Postcombe & Lewknor Grid Connection

Preliminary Ecological Appraisal Report

Postcombe and Lewknor Solar Farm Limited

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Basis of Report

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Executive Summary

A Preliminary Ecological Appraisal (PEA) has been undertaken to inform the construction of a proposed cable route which will connect a substation and solar site, situated in land to the north of Adwell, Thame, OX9 7DH (centred at ordnance survey grid reference (OSGR): SP 70068 00218) (hereafter referred to as the 'Site').

The site consisted of seven agricultural fields, generally bordered by hedgerows, woodland and trees. Mixed agricultural land, with small pockets of woodland surrounds the Site on all aspects, with exception of the north-east where the M40 motorway runs parallel to the site boundary. The landscape beyond the M40 is broadly similar in character, consisting of agricultural land with woodland blocks.

This report assesses the potential for direct and indirect ecological impact to occur, within the context of the scope of the PEA, and is based upon details of the development proposals provided to SLR Consulting Ltd (SLR) by Postcombe and Lewknor Solar Farm Limited.

The broad habitats recorded on site are as follows: arable fields, grasslands, woodland, hedgerow, scrub and ditches as well as urban hardstanding infrastructure.

A Construction Environmental Management Plan (CEMP) is recommended for the proposed works and would include precautionary working methods for:

- Amphibians;
- Reptiles;
- Nesting birds (including possible Schedule 1 species);
- Hazel Dormouse; and
- Hedgehog.

The following additional survey work is considered necessary top inform proposals and mitigation measures:

- In-season Habitat Condition Assessment for BNG;
- eDNA and HSI for GCN of one ponds;
- GLTA and owl survey of trees within 15 m of proposed works for bat suitability and presence / absence survey if impacts cannot be avoided; and
- Badger pre-construction survey within six months prior to works commencing.

Recommendations have been provided for ecological enhancement that could be delivered as part of the proposed development, including:

- Wildlife-friendly planting - new landscaping should provide a diverse mix of native species of demonstratable value for wildlife known to be at the Site and be designed to achieve a BNG on site.
- Invertebrate habitat features - any brash or trees that are unavoidably removed should be retained on site in brash or log piles that could act as refugia for a range of invertebrates, small mammals, amphibians or reptiles.

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Acronyms and Abbreviations

AONB	Area of Outstanding Natural Beauty
BNG	Biodiversity Net Gain
CEMP	Construction and Environmental Management Plan
CIEEM	Chartered Institute of Ecology and Environmental Management
EcIA	Ecological Impact Assessment
ECoW	Ecological Clerk of Works
eDNA	Environmental DNA
EPS	European Protected Species
FAR	Further Assessment Required
GCN	Great crested newt
GPEA	Guidelines for Preliminary Ecological Appraisal
HSI	Habitat Suitability Index
IRZ	Impact Risk Zone
km	kilometre
LNR	Local Nature Reserve
MAGIC	Multi-Agency Geographic Information for the Countryside
MMU	minimum mapping unit
NERC	Natural Environment and Rural Communities
NNR	National Nature Reserve
OSGR	Ordnance Survey Grid Reference
PEA	Preliminary Ecological Appraisal
PRF	potential roost features
RLB	Redline Boundary
S41	Section 41
SLR	SLR Consulting Limited
SPA	Special Protection Area
SSSI	Sites of Special Scientific Interest
TVERC	Thames Valley Environmental Records Centre
UKHab	UK Habitat Classification

1.0 Introduction

SLR Consulting Limited (SLR) was commissioned by Postcombe and Lewknor Solar Farm Limited in November 2024 to undertake a Preliminary Ecological Appraisal (PEA) in respect of a proposed cable corridor development of land to the north of Adwell, Thame, OX9 7DH (centred at ordnance survey grid reference (OSGR): SP 70068 00218) (hereafter referred to as the 'Site').

It is proposed that a new substation (installed at the north-western extent) is to be constructed with an associated c. 3 km cable route, connecting to a solar development south-east of the Site. The aforementioned substation has been approved as part of Harlesford Solar Farm (South Oxfordshire District Council Planning Ref: P20/S3245/FUL). No detailed designs have been provided for the cable corridor site, the duration and location of a site compound and access methods to site are currently unknown. However, for this report it is assumed the Site compound and working footprint will be confined within the redline boundary (RLB) only (as shown in Annex B – Drawing 1).

1.1 Site Description

The proposed Site boundary can be seen in Annex B – Drawing 1. It is located to the north of the village of Adwell, Thame. The site consisted of seven agricultural fields, generally bordered by hedgerows, woodland and trees.

Mixed agricultural land, with small pockets of woodland surrounds the Site on all aspects, with exception of the north-east where the M40 motorway runs parallel to the site boundary. The landscape beyond the M40 is broadly similar in character, consisting of agricultural land with woodland blocks.

1.2 Purpose of this Report

This report presents the findings of the PEA[1]. The report seeks to:

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

NOTE: *Where an ecological report is required to accompany a planning application, the appropriate report is an Ecological Impact Assessment (EcIA) report (or an Ecology/Biodiversity Chapter of an Environmental Statement for an Environmental Impact Assessment (EIA) project). Under normal circumstances, it is not appropriate to submit a PEA report as part of a planning application, because the scope of a PEA is unlikely to fully meet planning authority requirements in respect of biodiversity policy and implications for protected species. This is because a PEA report is normally written to advise a client of ecological constraints and opportunities to inform their design options, the need for further surveys, and likely mitigation requirements. It therefore lacks a detailed assessment of ecological effects, and commitment to mitigation; the planning authority is*

[1] Guidelines for Preliminary Ecological Appraisal (GPEA) | CIEEM (2017) Available at: https://cieem.net/wp-content/uploads/2018/01/Guidelines-for-Preliminary-Ecological-Appraisal-Jan2018-typo-edit.pdf

therefore unlikely to have adequate information to enable the decision maker to determine the application lawfully. A PEA report may, however, be submitted as an appendix to an EcIA Report.

1.3 Evidence of Technical Competence and Experience

Laura Lyons BSc, Senior Field Ecologist at SLR undertook the survey and authored this report. Laura has over six years of professional experience within ecological consultancy and is a Qualifying Member of the chartered Institute of Ecology and Environmental Management (CIEEM).

The desk study was completed by SLR Senior Ecologist Amy Green BSc (Hons) MRes PhD. Amy has over three years' experience in environmental / ecological consultancy and is a Qualifying Member of CIEEM.

This report has been subject to Quality Assurance review as per SLR's policies by Associate Ecologist Tom Redman BSc (Hons) MSc MCIEEM. Tom has over seven years' experience as a professional ecologist and regularly undertakes and reviews PEAs and EcIAs at various project scales. Tom holds Natural England survey licences for GCN (class 2), bats (class 4) and barn owl.

1.4 Validity of Data

According to CIEEM advice[2], survey data are valid for a period of 12 to 18 months from the date of the survey. The report highlights any circumstances where data may be valid for less than 18 months. Between 18 months and 3 years a professional ecologist will need to undertake a site visit and may also need to update desk study information (effectively updating the PEA) and then review the validity of the report

1.5 Relevant Legislation and Policy

1.5.1 National Planning Policy

A summary of Legislation and National Planning Policy relevant to (onshore) biodiversity in England is provided in Annex A. Note that the summary provided is intended for general guidance only and the original policy documents should be consulted for definitive information.

1.5.2 Local Planning Policy

The Site lies within South Oxfordshire, which is subject to the South Oxfordshire Local Plan 2011 – 2035[3]. Policies relevant to nature conservation, wildlife and biodiversity comprise of the following:

Policy ENV1: Landscape and Countryside

1. The highest level of protection will be given to the landscape and scenic beauty of the Chilterns and North Wessex Downs Areas of Outstanding Natural Beauty (AONBs):

- *Development in an AONB or affecting the setting of an AONB will only be permitted where it conserves, and where possible, enhances the character and natural beauty of the AONB;*

[2] Chartered Institute of Ecology and Environmental Management (2019), Advice Note on the Lifespan of Ecological Reports & Surveys. CIEEM, Winchester, Hampshire.

[3] South Oxfordshire District Council (2020) South Oxfordshire Locl Plan 2011 – 2035. [online] Available at: https://www.southoxon.gov.uk/south-oxfordshire-district-council/planning-and-development/local-plan-and-planning-policies/local-plan-2035/adopted-local-plan-2035/ [Accessed 14 Jan 2025].

- *Development in an AONB will only be permitted where it is appropriate to the economic and environmental wellbeing of the area or promotes understanding or enjoyment of the AONB;*
- *Major development in an AONB will only be permitted in exceptional circumstances and where it can be demonstrated to be in the public interest; and*
- *Development proposals that could affect the special qualities of an AONB (including the setting of an AONB) either individually or in combination with other developments, should be accompanied by a proportionate Landscape and Visual Impact Assessment.*

AONB Management Plans will be a material consideration in decision making.

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 landscapes, in particular:

i) Trees (including individual trees, groups of trees and woodlands), hedgerows and field boundaries;
ii) Irreplaceable habitats such as ancient woodland and aged or veteran trees found outside ancient woodland;
iii) The landscapes, waterscapes, cultural heritage and user enjoyment of the River Thames, its tributaries and flood plains;
iv) Other watercourse and water bodies;
v) The landscape setting of settlements or the special character and landscape setting of Oxford;
vi) Topographical features;
vii) areas or features of cultural and historic value;
viii) Important views and visually sensitive skylines; and aesthetic and perceptual factors such as tranquillity, wildness, intactness, rarity and enclosure.

3. Development which supports economic growth in rural areas will be supported provided it conserves and enhances the landscape, countryside and rural areas.

4. 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.

This policy contributes towards achieving objectives 1, 2, 3, 4, 5, 6, 7 & 8

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 Habitats and Species Regulations 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 any 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 outweigh 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.

This policy contributes towards achieving objectives 6, 7 & 8.

Policy ENV3: Biodiversity

1. *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.*
2. *Development proposals which would result in a net loss of biodiversity will only be considered if it can be 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.*
3. *Planning permission will only be granted if impacts on biodiversity can be avoided, mitigated or, as a last resort, compensated fully.*

Policy ENV4: Watercourses

1. *Development of land that contains or is adjacent to a watercourse must protect and where possible, enhance the function and setting of the watercourse and its biodiversity. As a last resort development should provide mitigation for any unavoidable impacts.*
2. *Development should include a minimum 10m buffer zone along both sides of the watercourse to create a corridor favourable to the enhancement of biodiversity. Where a 10m wide buffer zone is not considered possible by the local planning authority, (for example in dense urban areas where existing development comes*

closer to the watercourse) a smaller buffer zone may be allowed, but should still be accompanied by detailed plans to show how the land will be used to promote biodiversity and how maintenance access to the watercourse will be created. Wherever possible within settlements a minimum 10m buffer should be maintained.

3. *Proposals should avoid the culverting of any watercourse. Opportunities taken to remove culverts will be supported.*
4. *Outside settlements, proposals for mooring stages will not be permitted. Proposals for posts, earthworks or facing riverbanks with piles and planking will not be permitted except under exceptional circumstances and in agreement with the Environment Agency. Where it is necessary to protect a riverbank from erosion, the protective measures must be designed to maintain and enhance the special character of the river and its environment, including its biodiversity.*
5. *Major development proposals which are located within 20m of a watercourse will require a Construction Management Plan to be agreed with the Council before commencement of work to ensure that the watercourse will be satisfactorily protected from damage, disturbance or pollution.*
6. *Sites for new development with existing culverts will be expected to investigate the feasibility of de-culverting the watercourse. Where bridges are proposed as an alternative to culverting, the construction method should take into account the importance of maintaining an obstruction free bank for wildlife.*

Policy ENV 5: Green Infrastructure in New Developments

1. *Development will be expected to contribute towards the provision of additional Green Infrastructure and protect or enhance existing Green Infrastructure.*
2. *Proposals should:*
    a. *protect, conserve or enhance the district's Green Infrastructure;*
    b. *Provide an appropriate level of Green Infrastructure with regard to requirements set out in the Green Infrastructure Strategy, AONB Management Plan or the Habitats Regulations Assessment;*
    c. *Avoid the loss, fragmentation, severance or other negative impact on the function of Green Infrastructure; and*
    d. *Provide appropriate mitigation where there would be an adverse impact on Green Infrastructure; and v) provide an appropriate replacement where it is necessary for development to take place on areas of Green Infrastructure.*
3. *All Green Infrastructure provision should be designed with regard to the quality standards set out within the Green Infrastructure Strategy, or where relevant the Didcot Garden Town Delivery Plan. Consideration should also be given to inclusive access and contributing to gains in biodiversity, particularly through the use of appropriate planting which takes account of changing weather patterns. Where new Green Infrastructure is provided, applicants should ensure that appropriate arrangements are in place to ensure its ongoing management and maintenance.*

The northern section (two fields) lies within Tetsworth civil parish. Its subject to the current adopted Neighbourhood Development Plan2034[4], which is currently under review. Policies relevant to nature conservation, wildlife, and biodiversity comprise of the following:

Policy TET8 – Biodiversity and the Natural Environment

Development proposals should ensure that existing wildlife habitats are not unacceptably affected, and that existing green and blue infrastructure are preserved and where practicable enhanced (including providing net gains in biodiversity). As appropriate to their scale, nature

[4] Tetsworth NDP (2021). Tetsworth Neighbourhood Development Plan 2034. [online] Available at: https://www.tetsworthparishcouncil.co.uk/uploads/3/0/7/8/30785447/tetsworth_ndp_2035_made_version_may_2021.pdf [Accessed 23 Dec. 2024].

and location development proposals should take account of the relevant geographic area of the Tetsworth Parish Character Assessment.

5.18 This policy identifies a series of development principles that relate to specific green infrastructure opportunities and constraints in the Parish so that development proposals can address green infrastructure, and especially biodiversity, matters as relevant to the nature and scale of the proposal. Not all of these principles will be relevant to each proposal. For the most part, they can be dealt with as part of the proposed landscape scheme as a means of ensuring any potentially harmful effects of the development can be satisfactorily mitigated.

The central section of Site lies within Adwell civil parish. There is currently no Neighbourhood Development Plan for this parish.

The southern field and woodland areas, lies within Lewknor parish. Its subject to the current adopted Neighbourhood Plan Group - For the period 2023 to 2040[5]. Policies relevant to nature conservation, wildlife, and biodiversity comprise of the following:

Policy EN1: Wildlife and Biodiversity

As appropriate to their scale, nature and location development proposals should comply with the following biodiversity principles:

i. *Loss of mature trees, hedgerows or other form of wildlife corridor should be avoided, either as part of a landscape scheme and layout or as part of the construction works of a development scheme. Where the loss of a mature tree or hedgerow is unavoidable, the proposals should make provision on site for species appropriate to the site's growing conditions. Development proposals affecting trees and woodlands should, where appropriate, be supported by adequate tree survey information; tree constraints should be identified by a qualified arboricultural consultant, based on a Tree Survey completed in accordance with the current edition of British Standard 5837. Development proposals are encouraged to replace trees which are not being retained as a result of the development at a ratio of at least 2:1 or in an approved alternative location in accordance with a compensation scheme provided as a condition of planning permission.*
ii. *Where appropriate, incorporate landscape schemes which use species appropriate to the site's growing conditions.*
iii. *On-site biodiversity enhancements such as new roosting features for bats or nesting features for birds (including for use by swifts, swallows and house martins) should be incorporated into the fabric of the development.*
iv. *Fences, walls or hedges should be designed to incorporate features which allow safe dispersal of wildlife through areas of green space and gardens.*
v. *Development proposals should be planned so as to avoid deterioration in the ecological status of the Parish's chalk streams.*
vi. *Development should retain or provide a buffer adjacent to the watercourse of natural or semi-natural habitat, free from built development and parking areas.*
vii. *Wherever possible, piped water courses shall be re-opened and existing open water courses retained.*
viii. *Any flood attenuation ponds and new areas of recreational green space required as part of any new development shall be designed to encourage nature conservation and biodiversity.*
ix. *Proposals for new development must include details of how the biodiversity and wildlife environment of the site would be enhanced.*

[5] Lewknor Parish (2023). *Lewkenor Parish Neighbourhood Plan For the period 2023 to 2040*. [online] Available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.southoxon.gov.uk/wp-content/uploads/sites/2/2024/03/Lewknor-Parish-Neighbourhood-Plan-Final-Made-Version.pdf [Accessed 23 Dec. 2024].

x. *Development on land within or adjacent to the Sites of Special Scientific Interest in the Parish, the areas of Ancient Woodland and the Special Area of Conservation, and which is likely to have an adverse effect on it any of them (either individually or in combination with other developments), will not be supported. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest.*

Note: Biodiversity net gain should be assessed using a recognised assessment method, such as the DEFRA biodiversity offsetting metric.

Policy EN2: Aston Rowant National Nature Reserve

Development proposals at the Aston Rowant National Nature Reserve should conserve and where practicable enhance its status as a Site of Special Scientific Interest/Special Area of Conservation. In addition, any development proposals within the Reserve should result in a biodiversity net gain of at least 10% through the incorporation of measures including land management approaches such as grazing regimes, restoring hedgerows, reinstating ponds, reverting arable land to chalk grassland, and joining up islands of ancient woodland or chalk grassland.

13.3. High Grade Agricultural Land

Agricultural Land Classifications are published by Natural England. The field which lies south of the Site is classified as Very Good (Grade 2).

Policy EN3: High Grade Agricultural Land

Proposals for development on land outside the built-up part of the Plan area in the areas shown as Excellent and Very Good Agricultural Land will not be supported, unless the development is necessary and suitable for that specific countryside location.

Policy FI4: Green Energy

Proposals for individual and community scale renewable energy schemes will be supported subject to the following criteria:

i. *The siting and scale of the proposed development does not detract from the setting and its position in the wider landscape.*
ii. *The proposed development does not have an unacceptable impact on the amenities of local residents.*
iii. *The proposed development does not have an unacceptable impact on a feature of natural and biodiversity importance.*
iv. *Siting of green energy sites will not have an unacceptable impact to the views detailed in Policy CH4 "Protection of Views".*

2.0 Methodology

2.1 Desk Study

An ecological data search was made in December 2024 for reference materials relating to the ecology of the Site. A list of sources is given in Table 2-1.

A search was made for information on statutory designated sites within 10 km of the Site (including SSSIs, SACs, Ramsar wetlands and Special Protection Areas (SPAs), National Nature Reserves (NNRs) and LNRs). Any non-statutory designated sites within 1 km of the Site were also identified. These have been reviewed to identify those with ecological interest. A search was also made for records of protected, notable and invasive species records within 1 km of the Site.

A search was also made for SSSI Impact Risk Zones (IRZs) which are a defined zone around each SSSI in England that reflects the sensitivities of the features which they are notified and indicate the types of development proposal that could potentially have adverse impacts. Developments of a certain size and nature that fall within SSSI Impact Risk Zones require the Local Planning Authority (LPA) to consult with Natural England (NE) to determine whether the proposed development is likely to have an impact upon the SSSI.

Table 2-1: Sources of existing ecological data

Source	Baseline Information Provided
Multi Agency Geographic Information for the Countryside (MAGIC) web-based mapping tool[6]	Statutory designated nature conservation sites within 10 km of the Site boundary. Ancient woodland and other priority habitats within 1 km of the Site. Granted protected species mitigation licences within 1 km of the Site.
NBN Atlas[7]	Open licence records – 'CCO' within 1 km of the Site. Open Government Licence (OGL) within 1 km of the Site. Creative Commons licence – (CC-BY) within 1 km of the Site.
Thames Valley Environmental Records Centre (TVERC)	Records of protected and notable species and non-statutory sites within 1 km of the Site
Aerial imagery (Google Earth[8])	Habitats and features of nature conservation interest both within and surrounding the Site.
Ordnance Survey 1st and 2nd edition mapping	Habitats and features of nature conservation interest both within and surrounding the Site.
South Oxfordshire District Council[9]	Details of species and habitats listed on the South Oxfordshire biodiversity action plan (LBAP)

2.2 Field Survey

An extended UK Habitat Classification (UKHab) V2 Survey was undertaken by Laura Lyons between 16th to 17th December 2024. The survey area and a 30 m buffer zone from the boundary line was assessed (where accessible) for habitats and features with potential to support protected and priority species, together with any field signs of such species including

[6] Available at: MAGIC (defra.gov.uk)

[7] National Biodiversity Network UK Atlas (2024) *NBN Atlas - UK's largest collection of biodiversity information*. https://nbnatlas.org/.

[8] Available at: https://www.google.co.uk/intl/en_uk/earth/

[9] Available at: https://www.southoxon.gov.uk/south-oxfordshire-district-council/planning-and-development/wildlife-trees-and-landscape/wildlife-and-planning/protected-and-priority-species/

but not limited to, badger (*Meles meles*), bats (*Chiroptera*), great crested newt (GCN) (*Triturus cristatus*) and breeding birds (*Aves*).

This method was extended to include preliminary checks for notable, protected, or rare species of both flora and fauna. The figures were mapped using the fine scale minimum mapping unit (MMU) (25 m^2, 5 m length), in accordance with the UK Habitat Classification User Manual[10].

The UK Habitat Classification is a comprehensive classification system for the UK that has been developed to benefit from changes in habitat categorisation, recording analysis in recent decades. The system comprises a principal hierarchy (the Primary Habitats) which include broad habitats and priority habitats and non-hierarchical secondary codes. Habitat nomenclature and definitions have been designed to remain as close to existing systems as possible in order that data can be collected, analysed and translated without ambiguity.

The Habitats identified were classified to Level 4. This level of survey includes the documentation of habitats to a recognised standard but also includes the recording of field evidence indicating the presence or potential presence of species that could constitute a material consideration in planning terms, such as protected or priority plant or animal species. Notes of principal habitat types, supported by photographs, were made.

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

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

In addition, the presence of plant species included within Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) (WCA 1981) and Schedule 2 of the Invasive Alien Species (Enforcement and Permitting) Order 2019, and other non-native species which were evident during the survey, were incidentally recorded was searched for during the survey. Plants included within the schedule are considered derogated pest species that are pernicious or injurious, such as Japanese knotweed (*Reynoutria japonica*), Himalayan balsam (*Impatiens glandulifera*), floating pennywort (*Hydrocotyle ranunculoides*) and giant hogweed (*Heracleum mantegazzianum*). It is an offence under the Act to plant or cause the spread of these species in the wild.

2.2.1 Biodiversity Net Gain Condition Assessment survey

Condition assessments were undertaken alongside the UKHab survey in accordance with the Statutory Biodiversity Metric user guide[11] and technical supplement. The condition assessment data was collected to enable the provision of a Biodiversity Net Gain baseline score. Note where habitats require further in season survey (see section 5.1), they were precautionarily assigned a ‘good’ condition.

[10] The UK Habitat Classification Working Group (2023) The UK Habitat Classification User Manual Version 2.0.

[11] DEFRA (2024), *The Statutory Biodiversity Metric User Guide.*

2.2.2 Biodiversity Net Gain Assessment

The results of the UK Habitat survey and habitat condition assessments were analysed within the Statutory Biodiversity Metric[12] to calculate the biodiversity value of the Site at baseline.

The Biodiversity Metric uses habitat as a proxy for biodiversity and its primary application is to provide planners and developments with a method of establishing how much and what type of habitats should be created or enhanced in order to ensure that the impacts of a development do not result in a net loss of biodiversity, and to provide a 10% net gain. Habitats are assigned the following 'multiplier scores' which affect their value:

- Distinctiveness: A measure of the type, importance and relative rarity of a habitat;
- Condition: A measure of the present, or predicted, condition of a habitat type; and
- Strategic significance: How a habitat/area is regarded within Local Planning Policy.

Results of the baseline assessment are provided in this report (see section 3.4) along with the BNG metric in Annex C.

2.2.3 Limitations

2.2.3.1 Desk Study

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

2.2.3.2 Field Survey(s)

The Site and 30m buffer zone were accessible during the survey, however a small section of the buffer incudes the M40. The survey was undertaken in early December, which is a sub-optimal time to undertake habitat surveys. This is not considered a significant constraint due to the agricultural / intensively managed nature of habitats present nature of the majority of habitats present. Where surveys are required in the optimal season, this is flagged within the following sections.

The survey did not seek to identify all of the plant species within the study area and as such, this report does not provide an exhaustive list of flora found within the study area. However, it is considered that the survey results are representative of the habitats and flora of the Site and include the dominant and characteristic species as categorised by use of the DAFOR scale.

Whilst it is felt unlikely that significant factors have been overlooked, due to the nature of the subjects of ecological surveys it is feasible that species that use the Site may not have been recorded by virtue of their seasonality, cryptic behaviour, habit, or random chance. It should be noted that lack of evidence of any one protected species during survey visits does not necessarily preclude its presence at the site either at this current time or in the future. It is considered that the survey was suitable for conducting protected species risk assessments based on habitat type, collected data and local knowledge.

[12] DEFRA (2024). The Statutory Biodiversity Metric. The_Statutory_Biodiversity_Metric_-_User_Guide_.pdf (publishing.service.gov.uk)

3.0 Results

The results of the desk and field survey are reported below and describe the baseline conditions of the Site and within the surrounding area.

3.1 Designated Sites

3.1.1 Statutory Designated Sites

There were 13 statutory designated sites returned within 10 kilometres (km) of the Site boundary shown in Table 3-1.

Table 3-1: Statutory designated sites within 10km

Name & Designation	Approximate distance and direction from Site	Qualifying Feature(s) of Interest
Knightsbridge Lane SSSI	3.8 km SW	Site supports a population of green hounds' tongue (*Cynoglossum germanicum).* The population here is large in the local context and the number of plants has not changed significantly over the years. There is evidence of spread outside the SSSI boundary as additional groups of plants now occur on steep, chalky roadside banks further to the north.
Spartum Fen SSSI	4.4 km NW	An isolated alkaline fen which supports a number of specialised invertebrates and plants. The habitat is highly sensitive to changes in groundwater supply and natural habitat succession to woodland. The central open area which still supports remnant lowland fen habitat has encroaching scrub and saplings (birch and sallow) and is dominated by pond sedge and hemp agrimony. Blunt-flowered rush is locally frequent in the fen area and a few plants of greater bird's-foot trefoil and marsh valerian are also present. Several species of hoverfly and cranefly associated with wetland habitats were recorded in the proposed fen restoration area, including the notable cranefly (*Gnophomyia viridipennis)* indicating that the fen remains important for specialised insects.
Aston Rowant NNR	4.5 km SE	The reserve's diverse habitats support a variety of bird life including large flocks of finches and winter visitors such as fieldfare and redwing. Red kite, wheatear, whitethroat and blackcap have been recorded.
Aston Rowant SSSI	4.5 km SE	Site supports a variety of woodlands containing beech, ash, cherry, oak and yew with small areas of chalk grassland. Site supports occasional wood spurge, and one area has higher diversity with bracken, field rose, woodruff, hedge woundwort and other typical species. Frequently recordings of breeding species such as hawfinch, nightingale and turtle dove. The diversity of breeding species remains high and continues to include several specialist species of mixed chalk scrub. The breeding bird assemblage is therefore considered to be in favourable condition.
Shirburn Hill SSSI	5.5 km SE	Site supports a proportion of herbs to grasses. Notable features are the presence of plants of acid conditions on the top of the hill including heather, tormentil, heath speedwell and bracken. Other notable plants present include wild candytuft, biting stonecrop, pale toadflax, chalk eyebright and valerian.
Cuttle Brook LNR	5.6 km N	The site was purchased by Thame Tome Council in 1978 and become a LNR in 1955. There are two meadow areas (west and Nontron), with each own character and community of plant. The west meadow has a variety of gasses and flowers including ox-eye daisy, butter, clover and meadow pea. The Nontron meadow has a variety of gasses and flowers such lady's smock. The Cuttle Brook flows thought the centre of the LNR, and the pond was created in 1996 with kingfisher and water-boatman can be seen[13]

[13] Cuttlebrook.org.uk. (2018). *New leaflet & map 2018 | Cuttlebrook*. [online] Available at: https://cuttlebrook.org.uk/resources/new-leaflet-map-2018/ [Accessed 16 Jan. 2025].

Name & Designation	Approximate distance and direction from Site	Qualifying Feature(s) of Interest
Watlington Chalk Pit LNR	6.2 km S	Supports a mosaic of chalk downland, chalk scrub, mixed broadleaved and yew woodland habitats, with areas of leached and more acid grassland and scrub on the upper slopes. The site supports some of the most floristically diverse grassland in the Chilterns and is also notable for its lower plant flora and butterfly populations. Broadleaved plants include rock-rose (*Helianthemum nummularium*), yellow-wort (*Blackstonia perfoliate*), cowslip (*Primula veris)*, dropwort (*Filipendula vulgaris)*, together with large populations of horseshoe vetch (*Hippocrepis comosa)*, kidney vetch (*Anthyllis vulnerarya)* and squinancy wort (*Asperula cynanchica)*. The nationally rare candytuft (*Iberis amara)*, a plant which has its British distribution centred on the western scarp of the Chilterns, is a notable species of the sward. Other uncommon species include bee orchid (*Orchis apifera)* and frog orchid (*Coeloglossum viride)*.
Wormsley Chalk Banks SSSI	6.3 km SE	The SSSI contains three types of chalk grassland of varying character. Notable plant species recorded at the SSSI include Chalk eyebright (*Euphrasia pseudokerneri)*, Early gentian (*Gentianella anglica)*, Wild candytuft (*Iberis amara)*, and Chiltern Gentian (*Gentianella germanica)*. Mezereon (*Daphne mezereum)* has also been recorded associated with scrub, rather than chalk grassland. A list of flowering plants was noted during the visit which included Marjoram, clustered bellflower, rough hawkbit, field scabious, selfheal, pyramidal orchid, common agrimony, wild thyme, salad burnet, carline thistle, perforate St John's wort, yellow rattle, common knapweed, cowslip, bird's foot trefoil, dwarf thistle, eyebright, wild carrot, and wild basil.
Chilterns Beechwoods SAC	6.6 km E	The Chilterns Beechwoods represent a very extensive tract of ancient semi-natural beech Fagus sylvatica forests in the centre of the habitat's UK range. The woodland is an important part of a mosaic with species-rich chalk grassland and scrub. A distinctive feature in the woodland flora is the occurrence of the rare coralroot (*Cardamine bulbifera)*. Standing and fallen dead timber provide habitat for dead-wood (saproxylic) invertebrates, including stag beetle (*Lucanus cervus)*.
Watlington and Pyrton Hills SSSI	6.7km S	The downland on Watlington Hill consists of short, species-rich rabbit-grazed turf. Broadleaved plants include rock-rose, yellow-wort (*Blackstonia perfoliate)*, cowslip (*Primula veris)*, dropwort (*Filipendula vulgaris)*, together with large populations of horseshoe vetch (*Hippocrepis comosa)*, kidney vetch (*Anthyllis vulneraria)* and squinancy wort (*Asperula cynanchica)*. The nationally rare candytuft (*Iberis amara)*, a plant which has its British distribution centred on the western scarp of the Chilterns, is a notable species of the sward. Other uncommon species include bee orchid *Orchis (apifera)* and frog orchid (*Coeloglossum viride)*. There is an exceptional lichen flora associated with the calcareous soils. One area, the ancient dyke crossing the site from east to west, has one of the most diverse moss and liverwort floras in the Chilterns, with 50 species recorded including *Rhodobryum roseum, Scapania aspera, Weissia tortilis, Frullania tamarisci and Hypnum cuppressiforme ssp. lacunosum*. Watlington and Pyrton Hills have a notable butterfly fauna with twenty species recorded. Of particular note is the strong population of the silver-spotted skipper Hesperia comma which is a rare and declining species in Great Britain. Other butterflies occurring include chalkhill blue (*Lysandra coridon)*, small blue (*Cupido minimus)*, brown argus (*Aricia agestis*, green hairstreak (*Callophrys rubi*) and dark green fritillary (*Argynnis aglaja).*
Chinnor Hill SSSI	7.7 km E	The chalk grassland supports a rich calcicolous sward in which meadow oatgrass (*Avenula pratensis*) is abundant, together with hairy oat-grass A. pubescens, small cat's-tail (*Phleum bertolonii)* and narrow-leaved meadow grass (*Poa angustifolia*). False oat-grass (*Arrhenatherum elatius)* occurs in less heavily grazed areas. Herbaceous plants present include yellowwort (*Blackstonia perfoliate)*, autumn gentian (*Gentianella amarella)*, horseshoe vetch (*Hippocrepis comosa)*, kidney vetch (*Anthyllis vulneraria)*, carline thistle (*Carlina vulgaris)*, pyramidal orchid (*Anacamptis pyramidalis)* and bee orchid

Name & Designation	Approximate distance and direction from Site	Qualifying Feature(s) of Interest
		(*Ophrys apifera)*. Of particular note are candytuft (*Iberis amara)*, a species which in Britain is largely confined to Oxfordshire and Buckinghamshire, Chiltern gentian (*Gentianella germanica)*, a plant associated with the southern chalk and with a distribution centred on the Chilterns, and frog orchid (*Coeloglossum viride)*, which is uncommon in Oxfordshire.
Snakemoor LNR	8.6 km NE	In 1999 English Nature designated the site to be a Local Nature Reserve. In 2002 Haddenham Parish Council purchased a lease for 125 years to ensure the land is maintained as nature reserve. The site is 4.5 acres and is linked with footpaths, a hay meadow, a pond, an orchard and a variety of trees. The Hay Meadow was introduced to encourage the flowering of meadow plants such as Fritillaries, Meadow Craneshill, Campion, Orange Hawksweed and Lesser Knapweed. A variety of fungi these include: blushing blanket, soft slipper toadstool, dryads saddle, ear fungus, glistening ink cup and ganoderma adspersum. There are 25 bird boxes to encourage birds to nest there. Breeding birds such as blackcap, blue and great Tit, bullfinch, chaffinch, dunnock, kestrel, mistle thrush, willow warbler and skylark[14]
Swyncombe Downs SSSI	9.7 km SW	The grasslands include ancient species-rich sheep's fescue (*Festuca ovina)* turf heavily grazed by rabbits, alternating with rank stands of tall oat-grass (*Arrhenatherum elatius)*, both occupying slopes of various aspect and gradient. There are also sparse, herb-dominated swards indicative of former ploughing on the thinner soils. Notable very local plants include bastard toadflax (*Thesium humifusum)* and wild candytuft (*Iberis amara)*, while other species of interest are crested hairgrass (*Koeleria macrantha),* small scabious (*Scabiosa columbaria)*, creeping toadflax (*Linaria repens)*, valerian (*Valeriana officinalis)*, felwort (*Gentianella amarella)* and pyramidal orchid (*Anacamptis pyramidalis)*. The site is outstanding for its butterflies and moths. Butterflies include silver spotted, grizzled and dingy skippers Hesperia comma, (*Pyrgus malvae)* and *Erynnis tages* (the first of these a national rarity), as well as dark green fritillary (*Argynnis Aglaia)*. Day-flying moths include the cistus forester (*Procris Geryon)*, chimney sweeper (*Odezia atrata)* and wood tiger (*Parasemia plantaginis)*.

3.1.2 SSSI Impact Risk Zone (IRZs)

The Site lies within the Impact Risk Zone for Aston Rowant NNR and Aston Rowant SSSI the site is 4.5 km and southeast from the Site. The development does not fall into any of the categories required for the LPA to consult with Natural England on potential impacts on the SSSI.

3.1.3 Non-Statutory Designated Sites

The data search received by TVERC revealed there are no non-statutory designated sites within 1 km of the Site. This group has been discounted from further consideration in this assessment.

[14] www.haddenham-bucks-pc.gov.uk. (n.d.). *Snakemoor Nature Reserve - Haddenham Parish Council*. [online] Available at: https://www.haddenham-bucks-pc.gov.uk/Snakemoor_Nature_Reserve_24810.aspx.

3.2 Priority Habitats

3.2.1 Ancient Woodland

A search of the Ancient Woodland Inventory returned three areas of ancient woodland within 1km of the Site which is of ancient & semi-natural woodland plantation origin. These are detailed in Table 3 below.

Table 3-2: Ancient Woodland within 1 km

Name	Plantation Origin
Square Covert	Ancient & Semi-Natural Woodland
Piccadilly Wood	Ancient & Semi-Natural Woodland
Kiln Copse	Ancient & Semi-Natural Woodland

3.2.2 Habitats

The data search received by MAGIC habitats of principle importance within the Site or within 1 km of the Site, this is summarised in Table 3-3.

Table 3-3: Habitats of principle importance within 1 km

Location of Habitat	Main Habitats and Primary Data Sources
RLB and 30m buffer South end of Site, adjacent to field 9 and Salt Lane	National Forest Inventory 2020 – Broadleaved and Priority Habitat Inventory - Deciduous Woodland (England)
RLB and 30m buffer Central of the Site (SP 70056 00254)	National Forest Inventory (GB) - Mixed mainly conifer
RLB and 30m buffer Central of the Site, between SP 69432 00799 and SP 70196 00109	National Habitat Network All Habitats Combined – Class, Network Enhancement Zone 2 and PHI Other*
1 km from buffer zone	24 Priority Habitat Inventory - Deciduous Woodland 8 Priority Habitat Inventory - Traditional Orchards 3 Woodpasture and Parkland BAP Priority Habitat 1 National Habitat Network All Habitats Combined - Network Enhancement Zone 1

***Associated habitats** – these are not identified on the combined map as the vast majority of habitats listed as associated habitat on the individual habitat network maps will be identified on the combined map as a primary habitat. Any associated habitat that does not have an individual habitat network map plus all other priority habitat is shown on the combined map as 'PHI Other'.*[15]

3.3 UKHab Habitats within the Site boundary

The results of the UK Habitat Classification (UKHab) survey are illustrated Annex B -Drawing 1 along with the unique UKHab survey code (e.g. U1) that the habitat is attributed. The habitats were recorded within Site located in Table 3-4. To allow for any route changes and to identify ecologically desirable options consideration was given to the parcels of land

[15] magic.defra.gov.uk. (n.d.). *MAGIC - cannot be found*. [online] Available at: https://magic.defra.gov.uk/Metadata_for_magic/Habitat%20Network%20Mapping%20Guidance.pdf.

that are crossed by the cable route. This included eight fields, shown in Table 3-5 and there are eight hedgerows, shown in Table 3-6. In summary, the following areas and linear habitats were recorded within the Site and 30m buffer zone:

- w1h5 Other woodland - mixed - mainly broadleaved
- w1g6 Line of trees
- u1b Developed land - sealed surface
- u1b6 - Other developed land
- h3d Bramble scrub
- h Heathland and shrub
- r2 Rivers and streams
- w Woodland and forest
- u1b5 Buildings
- g4 Modified grassland
- c1 Arable and horticulture
- g3c Other neutral grassland
- c1a Arable field margins
- h2a – Hedgerows
- h2a – Native Hedgerow

Table 3-4: Habitat Descriptions

Photograph	Description
	**Woodland 1** w1g Other broadleaved woodland Secondary Code – 521 Unmanaged The woodland (SP 69057 01080) is located to the north of the Site. Hedgerow 2 merges into the woodland and to the south ditch 1 runs east to west. The ground flora throughout was predominantly bare ground and leaf litter with only some typical woodland species present. The woodland can be seen established in 2004[16]. **Dominant** Horse-chestnut **Occasional** Sycamore Hawthorn Stone Bramble Cleavers **Frequent** Ground-ivy

[16] Google Earth – Link (Accessed: January 17, 2025).

Photograph	Description
	Rare Broad-leaved Dock Cow Parsley Cock's-foot
	**Woodland 2** w1 Broadleaved and mixed woodland Secondary Code – 33 Line of Trees and 521 Unmanaged A line of deciduous trees (SP 69783 00568) ran parallel to M40. The age of the tree are approximately 20 years old. The track was managed by the Highways Agency. Also, the National Highways has category the area as Low[17]*. **Dominant:** Ash **Abundant:** Sycamore **Frequent:** Dog rose Blackthorn (*Prunus spinosa*) **Rare:** Stone bramble
	**Woodland 3** w1h5 Other woodland - mixed - mainly broadleaved Secondary Code – 521 Unmanaged This woodland (SP 70037 00215) was enclosed to the north, east and south with wooden posts and wire fencing with barb wire running along the top. Throughout the northern and central areas of the woodland, common box (*Buxus sempervirens*) was planted with the protection of tree shelter. At the Southern Cypress ssp became dominant. The ground flora throughout was predominantly bare ground and leaf litter with only some typical woodland species present. The strip of woodland (north and central) can be seen on Historic England Archive (USAAF photography) dated 20 December

[17] *Highway boundary (RedLine)* (no date). https://opendata.nationalhighways.co.uk/maps/highwaysengland::highway-boundary-redline/about. (Accessed: January 17, 2025).

* Low category denotes land that is less likely to be within the highway boundary.

Photograph	Description
	1943[18] The southern end of the area can be seen established in 2004[19]. **Abundant:** Norway maple (*Acer platanoides*) Cow parsley (*Anthriscus sylvestris*) Stinging nettle (*Urtica dioica*) **Occasional:** Common couch (*Elymus repens*) Cocksfoot grass (*Dactylis glomerata*) Cleavers (*Galium aparine*) Stone bramble (*Rubus saxatilis*) Elder (*Sambucus canadensis*) **Rare:** Common box English oak (*Quercus robur*) Cherry Laurel (*Prunus laurocerasus*) Tufted hairgrass (*Deschampsia cespitosa*) Holm oak (*Quercus ilex*) Traveller's joy (*Clematis vitalba*) Cypress sp (*Cupressus sp*) Wrinkled crust (*Phlebia radiata*) Turkey tail (*Trametes versicolor*) *Pholiota microspora* Fungi
	**Woodland 4** w1 Broadleaved and mixed woodland Secondary Code – 521 Unmanaged A small strip of woodland (SU 70443 99761) ran parallel to the M40. The ground flora throughout was predominantly bare ground and leaf litter with only some typical woodland species present. The strip can be seen established in 2004[20]. **Frequent:** Stone Bramble Occasional: Cherry Plum (*Prunus cerasifera*) **Rare:** Cleavers Common Couch Cypress sp. Pedunculate Oak Common beech (*Fagus sylvatica*)

[18] ArcGIS Web Application – Link. (Accessed: January 17, 2025).
[19] Google Earth – Link (Accessed: January 17, 2025).
[20] Google Earth – Link (Accessed: January 17, 2025).

Photograph	Description
	**Woodland 5** w1g Other broadleaved woodland Secondary Code – 29 Plantation, 521 Unmanaged A group of beech ten trees planted in a circle (SU 70342 99833). The trees are protected by a 1.5 m high wooden fence with metal mess netting. The ground flora is limited with areas of brae ground and leaf litter. The trees can be seen established in 2004[21]. **Dominant** Beech **Frequent:** Nettle
	**Woodland 6** w1g Other broadleaved woodland Secondary Code – 29 Plantation, 521 Unmanaged A group of ask, twelve trees planted in a circle (SU 70342 99833), a single bird nest was recorded. The trees are protected by a 1.5m high wooden fence with metal mess netting. The fence is in disarray. The ground flora is sparse with areas of brae ground and leaf litter. The trees can be seen established in 2004[22]. **Dominant** Ash **Frequent:** Nettle

[21] Google Earth – Link (Accessed: January 17, 2025).
[22] Google Earth – Link (Accessed: January 17, 2025).

Photograph	Description
	**Woodland 7** w1h5 Other woodland - mixed - mainly broadleaved Secondary Code – 29 Plantation A small strip of woodland (SU 70700 99248) ran parallel to the north side of Salt Lane. The woodland was a plantation with the trees in rows. Five bird nests were seen within the canopy of the trees. The east side (close to the M40) has public steps through the wood. The ground flora throughout was predominantly leaf litter with only some typical woodland species present. The substation station and tower were managed by the Highways Agency. Also, the National Highways has category the area as Low[23]*. **Frequent:** Hawthorn (*Crataegus monogyna*) Field Maple (*Acer campestre*) False Brome (*Brachypodium sylvaticum*) **Occasional:** Stone bramble Common couch Spurge-laurel (*Daphne laureola*) Wild Privet (*Ligustrum vulgare*) **Rare:** Ivy (*Hedera helix*) Lords-and-Ladies (*Arum maculatum*) Dog Rose (*Rosa canina*) Enchanter's Nightshade (*Circaea lutetiana*)
	**Woodland 8** w1h5 Other woodland - mixed - mainly broadleaved Secondary Code – 521 Unmanaged A small strip of woodland (SU 70700 99248) ran parallel to the south side of Salt Lane. A bird nest was seen within the canopy of the tree. The ground flora throughout was predominantly bare ground and leaf litter with only some typical woodland species present. The strip can be seen established in 2004[24]. **Frequent:** Common couch grass Yellow Archangel (*Lamiastrum galeobdolon*) **Occasional:** Cleavers Wild privet Common nettle Stone bramble Sycamore (*Acer pseudoplatanus*) **Rare:** Common beech Ivy Spurge-laurel

[23] *Highway boundary (RedLine)* (no date). https://opendata.nationalhighways.co.uk/maps/highwaysengland::highway-boundary-redline/about. (Accessed: January 17, 2025).

* Low category denotes land that is less likely to be within the highway boundary.

[24] Google Earth – Link (Accessed: January 17, 2025).

Photograph	Description
	Dog rose Spindle (*Euonymus europaeus*) Ash (*Fraxinus excelsior*) White saddle (*Helvella crispa*)
	**Urban 1** u1b6 - Other developed land Secondary Code - 805 Development site The northern field (SP 68982 01046) was set up as a construction site and associated compound at the time of survey. This was part of works for the approved Harlesford Solar Farm (South Oxfordshire District Council Planning Ref: P20/S3245/FUL). Access was not granted for the approved substation.
	**Urban 2** u1b – Developed land – sealed surface Secondary Code - 521 Unmanaged and 800 Road There was a tarmac road at the North end of the cable route (SP 69046 01097). The road was managed by the Highways Agency. Also, the National Highways has category the area as Low[25]*.

[25] *Highway boundary (RedLine)* (no date). https://opendata.nationalhighways.co.uk/maps/highwaysengland::highway-boundary-redline/about. (Accessed: January 17, 2025).

* Low category denotes land that is less likely to be within the highway boundary.

Photograph	Description
	**Urban 3** u1b Developed land - sealed surface Secondary Code – 839 Track A concrete track (SU 70722 99306) ran parallel to the M40. The track was notable as a public footpath. Between the concrete sections sparse flora were growing. The track was managed by the Highways Agency. Also, the National Highways has category the area as Low[26]*. **Rare:** Cleavers Common groundsel (*Senecio vulgaris*) Springy turf-moss (*Rhytidiadelphus squarrosus)*
	**Urban 4** u1b5 Buildings A substation station and tower (SP 70072 00257) were present on site. Heavy chain link fence with barbed wire running around the top surrounded this area The substation station and tower were managed by the Highways Agency. Also, the National Highways has category the area as Low[27]*.

[26] *Highway boundary (RedLine)* (no date). https://opendata.nationalhighways.co.uk/maps/highwaysengland::highway-boundary-redline/about. (Accessed: January 17, 2025).

* Low category denotes land that is less likely to be within the highway boundary.

[27] *Highway boundary (RedLine)* (no date). https://opendata.nationalhighways.co.uk/maps/highwaysengland::highway-boundary-redline/about. (Accessed: January 17, 2025).

* Low category denotes land that is less likely to be within the highway boundary.

Photograph	Description
	**Urban 5** u1b6 Other developed land A telecommunication station and tower (SU 70479 99703) was present on site. Heavy chain link fence with barbed wire running around the top surrounded this area.
	**Urban 6** u1b Developed land - sealed surface Secondary Code – 800 Road There was a tarmac road - Salt Lane – at the south end of the cable route, (SU 70660 99164). The road was managed by the Highways Agency. Also, the National Highways has category the area as Low[28*].

[28] *Highway boundary (RedLine)* (no date). https://opendata.nationalhighways.co.uk/maps/highwaysengland::highway-boundary-redline/about. (Accessed: January 17, 2025).

* Low category denotes land that is less likely to be within the highway boundary.

Photograph	Description
	**Bramble scrub 1** h3d Bramble scrub Secondary Code – 32 Scattered trees, 80 Unmanaged A strip of scrub (SP 70167 00157) ran parallel to the M40 north bound. The strip contained dense bramble at the base, and encroaching over the wooden fence and growing up the trees. The scrub was managed by the Highways Agency. Also, the National Highways has category the area as moderate[29] **Dominant:** Stone bramble **Frequent:** Common couch **Occasional:** Ash Willowherb sp. (*Epilobium sp*.) **Rare:** Dog-rose Cock's-foot Cow parsley Yew (*Taxus baccata*) Rowan (*Sorbus aucuparia*) Narrow leaved plantain (*Alisma Lanceolota*) Hogweed (*Heracleum sp*hondylium)
	**Bramble scrub 2** h3d Bramble scrub Secondary Code – 69 Fence There was a wooden fence (SP 70198 00108) with bramble growing over. The fence divided the track (SU 70722 99306) and field 8. The track was managed by the Highways Agency. Also, the National Highways has category the area as Low[30]*. **Dominant:** Stone bramble **Abundant:** Common couch **Frequent:** Common nettle **Occasional:** Traveller's-joy Bindweed sp. (*Convolvulus* sp.) **Rare:** Field maple

[29] *Highway boundary (RedLine)* (no date). https://opendata.nationalhighways.co.uk/maps/highwaysengland::highway-boundary-redline/about. (Accessed: January 17, 2025).

* Moderate category denotes land that is likely to be within the highway boundary but is subject to change once the area has been audited.

[30] *Highway boundary (RedLine)* (no date). https://opendata.nationalhighways.co.uk/maps/highwaysengland::highway-boundary-redline/about. (Accessed: January 17, 2025).

* Low category denotes land that is less likely to be within the highway boundary.

Photograph	Description
	Cleavers White deadnettle (*Lamium album*)
	**Watercourse 1** r2 Rivers and streams Secondary Code – 49 Freshwater – artificial, 50 Ditch and 521 Unmanaged The ditch (SP 69037 01028) ran parallel to the north of field 1. The channel was 1 m wide and 0.3 m deep and was full of dead leaves. The ditch did contain wet soil during the time of the survey. The ditch had a flat base with the banks with a gradient of 45º. No evidence of aquatic plant species were noted, and the ditch was mostly shaded by woodland 1.
	**Watercourse 2** r2 Rivers and streams Secondary Code – 49 Freshwater – artificial, 50 Ditch and 314 Mudbanks There was a ditch (SP 69323 00692) that ran east to west. Lay between fields 1 – 2 and field 3. The channel was 0.5 meter wide, 0.3 meters deep the water depth was approximately 10 cm. The channel and sides are unvegetated. There was a slight flow. The ditch had a flat base with the banks with a gradient of 45º.

Table 3-5: Grasslands and Crop Field Descriptions

Photograph	Description
	**Field 1 - SP 69092 00952** g4 Modified grassland Secondary Code – 107 Mown and collected, 504 Waterlogged Field 1 was situated to the northern end of the Site. The field was waterlogged and areas of standing water. The vegetation height approximately 10cm at time of survey suggesting recent mowing. **Frequent:** Shepherd's-purse (*Capsella bursa-pastoris*) White clover (*Trifolium repens*) Scentless mayweed (*Tripleurospermum inodorum*) **Occasional:** Bristly oxtongue (*Helminthotheca echioides*) Annual meadow grass (*Poa annua*) Lesser swine cress (*Lepidium didymum*) Common chickweed (*Stellaria media*) **Rare:** Narrow leaved plantain Red deadnettle (*Lamium purpureum*) Creeping buttercup (*Ranunculus repens*) Salad burnet (*Sanguisorba minor*)
	**Field 2 - SP 69333 00837** c1 Arable and horticulture Secondary Code – 517 Recent Management At the time of the survey field 2 was sown, however, it was uncertain which crop. There were remains of past crop, Siberian kale (*Brassica oleracea)*. Vegetation is sparse with approximately 75% bare ground existing between the plants.

Photograph	Description
	**Field 3 - SP 69387 00611** c1 Arable and horticulture Secondary Code – 75 Active Management Due to the time of year, it was uncertain which specie had been sown. Vegetation is sparse with approximately 75% bare ground existing between the plants.
	**Field 4 - SP 69492 00753** g4 Modified grassland Secondary Code – 521 Unmanaged The area had been unmanaged and was located adjacent to east of Field 3. As the field travelled south, there was an incline. There were abundant of past crop, Siberian kale. Amongst the kale the following flora species were recorded: **Abundant:** Common field-speedwell (*Veronica persica*) **Occasional:** Cow parsley Cleavers Groundsel (*Senecio vulgaris*) Bitter-cress sp. (*Cardamine sp*.) Prickly sow-thistle (*Sonchus asper*) **Rare:** Red dead-nettle Willowherb sp. Small-flowered crane's-bill (*Geranium pusillum*) Meadow thistle (*Cirsium dissectum*) White deadnettle (*Lamium album*)

Photograph	Description
	**Field 5 - SP 69804 00516** g4 Modified grassland Secondary Code – 64 Mown The area had been unmanaged and was located south of Field 4. As the field travelled south, there was an incline. Soft rush (*Juncus effusus*) became more present further south. The following flora species were recorded: **Abundant:** Common bent (*Agrostis capillaris*) **Frequent:** Small-flowered crane's-bill Groundsel **Occasional:** Soft rush Hairy bittercress (*Cardamine hirsute*) **Rare:** Common nettle Red dead-nettle Creeping buttercup Common field-speedwell White clover Shepherd's-purse Yarrow (*Achillea millefolium*)
	**Field 6 - SP 70181 00066** g3c Other neutral grassland Secondary Code – 516 Active Management The dominance grass is false brome (*Brachypodium sylvaticum*) with occasional groundsel. The vegetation had been cut and collected.

Photograph	Description
	**Field 7 - SU 70394 99746** g4 Modified grassland Secondary Code – 106 Mown The area had been unmanaged, there were abundant of past crop, Siberian kale amongst typical agricultural type grasses recorded for the other g4 grasslands. Amongst the kale the following flora species were recorded: **Dominant:** Siberian kale **Abundant:** Ribwort plantain (*Plantago lanceolata*) **Occasional:** Common nettle **Rare:** Cleavers Scentless mayweed Red clover (*Trifolium pratense*)
	**Field 8 - SU 70517 99484** c1 Arable and horticulture Secondary Code – 516 Active Management and 107 Mown and collected The field was cut and collected the crop was unidentified. Between the cut drop there was Siberian kale growing.

Photograph	Description
	**Field 9 - SU 70688 99016** c1 Arable and horticulture Secondary Code – 516 Active Management Field 9 was situated to the south end of the Site. The crop had been collected, around the northern perimeter leaf litter has encroached on to the field.
	**Field Margins 1 – SP 69259 00613** c1a Arable field margins Secondary Code – 521 Unmanaged Section of margin is 3 meters wide and was around the north, west and south of Field 3. The blackthorn from hedgerow was creeping into the margins. Animal trails are throughout and leading into hedgerow 4. **Dominant:** Cock's-foot **Abundant:** Blackthorn **Frequent:** Timothy grass (*Phleum pratense*) Soft-brome (*Bromus hordeaceus*) **Occasional:** Common nettle Crane's-bill sp. Bristly oxtongue False oat-grass (*Arrhenatherum elatius*) **Rare:** Cleavers Teasel Willowherb sp. Cow parsley Spear thistle (*Cirsium vulgare*)

Photograph	Description
	**Field Margins 2 - SU 70617 99488** c1a Arable field margins Secondary Code – 521 Unmanaged Section of margin is 1.5 meters wide and was around perimeter of Field 8. **Abundant:** Common bent **Frequent:** Hogweed **Occasional:** Common nettle Willowherb sp. White deadnettle Thistle sp. (*Cirsium sp.*) **Rare:** Teasel Ivy
	**Grass 1 SU 70430 99808** g4 Modified grassland Secondary Code – 32 Scattered trees and 521 Unmanaged The strip of grassland is approximate 3m width and ran parallel to M40. **Dominant:** Common couch **Occasional:** Hogweed Stone bramble **Rare:** Pedunculate oak Cleavers Ground Ivy (*Glechoma hederacea*) Broad-leaved dock (*Rumex obtusifolius*) Hawthorn (*Crataegus monogyna*) Wild teasel (*Dipsacus fullonum*) Enchanter's nightshade (*Circaea lutetiana*)

Photograph	Description
	**Grass 2 SU 70429 99737** g3 Natural grassland 16 Tall forbs, 518 Neglected The area of grassland is in field 7. The area consisting large mounds of soil and manure with early regeneration of flora. Deer prints were recorded over the bare soil. **Dominant** Common nettle **Occasional** Broad-leaved dock Siberian kale Ribwort plantain **Rare** Common ragwort (*senecio jacobaea*)

Table 3-6: Hedgerows

Photograph	Description
	**Hedgerow 1 – SP 69016 01029** h2a – Native Hedgerows Secondary Code – 11 Hedgerow with trees and 521 Unmanaged Hedgerow 1 was located northern of the cable routes and ran to the road. The hedgerow was approximately 4m high, 1.2m wide. Within the hedgerow common beech (*Fagus sylvatica*) trees with a bird nest. **Dominant:** Blackthorn Hawthorn Abundant: Common couch **Frequent:** Stone bramble Hogweed Cow parsley Ground-ivy Cock's-foot **Occasional:** Willowherb sp. Spear thistle Common beech Pendulous Sedge (*Carex pendula*) **Rare:** Cleavers Broad-leaved dock

Photograph	Description
	Mistletoe (*Viscum album*) Common agrimony (*Agrimonia eupatoria*)
	**Hedgerow 2 - SP 69049 01067** h2a – Native Hedgerows Secondary Code – 11 Hedgerow with trees and 521 Unmanaged Hedgerow 2 was located northern of the cable routes and ran to the road and field 1. The hedgerow was approximately 3m high, 1.5m wide. Within the hedgerow common beech where three have been pollarded. The hedgerow was stock proof. **Abundant:** Blackthorn **Frequent:** Common beech **Occasional:** Common Ivy Stone bramble **Rare:** Willow sp.
	**Hedgerow 3 – SP 69193 01017** h2a Native hedgerow Secondary Code – 521 Unmanaged Hedgerow was adjacent to fields 1. The hedgerow was approximately 4m high and 2m wide. The hedgerow was stock proof. **Abundant** Aspen (*Populus tremula*) **Frequent** Elder Stone bramble Blackthorn **Rare** Ground-ivy Cleavers Common nettle

Photograph	Description
	**Hedgerow 4 - SP 69204 00765** h2a – Native Hedgerows Secondary Code – 11 Hedgerow with trees, 116 Flailed hedgerow and 516 Active Management Hedgerow separates fields 1 and 2 The hedgerow was approximately 2m high and 1.5m wide. The hedgerow was stock proof. **Dominant:** Blackthorn **Frequent:** Hawthorn Common nettle **Occasional:** Common couch Common bent Ground-ivy **Rare:** Broad-leaved dock Cleavers Spear thistle Cock's-foot Dog-rose Elder (*Sambucus nigra*)
	**Hedgerow 5 - SP 69271 00637** h2a – Native Hedgerows Secondary Code – 11 Hedgerow with trees, 116 Flailed hedgerow Hedgerow separates fields 1, 2 and 3. The hedgerow was approximately 3m high and 2m wide. The hedgerow was stock proof and has a wet ditch to the north side. **Frequent:** Stone bramble Blackthorn Ivy **Occasional:** Common nettle Cleavers Cock's-foot Common couch Hazel (*Corylus avellana*) Field bindweed (*Convolvulus arvensis*) Elder (*Sambucus nigra*) **Rare:** Dog-rose Ground-ivy Field maple (*Acer campestre*) Goat willow (*Salix caprea*)

Photograph	Description
	**Hedgerow 6 - SU 70336 99889** h2a – Native Hedgerows Secondary Code – 116 Flailed hedgerow Hedgerow separates fields 6 and 7. The hedgerow was approximately 1.5m high and 1m wide. The hedgerow was not stock proof. **Frequent** Elder sp. Blackthorn Common nettle
No photoaraph available.	**Hedgerow 7 – SU 70455 99698** h2a – Native Hedgerows Secondary Code – 116 Flailed hedgerow Hedgerow separates fields 7 and 8. The hedgerow was approximately 1.5m high and 1m wide. The hedgerow was stock proof. **Frequent** Blackthorn Common nettle
	**Hedgerow 8 - SU 70664 99224** h2a – Native Hedgerows Secondary Code – 116 Flailed hedgerow Hedgerow separates fields 8 and a track at the southern end. The hedgerow was approximately 1.5m high and 1m wide. The hedgerow was not stock proof. **Dominant:** Field maple **Rare:** Spurge-laurel Wild privet

3.4 Species

3.4.1 Plants

3.4.1.1 Non-Native Invasive Flora and Fauna

The data search returned no records of Invasive non-native plant species from schedule 9 of the wildlife and countryside act and Schedule 2 of invasive alien species (permitting and enforcement) order 2019, within 1 km of the application boundary. However, TVERC records highlighted three INNS of plant present within 1 km of the Site. Plant species include:

- Italian alder (*Alnus cordata*)
- Least duckweed (*Lemna minuta*)
- Russian-vine (*Fallopia baldschuanica)*

No invasive plant species were found during the field survey, although it is acknowledged the survey was not undertaken in the optimal season.

There were no notable species found during the survey. The majority of the grassland /crop areas were mown with a short sward height and have limited opportunity for any notable plant species to be present.

3.4.1.2 Important Plant Areas

No important plant areas were identified within and 1 km from the application boundary.

3.4.2 Invertebrates

The data search returned five records of three notable invertebrate species under Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006[31], within 2 km of the Site. Three of small heath (*Coenonympha pamphilus*) were recorded within the last 10 years. A small heath record is within RLB May 2019 within southeast of field 8 (SU 707993). The further two are June 2019 in Thame, 0.7 km, southwest and September 2020 in Aston Rowant, 1.04 km southwest from the Site.

Habitats on Site are common and ubiquitous in the wider landscape and are unlikely to form habitat for invertebrates. In addition, the habitat types of present, are only likely to be used by common and widespread species.

3.4.3 Amphibians

The data search from TVERC returned records of two amphibian species within 1 km of the Site. The following records were recorded within the last 10 years:

- Six GCN records –
  - Two, September and October 2015, in Tetsworth 0.9 km southwest from the Site;
  - Four September and October 2016, in Tetsworth 1 km north from the Site; and
  - Two April 2021, in Tetsworth 0.3 km north from the Site.
- Two common toads (*Bufo bufo*) in May 2016 in Tetsworth, 0.9 km southwest from the Site;

In addition, there are nine historic (>10 years old) records of GCN within 1 km of the Site.

[31] Department for Environment, Food & Rural Affairs (2022) *Habitats and species of principal importance in England*. https://www.gov.uk/government/publications/habitats-and-species-of-principal-importance-in-england.

MAGIC returned nine development licence for GCN within 1 km of the Site. This data was from March 2014 and the closest been 2016, 0.8 km north of the Site.

The habitats on Site have Low potential for GCN and other amphibians due to the lack of aquatic habitats and the regularly disturbed grassland. However, a pond (Figure 1) is located 80 meters west from the RLB in field 1. The pond (SP 69140 00680) is suitable for GCN, and emergent and aquatic vegetation and subject to further assessment. There are addition three ponds within 500 m from the Site. However, all three are situated to the east of the M40.

Figure 1: Pond in field 1.

3.4.4 Reptiles

The data search received by TVERC returned no records of reptiles within 1 km of the Site.

No reptiles were recorded during the survey.

The arable field within the Site provides limited suitability for reptiles, as do some of the grassland fields. However, nearby ponds and ditches offer suitable conditions, particularly for grass snakes. Additionally, the surrounding wooded area and hedgerow bases offer further potential opportunities for reptiles. Reptiles are considered further in this report.

3.4.5 Birds

The data search retuned 198 records of 39 birds' species have been recorded within 1 km of the Site. Of which 23 species are protected or notable, these are shown in Table 3-7.

During the survey, four red kites (*Milvus milvus*) (red listed) were observed and some possible barn owl (*Tyto* alba) pellets and associated mammal skulls were also noted at the base of one of the veteran ash trees (SP 69533 00757). Both species are notable as being listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). This protects these species from disturbance whilst nesting (including from nest construction to successful fledging).

Trees bordering the Site offer opportunities for nesting birds although no nests were recorded. The neighbouring gardens and buildings could offer suitable nesting opportunities for locally common and widespread birds.

The habitats on Site are common in the wider landscape and are important to birds at the Site level only. However, consideration will be required to breeding birds which may use the hedgerows and trees on Site.

Table 3-7: Protected or notable bird species within 1 km of the Site

Common Name	Latin Name	European Directives	UK Legislation	NERC S41	IUCN Red List
Brambling	*Fringilla montifringilla*	-	WACA-Sch1-p1	-	Amber
Bullfinch	*Pyrrhula pyrrhula*	-	-	NERC-S41	Amber
Common Tern	*Sterna hirundo*	BirdsDir-A1	-	-	Amber
Cuckoo	*Cuculus canorus*	-	-	NERC-S41	Red
Dunnock	*Prunella modularis*	-	-	NERC-S41	Amber
Fieldfare	*Turdus pilaris*	-	WACA-Sch1-p1	-	Red
Green Sandpiper	*Tringa ochropus*	-	WACA-Sch1-p1	-	Amber
Grey Partridge	*Perdix perdix*	-	-	NERC-S41	Red
Herring Gull	*Larus argentatus*	-	-	NERC-S41	Red
Hobby	*Falco subbuteo*	-	WACA-Sch1-p1	-	-
House Sparrow	*Passer domesticus*	-	-	NERC-S41	Red
Lapwing	*Vanellus vanellus*	-	-	NERC-S41	Red
Linnet	*Linaria cannabina*	-	-	NERC-S41	Red
Moorhen	*Gallinula chloropus*	-	-	-	Amber
Red Kite	*Milvus milvus*	BirdsDir-A1	WACA-Sch1-p1	-	RL-Global-post2001-NT
Redwing	*Turdus iliacus*	-	WACA-Sch1-p1	-	Amber
Reed Bunting	*Emberiza schoeniclus*	-	-	NERC-S41	Amber
Skylark	*Alauda arvensis*	-	-	NERC-S41	Red
Song Thrush	*Turdus philomelos*	-	-	NERC-S41	Amber
Sparrowhawk	*Accipiter nisus*	-	-	-	Amber
Spotted Flycatcher	*Muscicapa striata*	-	-	NERC-S41	Red
Starling	*Sturnus vulgaris*	-	-	NERC-S41	Red
Yellowhammer	*Emberiza citrinella*	-	-	NERC-S41	Red

In addition to the aforementioned red kite and possible barn owl pellets, the following birds were observed during the survey at the Site:

- Twelve carrion crows (*Corvus corone*)
- Five wood pigeons (Columba Palumbus)
- Three pheasants (*Phasianus Colchicus*)
- One common blackbird (*Turdus merula*)
- Two robins (*Erithacus rubecula*)

In addition, a tawny owl (*Strix aluco*) was heard at the north end of the site.

Trees on and bordering the Site offer opportunities for nesting birds. The grassland and cropland on site offer suitability for ground nesting species such as skylark (*Alauda arvensis)*

3.4.6 Mammals

3.4.6.1 Bats

The TVERC returned 41 records of 5 bat species, including bats whose species was not identified and those only identified as far as *Myotis*, *Nyctalus* and *Pipistrellus* genus, see Table 3-8 below.

Table 3-8: Bat species within 1 km of the Site

Common name	Scientific name	Records	Approximate most recent distance from the Site (km)	Date of record
Common Pipistrelle	*Pipistrellus pipistrellus*	11	0.92 west	2021
Soprano Pipistrelle	*P. pygmaeus*	5	0.92 west	2021
Unidentified pipistrelle species	*Pipistrellus spp.*	2	0.92 west	2021
Unidentified myotis species	*Myotis*	3	0.92 west	2021
Noctule bat	*Nyctalus noctula*	3	0.92 west	2021
Brown long-eared bat	*Plecotus auritus*	16	0.92 west	2022
Unidentified bat species	*Chiroptera*	1	0.92 west	2021

MAGIC returned two European Protected Licence application returns within 1 km of the Site. Details are provided below in Table 3-9.

Table 3-9: Description of European Protected Species Licence Returns for Bats

Reference	Species	Maternity Roost?	Distance from Site (km)	Expiry
2014-4287-EPS-MIT	Brown long-eared bat and Common Pipistrelle	N	0.92 west	31/03/2021
EPSM2011-2844	Brown long-eared bat and Common Pipistrelle	Y	0.92 west	30/09/2014

The Site is surrounded by hedgerows that connect to the wider landscape and contain mature trees which are suitable for foraging and commuting bats. There is also woodland to the west of the Site. The body of the Site consists of either agricultural land or poor-quality grassland fields which don't offer quality foraging opportunities for bats. There is moderate suitability for foraging and commuting bats on site as a result.

There are no buildings within the Site and therefore roosting bats in structures are not considered further. Whilst a full ground-based assessment of trees within the Site for bat roost potential was not undertaken, features that could support roosting bats such as dead limbs, lifted bark, splits, and cracks were recorded on trees within the Site.

Therefore, if any trees on Site are to be removed, a further survey will be required to rule out roosting bats. There are multiple trees of a suitable size and age on site that could offer Potential Roosting Features (PRF) on site. An example of two 'PRF-M' where these trees are suitable for multiple bats and may therefore be used by a maternity colony and Further Assessment Required (FAR).

Two trees were identified as having potential for bats and shown in Table 11:

1. One ash tree – Grid Reference: SP 69533 00757
2. One ash tree – Grid Reference: SP 69537 00773

Table 3-10: Bat Potential Features examples on trees that were considered PRF-M (FAR)

Tree 1	Tree 2
Features identified: • Butt rot • Rot holes • Wound • Transverse snap  	Features identified: • Loose bark • Hollows  

3.4.6.2 Badger

The TVERC data show three records of badgers (*Meles meles*), 1 km from the Site. These records were recorded within the last 10 years. However, details of these are omitted to maintain confidentiality (to avoid persecution) in relation to this species.

The habitats on Site are suitable for foraging badger but no evidence of the species including setts was observed during the field survey on Site or within 30 m. However, badgers are mobile species and there is the potential for them to dig setts prior to commencement of works.

3.4.6.3 Hazel Dormouse

The TVERC data study show two records of hazel dormouse (*Muscardinus avellenarius*). Both records are within the same location, 0.98 km south from the Site. One was within dormouse nest tube in May 2022, while another dormouse was an individual was recorded during a box check in October 2022.

No dormice or evidence of dormice was identified during the surveys. Although there is woodland on site, this lacks an overtly suitable structure for hazel dormice (e.g. lacks dense understorey, food plants etc.). It is acknowledged that scrub and hedgerow habitat are present and offer some habitat suitability. Given the lack of suitable woodland and records in close proximity to the Site it is considered unlikely that hazel dormouse are present on site, however not impossible. Therefore, these are precautionarily considered further.

3.4.6.4 Otter

The TVERC data search returned no records of otter (*Lutra lutra*) 2km south from the Site.

No signs of otter activity were recorded during the survey. The ditches are considered due to low water levels, unvegetated banks and therefore unlikely to offer suitable foraging or sheltering habitat for the species.

Given the lack of records in the area and the poor habitat quality on site, it is unlikely otter would be present on site. Taken together with the lack of records in the area, it is considered unlikely that otter and are receptors with respect to the proposed development.

3.4.6.5 Water Vole

The TVERC data search returned no records of water vole (*Arvicola amphibius*) within 1 km of the Site.

No signs of water vole activity were recorded during the survey. The ditches are considered suboptimal due to lack of vegetation and water levels for foraging, habitat for and shelter.

Taken together with the lack of records in the area, it is considered unlikely that water voles and are receptors with respect to the proposed development.

3.4.6.6 Other Mammals

The TVERC data search returned one record of polecat (*Mustela putorius*), 0.3 km east from the Site in April 2020. The polecat is listed as principal importance under Section 41 (S41) of the NERC Act 2006. The habitats on site were dominated by agricultural fields and grassland which provides moderate potential for polecats as they thrive on open farmland. Also, the hedgerows were to be the key features on site for polecat.

The TVERC data show three records European hedgehog (*Erinaceus europaeus*), 2 km from the Site. Where eleven records were recorded within the last 10 years, of which ten were recorded within the village of Tetsworth and one was South Weston village. The NBN

Atlas shows one recorded within the last 10 years. Located South Weston village, 1 km from Site.

The hedgehog is listed as principal importance under Section 41 (S41) of the NERC Act 2006. The habitats on the Site are suitable for supporting hedgehogs are considered a potential receptor with respect to future development. The Site offers suitable foraging and nesting opportunities for hedgehogs, particularly along the hedgerows and woodland, and is important at the Site level. Further consideration is required.

NBN Atlas shows two records of American mink (*Neovison vison*), 0.6 km west from the Site within Haseley Brook in October 2022. The American mink is classed as an invasive non-native species. It is listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) making it an offence under Section 14 of the Act to release any non-native animal.

During the survey two roe deer's seen in Field 5. In addition, deer tracks were seen throughout all the fields.

4.0 Ecological Constraints and Opportunities

The Site and its surroundings have potential to support the following ecological receptors of note, which could therefore be impacted upon by any future development proposals.

4.1 Construction Environmental Management Plan

A Construction and Environmental Management Plan (CEMP) shall be produced ahead of development to include mitigation and enhancement measures. This will include strategies to support the protected species and habitats on Site, as well as general enhancements to biodiversity.

4.2 Designated Sites

4.2.1 Statutory Sites

The proposed development is not considered likely to significantly affect any statutory designated sites. The nearest statutory designated site is Knightsbridge Lane SSSI which is situated 3.8 km southwest, whilst the nearest international statutory designated sites is Chilterns Beechwoods SAC, situated 6.6 km east. Due to their distance from the Site, no direct impacts are anticipated. Furthermore, no indirect effects are anticipated due to a lack of potential impact pathways such as hydrological connectivity. All other statutory designated sites are located further from the Site with no obvious impact pathways. As such, no significant effects on statutory designated sites are likely to occur from the proposed cable route works.

4.3 Habitats

The following habitats are listed as Habitats of Principal Importance as listed under S41 of the NERC Act 2006. Habitats that are not listed under S41 are not considered below. However, a 10% Biodiversity Net Gain (BNG) must be achieved to comply with legislation. To gain an accurate habitat condition score, some habitats require re-surveying during optimal season (see section 5.1 below).

4.3.1 Hedgerows

Hedgerows are present within the Site, which is an important habitat for a variety of species which may use them for shelter, commuting, and breeding. Hedgerows should be maintained where possible as they likely qualify as a UK BAP Priority Habitat.

4.3.2 Plants

The habitats on Site were of limited botanical interest and poor species diversity, although the timing of survey may have contributed to this. The species poor hedges and grassland margins are noted for their potential to support some protected/priority faunal species rather than for their botanical value.

No invasive non-native or notable plant species were recorded within the Site or wider surveyed area.

4.4 Protected and Other Notable Species

4.4.1 Invertebrates

Invertebrates are often under recorded and represented in desk study and field survey, although the Site lacks good invertebrate habitat, retention of the hedgerows and trees will be beneficial to maintaining the local invertebrate population.

4.4.2 Amphibians

The majority of the Sites agricultural area was considered to be sub optimal for amphibians, due to the likely disturbed nature of the agricultural grassland field. The key habitats on Site that could support amphibians were the hedgerows and arable field margins for terrestrial activity, as well as the offsite pond 80 m from RLB as well as three ponds within 500 m, however, these are situated to the east of the M40. Given the pond located 80 m from the RLB it is a possibility that GCN could be utilising the site during their terrestrial phase.

The development could incur the direct loss and/or indirect damage of suitable foraging and commuting terrestrial habitat for amphibians. In addition, the development could result in reckless injury or killing of amphibians, including GCN, should they be present within the Site.

Further survey should be undertaken of the pond highlighted above to ascertain the presence / likely absence of GCN. Should GCN be identified then measures to protect GCN in their terrestrial phase should include precautionary measures implemented during the works included within the CEMP. Such measures should include prior to works, vegetation clearance along the route should include a two-phase cut to prevent injury and/or killing of such species. Given the temporary nature of the works and sub-optimal nature of on-site terrestrial habitats, this should be sufficient to prevent legislative breaches in relation to GCN.

4.4.3 Reptiles

The Site is suitable for reptiles. All native reptiles are protected under the Wildlife and Countryside Act 1981 (as amended), making it an offence to intentionally, deliberately, or recklessly kill or injure any native reptile.

Impacts to habitats suitable for reptiles should be avoided where possible. However, should designs include impacting suitable habitat areas for reptiles, it is recommended to complete a two-stage directional strim and fingertip search prior to any habitat clearance in the reptile active period (generally considered March to October inclusive). Removal of any habitat suitable for hibernation should not occur outside of the active period, when individuals could be hibernating and therefore more vulnerable.

4.4.4 Birds

Habitats across the site are suitable for nesting by a range of common species. In addition, owl pellets and small mammal skulls were observed at the base of an ask tree. However, it was not possible to attribute these to a specific owl species. It is possible these were field signs of barn owl (*Tyto alba*), a Schedule 1-listed species, and the same tree have a cavity in the trunk which could be suitable for barn owl nesting or roosting. A detailed inspection of this cavity is recommended in Section 5.3 to determine if it is, or has previously been, used by barn owl.

Unmitigated, construction activities (e.g. clearance of vegetation) have the potential to cause injury or mortality of nesting birds, and damage or destruction of eggs or nests during construction. Vegetation clearance works of the field and hedgerows (if removed) should therefore be timed to avoid the bird breeding season (the nesting season is typically taken to

run from March to August inclusive). If this is not possible, nesting bird surveys completed by an appropriately experienced ecologist would be required no more than 48 hours prior to vegetation clearance or other works that could affect nesting birds such as tracking into new areas. Should non- Schedule 1 nesting birds be encountered, an exclusion zone around any active nests would be required to prevent damage of the nests and injury to the young birds until they had fledged. Specialist advice by a suitable qualified ornithologist with regards to Schedule 1 birds will be required if such species are encountered on site.

Avoiding removal of hedgerows is recommended. Where hedgerow removal is required, enhancement of remaining hedgerows and planting of further hedgerows is recommended; this will assist in achieving a biodiversity net gain for hedgerow units and provide additional and higher quality nesting habitat for bird species currently using the Site.

4.4.5 Mammals

4.4.5.1 Bats

The hedgerows on and surrounding the Site offer suitable habitat for foraging and commuting bats.

All species of bat in the UK are protected by the Wildlife and Countryside Act (1981) (as amended) and the Conservation of Habitats and Species Regulations (2017).

Some of the mature trees within the hedgerows surrounding the Site have potential for roosting bats, and it is recommended that a full GLTA be completed to identify any trees with bat roost potential within 15 m of any proposed works. Trees that have potential bat roost features may need to be climbed by a Natural England licenced bat worker on several visits to determine whether bats are roosting within them. If this cannot be completed safely, then bat emergence surveys at night may be appropriate (carried out between May and September inclusive in both instances).

4.4.5.2 Badger

The Site has the potential to support badgers, including opportunities for sett construction.

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

Badger can establish setts quickly and habitats on Site and within 30m offer suitability in this regard. Should construction not commence within 6 months of the survey (i.e. by 17th June 2025) then a further pre-construction badger survey should be undertaken to identify any new setts that have been established.

4.4.5.3 Hazel Dormouse

It is considered unlikely that hazel dormouse are present on site, in addition only a minimal amount of hedgerow removal is likely to be required to facilitate cable route installation (if any). A check of the sections of hedgerow to be removed should be undertaken prior to clearance works for any nests that may be present. In the unlikely event that a hazel dormouse or nest is found, then works would have to stop and specific advice and an EPS licence sought from Natural England (for which there are time and cost implications).

4.4.5.4 European Hedgehog

Hedgehogs are listed on Schedule 6 of the Wildlife and Countryside Act (1981) which makes it illegal to kill or capture wild hedgehogs using certain methods. Hedgehog is also a species of principal importance under S41 of the NERC Act 2006.

The Site offers suitable habitat to support European hedgehog. Should they be present, the works could impact the species by disturbance and/or destruction or damage to resting sites potentially resulting in reckless injury or killing of them.

Such impacts could be reduced by implementing reasonable avoidance measures during the construction phase of the works which will also safeguard other small to medium size mammals. These precautions should be detailed within the CEMP but are likely to include:

- Any trenches or deep pits within the Site that are to be left open overnight should be provided with a means of escape should any animals enter. The simplest method for this would be in the form of a roughened plank of wood placed in the trench as a ramp to the surface. This is particularly important if the trench fills with water.
- Any trenches/pits should be inspected each morning to ensure no animals have become trapped overnight. Should an animal become trapped in a trench it will likely attempt to dig itself into the side of the trench, by forming a temporary borrow.

5.0 Recommendations for Further Surveys

Based on the findings of this assessment the following additional surveys are recommended to ensure that a full and comprehensive understanding of the ecological baseline is attained which will guide the design process and provide sufficient information for a detailed ecological impact assessment.

5.1 Biodiversity Net Gain

To comply with national legislation (Environment Act 2021), the development must achieve a minimum 10% BNG. To complete this a further habitat condition survey will be required to obtain scores for each habitat to inform the calculations. The main habitats to be surveyed within the optimal season (considered to be May to July for grassland) are, Fields 4, 5 and 6.

5.2 Great Crested Newts

GCN Environmental DNA (eDNA) surveys should be undertaken on the nearby pond (within 80 m of RLB) between 15 April and 30 June to confirm if the pond is utilised by GCN and by extension if the terrestrial habitats on Site are likely to be used. A Habitat Suitability Index (HSI) assessment of the pond should be undertaken to further supplement the information gathered on GCN. The results of this survey will inform the precautionary working methods in relation to GCN which should be included in the CEMP for the Site.

5.3 Birds

A survey of the mature trees which may be impacted on Site for potential to support barn owl (a Schedule 1 species) should be undertaken alongside the GLTA (refer to bats) and during all surveys in the breeding bird season surveyors should take note of any Schedule 1 birds. A pre-construction survey for Schedule 1 birds is also recommended. These species are afforded extra protection against disturbance whilst nesting so if any are identified as nesting on the site, buffers extending up to several hundred metres (depending on species) from the nest may be required for the duration of the nesting attempt to ensure the proposed works do not disturb Schedule 1 species.

Any clearance of vegetation on Site should take place outside of the nesting bird season, taken to run from March to August inclusive. If this is not possible, and as a last resort, the absence of nesting birds should be confirmed by a suitably qualified person prior to commencement (within 48 hours) by an Ecological Clerk of Works (ECoW). Should any active nests be found, the appropriate mitigation must be put in place (minimum of 5 m buffer zone) to enable successful fledging of the chicks before the area is cleared.

5.4 Bats

Some of the mature trees within the hedgerows surrounding the Site have potential for roosting bats, and it is recommended that a full GLTA be completed to identify any trees with bat roost potential within 15 m of any proposed works. The assessment would consist of a ground based visual inspection of each tree to determine their potential to provide opportunities for roosting by bats and signs of bat presence. The inspection will involve using binoculars and torches to identify potential roost features (PRF), such as lifted bark, woodpecker hole and/or other cavities. Trees confirmed as having bat roost potential will need to be subject to further survey, either through aerial inspection, or through a series of presence / absence surveys. Surveys would be required on three occasions (between May and September inclusive, with visits spaced at least three weeks apart) to determine whether bats are roosting within them.

5.5 Badger

A badger pre-construction survey no more than 6 months prior to works is recommended to identify any new setts that may have been excavated on Site or within 30 m. Measures to minimise impacts on foraging and commuting badger will be detailed in the CEMP, similar to those described above in Section 4.4.5.4 for hedgehog.

6.0 Potential Opportunities for Biodiversity Enhancements

Detailed development plans are not available at this time and surveys to confirm the presence or absence of a number of protected or notable species have not been undertaken. Therefore, the recommendations listed below to provide nature conservation enhancements, as required under local planning policy, are very generic. The list below is not exhaustive and may change depending on the detailed design of the development and any protected or notable species confirmed to be present following further survey work.

- Wildlife-friendly planting - new landscaping should provide a diverse mix of native species of demonstratable value for wildlife known to be at the Site/have the potential to be encouraged to the Site. Landscaping should account for climate risk through providing appropriate species mixes which are drought resilient, or suitable for use in rain gardens or for surface water control where appropriate. Enhancement of the modified grasslands to a more biodiverse grassland, and other measures to deliver a BNG should be incorporated.
- Log piles - any brash or trees that are unavoidably removed should be retained on site in brash or log piles that could act as refugia for a range of invertebrates, small mammals, amphibians or reptiles.

7.0 Conclusions and Recommendations

SLR Consulting Limited (SLR) was commissioned by Solar 2 Project E Limited to undertake a Preliminary Ecological Appraisal (PEA) of an area of land that is proposed for cable route to be developed north of Adwell, Thame, OX9 7DH.

A habitat survey and protected species walkover assessment has been undertaken of the proposed area. The Site was identified as other woodland - mixed - mainly broadleaved (w1h5), broadleaved and mixed (w1), bramble scrub (h3d), developed land - sealed surface (u1b), other developed land (u1b6), buildings (u1b5) and rivers and streams (r2). Also, eight fields, consisting of modified grassland (g4), arable and horticulture (c1), other neutral grassland (g3c) and arable field margins (c1a). Within the Site there are eight hedgerows consisting of native hedgerow (h2a).

These habitats are typical of the area and the immediate surroundings; however, they still offer potential to support various protected species. Measures to avoid impacts to surrounding / adjacent habitat should be outlined in a CEMP.

The list below is a summary of the additional surveys which are likely to be required to inform any future planning application on the Site:

- In-season Habitat Condition Assessment for BNG;
- eDNA for GCN of one pond;
- HSI assessment of one pond;
- GLTA and owl survey of trees within 15 m of any proposed works for bat suitability and presence / absence survey if impacts cannot be avoided;
- A two-stage directional strim and fingertip search prior to works for reptiles;
- Nesting bird checks prior to vegetation clearance, including check for Schedule 1 nesting species.
- Badger pre-construction survey.

Annex A Relevant Legislation and Planning Policy

Postcombe & Lewknor Grid Connection

Preliminary Ecological Appraisal Report

Postcombe and Lewknor Solar Farm Limited

SLR Project No.: 425.VT1363.00001

12 February 2025

Relevant Legislation and Planning Policy

Legislation

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

Environment Act (2021)

The Environment Act has wide ranging provisions including those around:

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

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

Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations) consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law. Under the Habitats Regulations it is an offence to deliberately capture, kill or disturb[1] wild animals listed under Schedule 2 of the Regulations as well as damage or destroy a breeding site or resting place of such an animal (even if the animal is not present at the time). European Sites, including Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), are also protected under the Habitat Regulations, and any proposal that could affect them will require a Habitats Regulations Assessment (HRA).

[1] Disturbance, as defined by the Conservation of Habitats and Species Regulations 2010, includes in particular any action which impairs the ability of animals to survive, breed, rear their young, hibernate or migrate (where relevant); or which affects significantly the local distribution or abundance of the species.

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

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

Environment (Wales) Act 2016

The Environment (Wales) Act puts in place the legislation needed to plan and manage Wales' natural resources in a more proactive, sustainable and joined-up way. Part 1 Section 6 of the Act introduces a new biodiversity duty, which replaces and enhances the biodiversity duties set out in the NERC Act 2006 and requires public authorities to seek to maintain and enhance biodiversity in the exercise of their functions and in so doing promote the resilience of ecosystems.

Section 7 of the Act lists living organisms and types of habitat in Wales, considered to be of key significance to sustain and improve biodiversity in relation to Wales.

Natural Environment & Rural Communities (NERC) Act 2006

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

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

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

Protection of Badgers Act 1992

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

Wildlife & Countryside Act 1981

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

- Intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act, or its dependent young while it is nesting;
- Intentionally kill, injure or take any wild animal listed under Schedule 5 to the Act;

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

Planning Policy

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

National Planning Policy Framework December 2024(England)

The National Planning Policy Framework (NPPF)[2] sets out guidance for local planning authorities and decision-makers in how to apply planning policies when drawing up plans and making decisions about planning applications. Along with Government Circular 06/052, the broad policy objectives in relation to the protection of biodiversity and geological conservation in England through the planning system are set out. Specific policies relating to habitats and biodiversity are set out in paragraphs 187 to 195 of the NPPF.

Paragraph 187 states that:
"Planning policies and decisions should contribute to and enhance the natural and local environment by:

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

[2] Ministry of Housing, Communities & Local Government (December 2024). https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf

Paragraph 192 states that:
"To protect and enhance biodiversity and geodiversity, plans should:

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

Paragraph 193 of the NPPF states that:
"When determining planning applications, local planning authorities should apply the following principles:

a) *if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
b) *development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
c) *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*
d) *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this* is appropriate."

Paragraphs 194 - 195 relate to European sites (referred to as habitats sites) and state:
"The following should be given the same protection as habitats sites:

a) *potential Special Protection Areas and possible Special Areas of Conservation;*
b) *listed or proposed Ramsar sites; and*
c) *sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.*

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

National Planning Policy (Wales)

Planning Policy Wales (PPW)[3] sets out the land use planning policies of the Welsh Government. The primary objective of PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic,

[3] Welsh Government. 2018. Planning Policy Wales. Edition 10, December 2018.

environmental and cultural well-being of Wales. Section 6.4 of PPW relates to biodiversity and ecological networks.

Paragraph 6.4.3 of PPW states that:

"The planning system has a key role to play in helping to reverse the decline in biodiversity and increasing the resilience of ecosystems, at various scales, by ensuring appropriate mechanisms are in place to both protect against loss and to secure enhancement."

It goes on to state that:

"Development plan strategies, policies and development proposals must consider the need to:

- *support the conservation of biodiversity, in particular the conservation of wildlife and habitats;*
- *ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats;*
- *ensure statutorily and non-statutorily designated sites are properly protected and managed;*
- *safeguard protected and priority species and existing biodiversity assets from impacts which directly affect their nature conservation interests and compromise the resilience of ecological networks and the components which underpin them, such as water and soil, including peat; and*
- *secure enhancement of and improvements to ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks."*

Section 6.4 goes on to set out policy in respect of:

- The Biodiversity and Resilience of Ecosystems Duty, as set out in Section 6 of the Environment (Wales) Act 2016;
- Designated Sites, including:
  - Sites of Special Scientific Interest;
  - Special Protection Areas, Special Areas of Conservation and Ramsar Sites;
  - Proposed Special Areas of Conservation, Special Protection Areas and Ramsar sites; and
  - Non-statutory Designations.
- Protected Species; and
- Trees, Woodlands and Hedgerows.

PPW is supplemented by a series of Technical Advice Notes (TANs), Welsh Government Circulars, and policy clarification letters, which together with PPW provide the national planning policy framework for Wales. TAN 5[4] deals with Nature Conservation and Planning and states in paragraph 2.4:

"When considering policies and proposals in local development plans and when deciding planning applications that may affect nature conservation, local planning authorities should:

- *Pay particular attention to the principles of sustainable development, including respect for environmental limits, applying the precautionary principle, using scientific*

[4] Welsh Assembly Government. 2009. Planning Policy Wales Technical Advice Note 5: Nature Conservation and Planning. September 2009.

knowledge to aid decision making and taking account of the full range of costs and benefits in a long term perspective;

- *Contribute to the protection and improvement of the environment, so as to improve the quality of life and protect local and global ecosystems, seeking to avoid irreversible harmful effects on the natural environment;*
- *Promote the conservation and enhancement of statutorily designated areas and undeveloped coast;*
- *Ensure that appropriate weight is attached to designated sites of international, national and local importance;*
- *Protect wildlife and natural features in the wider environment, with appropriate weight attached to priority habitats and species in Biodiversity Action Plans;*
- *Ensure that all material considerations are taken into account and decisions are informed by adequate information about the potential effects of development on nature conservation;*
- *Ensure that the range and population of protected species is sustained;*
- *Adopt a step-wise approach to avoid harm to nature conservation, minimise unavoidable harm by mitigation measures, offset residual harm by compensation measures and look for new opportunities to enhance nature conservation; where there may be significant harmful effects local planning authorities will need to be satisfied that any reasonable alternative sites that would result in less or no harm have been fully considered."*

Annex B Drawing 1 UKHAB Map

Postcombe & Lewknor Grid Connection

Preliminary Ecological Appraisal Report

Postcombe and Lewknor Solar Farm Limited

SLR Project No.: 425.VT1363.00001

12 February 2025

468500 469000 469500 470000 470500 471000

201000 200500 200000 199500

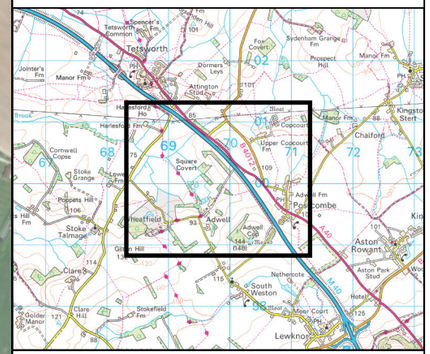
U1 u1b6 805
H1 h2a 521 11 521
W1 w1g 521
H3 h2a 521 11
WB2 r2 49 521 50
G3 g4
U2 u1b
WB2 r2 49 521 50
H2 h2 11 521
H4 h2a 11 116 516
WB1 r2 49 50 314
G4 g4 107 504
WB2 r2 49 521 50
F2 c1 517
F4 g4 521
W2 w1 33
r1g 521
F3 c1 516
W3 w1h5 521
H5 h2a 116 11
M40
F5 g4 106
B4012
U4 u1b5
BS1h3d 32
A40
BS1 h3d 32 521
F6 g3c 516
G1 g4 32 521
H6 h2a 521
F7 g4
W4 w1 33
G2 g3c 107
U5 u1b6
W5 w1g 29 521
w1g 29 521
H7 h2a 116
h3d 32 612
W6 w1g 29 521
F7 g4 107
H8 h2a 116
F8 c1 516 107
W8 w1h5 29 521
PR7 c1c

N

0 250 500
Metres

Secondary Codes
11 Hedgerow with Trees
29 Plantation
32 Scattered Trees
33 Line of Trees
49 Freshwater - Artificial
50 Ditch
106 Mown
107 Mown and Collected
116 Flailed Hedgerow
314 Mudbanks
504 Waterlogged
516 Active Management
517 Recent Management
521 Unmanaged
612 Fence
805 Development Site

LEGEND
Cable Route Boundary
Cable Route Boundary 30 m Buffer
Survey Extent
Survey Area
Aerial Interpretation
Primary Habitat Classification
Heathland and Shrub - Hedgerows
h2 - Hedgerow
h2a - Hedgerow Priority Habitat
Woodland and Forest
w1 - Broadleaved Mixed and Yew Woodland
Rivers and Lakes - Rivers and Streams
r2 - Rivers and Streams
Cropland - Arable and Horticulture
c1 - Arable and Horticulture
c1c - Cereal Crops
Grassland - Neutral Grassland
g3c - Other Neutral Grassland
Grassland - Modified Grassland
g4 - Modified Grassland
Heathland and Shrub - Dense Scrub
h3d - Bramble Scrub
Rivers and Lakes - Standing Open Water and Canals
r1g - Other Standing Water
Urban - Built-up Areas and Gardens
u1b - Developed Land; Sealed Surface
u1b5 - Building
u1b6 - Other Developed Land
Woodland and Forest - Broadleaved Mixed and Yew Woodland
w1g - Other Woodland; Broadleaved
w1h5 - Other Woodland; Mixed; Mainly Broadleaved



solar2

SLR

POSTCOMBE AND LEWKNOR GRID CONNECTION

PRELIMINARY ECOLOGICAL APPRAISAL

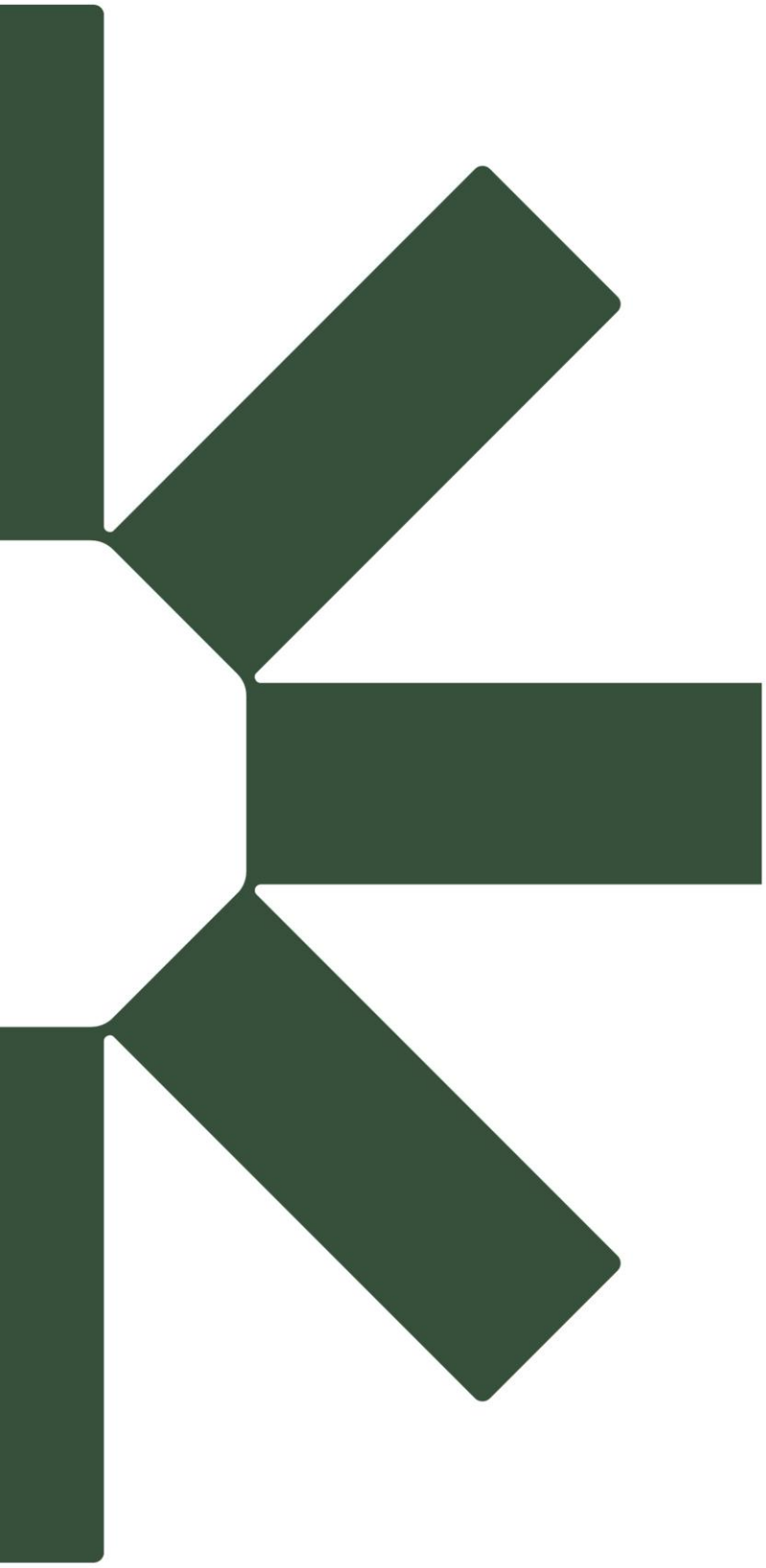
BASELINE UK HABITAT SURVEY RESULTS

FIGURE 1

Scale 1:9,000 @ A3

Date MAY 2025

425.001363.00001.0002.1 UKHab Baseline



Making Sustainability Happen