will seek the retention of important hedgerows. Where retention is not possible and a proposal seeks the removal of a hedgerow, the Council will require compensatory planting with a mixture of native hedgerow species.

Policy ENV2: Biodiversity – Designated Sites, Priority Habitats and Species

1. The highest level of protection will be given to sites of international nature conservation importance (Special Areas of Conservation). Development that is likely to result in a significant effect, either alone or in combination, on such sites will need to satisfy the requirements of the Conservation of Habitat and Species 2017 (as amended).

2. Sites of Special Scientific Interest (SSSI) are of national importance. Development that is likely to have an adverse effect on a SSSI (either on its own or in combination with other developments) will only be permitted in exceptional circumstances, where it can be demonstrated that the benefits of the development in the location proposed clearly outweigh an harm to the special interest features and the SSSI's contribution to the local ecological network. In such circumstances, measures should be provided (and secured through planning conditions or legal agreements) that would mitigate or, as a last resort, compensate for the adverse effects resulting from development.

3. Development likely to result, either directly or indirectly to the loss, deterioration or harm to:

- Local Wildlife Sites
- Local Nature reserves
- Priority Habitats and Species
- Legally Protected Species
- Local Geological Sites

- Ecological Networks (Conservation target Areas)
- Important or ancient hedges or hedgerows
- Ancient woodland and veteran trees

will only be permitted if:

I. the need for, and benefits of the development in the proposed location outweighs the adverse effect on the interests;

II. it can be demonstrated that it could not reasonably be located on an alternative site that would result in less or no harm to the interests and

III. measures will be provided (and secured through planning conditions or legal agreements) that would avoid, mitigate or as a last resort, compensate for the adverse effects resulting from development.

4. Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) will be refused planning permission, unless there are wholly exceptional reasons justifying the granting of planning permission.

5. Where development has the potential to affect a proposed wildlife site the developer must undertake surveys and assessments to determine whether the site meets the criteria for Local Wildlife Site status.

Policy ENV3: Biodiversity

6.2.4 Development that will conserve, restore and enhance biodiversity in the district will be supported. All development should provide a net gain in biodiversity where possible. As a minimum, there should be no net loss of biodiversity. All proposals should be supported by evidence to demonstrate a biodiversity net gain using a recognised biodiversity accounting metric, in this case DEFRA's Biodiversity Metric 3.0 or the Small Sites Metric.

6.2.5 Development proposals which would result in a net loss of biodiversity will only be considered if it can demonstrated that alternatives which avoid impacts on biodiversity have been fully explored in accordance with the mitigation hierarchy*. In the absence of alternative sites or layouts, development proposals must include adequate mitigation measures to achieve a net gain of biodiversity. Where harm cannot be prevented or adequately mitigated, appropriate compensation measures will be sought, as a last resort, through planning conditions or planning obligations (depending on the circumstances of each application) to offset the loss by contributing to appropriate biodiversity projects to achieve an overall net gain for biodiversity.

6.2.6 Planning permission will only be granted if impacts on biodiversity can be avoided, mitigated or, as a last resort, compensated fully.

6.3 National Planning Policy Framework

6.3.1 The National Planning Policy Framework (NPPF) was updated in December 2023 (DLUHC, 2023) thereby replacing the older version of September 2023. The new framework sets out in section 15 that to protect and enhance biodiversity and geodiversity, plans should:

- 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
- 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.

6.3.2 When determining planning applications, local planning authorities should apply the following principles:

- 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;
- 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
- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

Standing Advice (GOV.UK)

6.3.3 The GOV.UK website provides information regarding protected species and sites in relation to development proposals: 'Local planning authorities should take advice from Natural England or the Environment Agency about planning applications for developments that may affect protected species.' GOV.UK advises that 'some species have standing advice which you can use to help with planning decisions. For others you should contact Natural England or the Environment Agency for an individual response.'

6.3.4 The standing advice (originally from Natural England and now held and updated on GOV.UK) provides advice to planners on deciding if there is a 'reasonable likelihood' of protected species being present. It also provides advice on survey and mitigation requirements.

6.3.5 When determining an application for development that is covered by standing advice, in accordance with guidance in Government Circular 06/2005, Local planning authorities are required to take the standing advice into account. In paragraph 82 of the aforementioned Circular, it is stated that: 'The standing advice will be a material consideration in the determination of the planning application in the same way as any advice received from a statutory consultee…it is up to the planning authority to decide the weight to be attached to the standing advice, in the same way as it would decide the weight to be attached to a response from a statutory consultee.'

6.4 Badger

6.4.1 Badger is protected under the Protection of Badgers Act 1992. It is not permitted to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so; or to intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it. A badger sett is defined in the legislation as "a structure or place, which displays signs indicating current use by a badger".

6.4.2 ODPM Circular 06/2005 provides further guidance on statutory obligations towards badger within the planning system. Of particular note is paragraph 124, which states that "The likelihood of disturbing a badger sett, or adversely affecting badgers' foraging territory, or links between them, or significantly increasing the likelihood of road or rail casualties amongst badger populations, are capable of being material considerations in planning decisions."

6.4.3 Natural England provides Standing Advice , which is capable of being a material consideration in planning decisions. Natural England recommends mitigation to avoid impacts on badger setts, which includes maintaining or creating new foraging areas and maintaining or creating access (commuting routes) between setts and foraging/watering areas.

6.5 Bats

6.5.1 All species of bats are protected under The Conservation of Habitats and Species Regulations 2017 (as amended) with additional protection provided under the Wildlife and Countryside Act 1981 (as amended). This makes it illegal to injure or kill a bat, to disturb, damage, destroy or obstruct a bat roost.

6.6 Birds

6.6.1 All nesting wild birds are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition to this, for some rarer species (listed on Schedule 1 of the Act), it is an offence to disturb them whilst they are nest building or at or near a nest with eggs or young, or to disturb the dependent young of such a bird.

6.7 Reptiles

6.7.1 All native reptile species receive legal protection in Great Britain under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are included as 'species of principal importance' for the purpose of conserving biodiversity under Section 41 (England) of the NERC Act 2006 and Section 7 of the Environment (Wales) Act 2016. Viviparous lizard, slow-worm, grass snake and adder are protected against killing, injuring and unlicensed trade only.

6.8 Wild mammals in general

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

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Appendix 1 – Photographs

Photograph 1: Field 1, view east along northern boundary

Photograph 2: Field 2, view west along southern boundary

Photograph 3: Field 3, view north along eastern boundary

Photograph 4: Field 4, view east along southern boundary

Photograph 5: Scattered trees within other neutral grassland in east of site

Photograph 6: Hardstanding roads, view from north to south within centre of site

Photograph 7: Field F7

Photograph 8: Mixed scrub in south-east

Photograph 9: Bramble scrub in the south-east

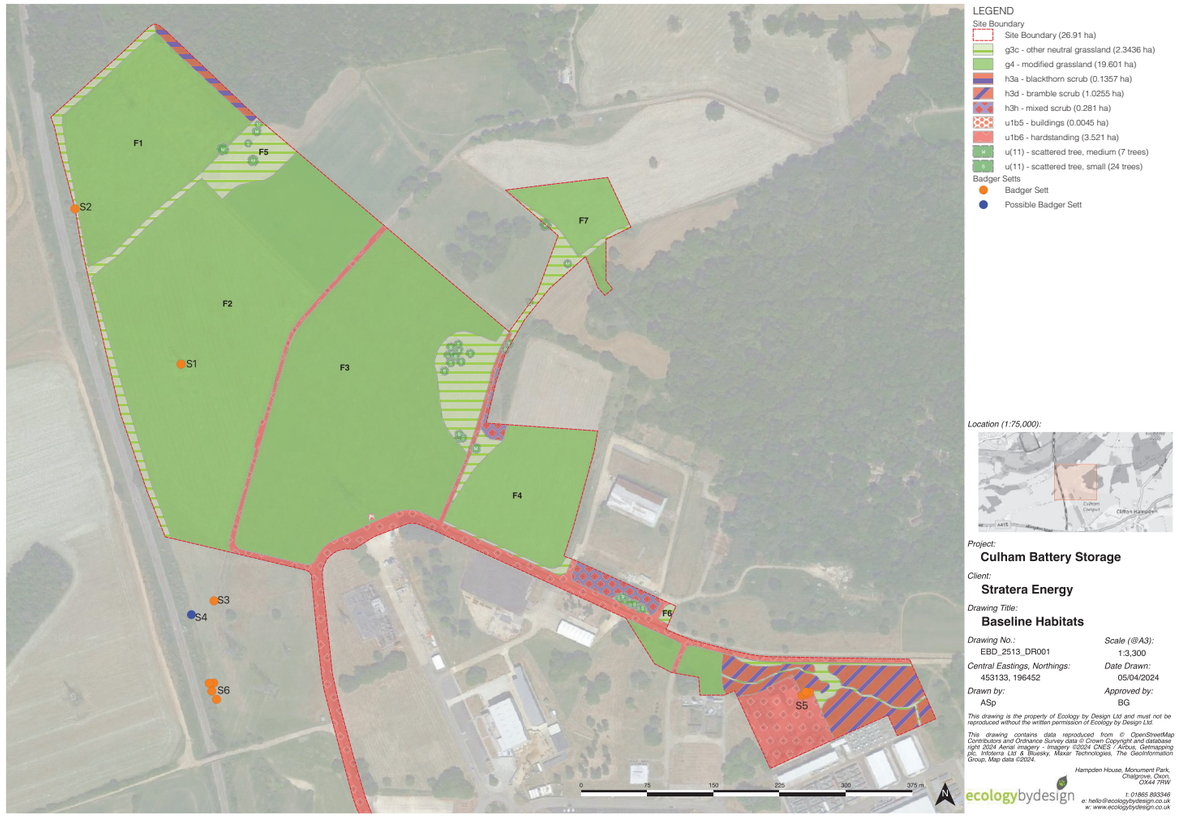
Appendix 2 – Figures

Figure 1: Baseline habitats

Figure 2: Impacts

Figure 3: Proposed habitats

(Next page)



LEGEND

Site Boundary

- Site Boundary (26.91 ha)

Retained Habitats

- Bramble scrub (0.1486 ha)
- Buildings (0.0045 ha)
- Developed land; sealed surface (3.2679 ha)
- Modified grassland (0.5199 ha)
- Other neutral grassland (1.2742 ha)

Lost Habitats

- Blackthorn scrub (0.1357 ha)
- Bramble scrub (0.8769 ha)
- Developed land; sealed surface (0.2531 ha)
- Mixed scrub (0.281 ha)
- Modified grassland (19.0811 ha)
- Other neutral grassland (1.0694 ha)

Retained Trees

- Rural Tree, small (14 trees)
- Rural Tree, medium (6 trees)

Lost Trees

- Rural Tree, small (10 trees)
- Rural Tree, medium (1 trees)

Location (1:75,000):

Project:

Culham Battery Storage

Client:

Stratera Energy

Drawing Title:

Impacts

Drawing No.: EBD_2513_DR002

Scale (@A3): 1:3,300

Central Eastings, Northings: 453133, 196452

Date Drawn: 05/04/2024

Drawn by: ASp

Approved by: BG

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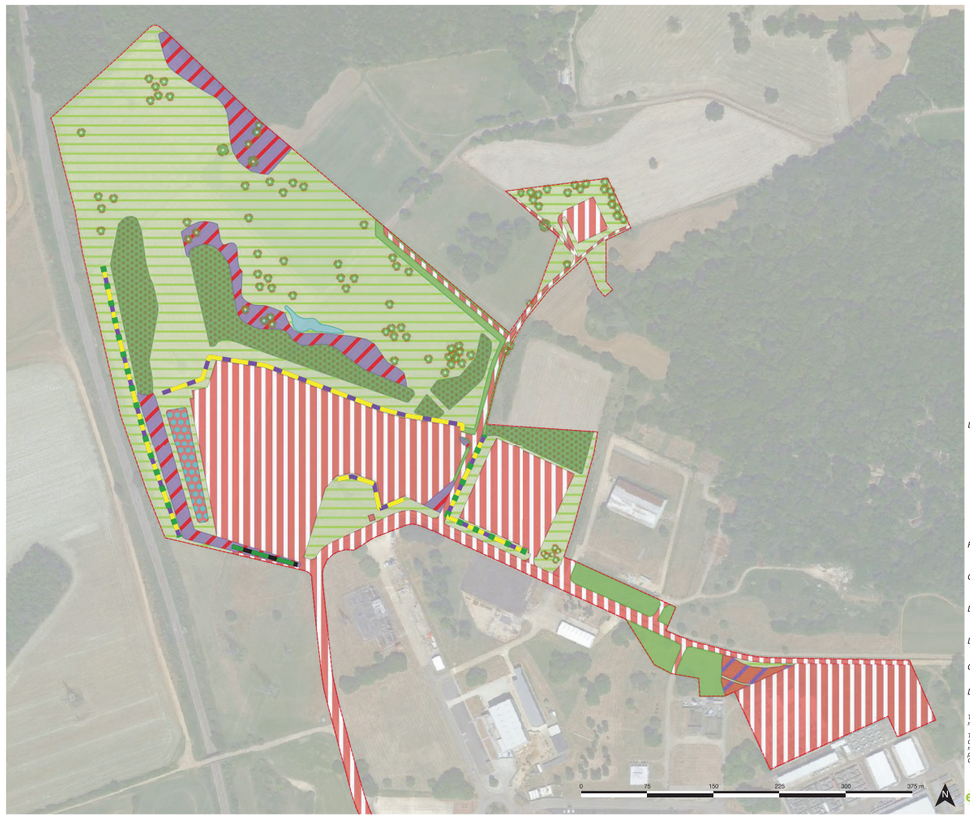

LEGEND

Site Boundary

- Site Boundary (26.91 ha)
- Bramble scrub (0.1486 ha)
- Developed land; sealed surface (9.7932 ha)
- Buildings (0.0045 ha)
- Mixed scrub (1.6165 ha)
- Modified grassland (0.8826 ha)
- Other neutral grassland (11.9869 ha)
- Other woodland; broadleaved (2.1781 ha)
- Ponds (Priority Habitat) (0.0668 ha)
- Sustainable urban drainage feature (0.2351 ha)
- Rural Tree, Small (85 trees)
- Rural Tree, Medium (6 trees)
- Native hedgerow (0.48 km)
- Native hedgerow with trees (0.52 km)
- Line of trees (0.08 km)

Location (1:75,000):

Project:

Culham Battery Storage

Client:

Stratera Energy

Drawing Title:

Proposed Habitats

Drawing No.: EBD_2513_DR003

Scale (@A3): 1:3,300

Central Eastings, Northings: 453133, 196452

Date Drawn: 05/04/2024

Drawn by: ASp

Approved by: BG

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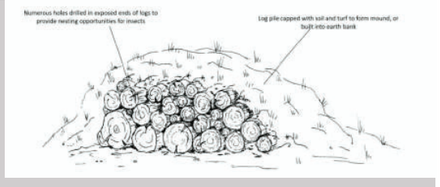
Appendix 3 – Definitions of the Geographic Context of Habitat Importance

Geographic Context of Importance	Examples
International value	Ramsar Sites, Special Protection Areas, Biosphere Reserves, Special Areas of Conservation. Sites supporting populations of internationally important species.
National value	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.
Regional value	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.
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.
District / Borough	Undesignated Sites or features considered to appreciably enrich the habitat resource in the District or Borough.
Local i.e. Parish / Neighbourhood	Undesignated Sites or features which appreciably enrich the habitat resource within the Parish or Neighbourhood.
Negligible value	Low grade and widespread habitats.

Appendix 4 – Definitions of the geographic Context of Species Importance

Geographic Context of Importance	Examples
International	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	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	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	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.
District / Borough	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.
Local i.e. Parish / Neighbourhood	Species that are not threatened but are valued at a local level on intrinsic appeal.
Negligible	Common or widespread species.

Appendix 5 – Recommended Enhancements

Products	Description
	**3S Schwegler Starling Nest Box (or similar)** A versatile box that attracts other species such as woodpeckers, nuthatches and pied flycatchers. http://www.nhbs.com/title/177925/3s-schwegler-starling-nest-box
	**2F Schwegler Bat Box (or similar)** A standard bat box for smaller bats to be placed on a mature tree. http://www.nhbs.com/2f-schwegler-bat-box-general-purpose
	**Buried Log Piles** Partially buried log piles provide valuable shelter and foraging resources for reptiles and a range of invertebrates and other wildlife. Buried log piles are particularly beneficial when constructed from pre-existing dead wood taken from the site. Wood from any broadleaved tree can be used but oak, beech and fruit trees support the richest invertebrate assemblages.