Habitat Regulations Assessment

Postcombe and Lewknor Solar Farm

Postcombe and Lewknor Solar Farm Limited

Prepared by:

SLR Consulting Limited

3rd Floor, Summit House, 12 Red Lion Square,
London, WC1R 4QH

SLR Project No.: 425.VT1363.00001

8 May 2025

Revision: Final

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
01	28 March 2025	Jess Colebrook	Richard Arnold	Richard Arnold
02	8 May 2025	Jess Colebrook	Richard Arnold	Richard Arnold

Table of Contents

Supporting Figures

1.0 Introduction

1.1 Background and purpose of this report

SLR Consulting Limited (SLR) were commissioned at the instruction of Postcombe and Lewknor Solar Farm Limited (the Applicant) to carry out a (shadow) Habitats Regulations Assessment (HRA) in relation to the ES undertaken for the Postcombe and Lewknor Solar Farm ("the Proposed Development").

This report is intended to provide sufficient information for the Competent Authority (in this case South Oxfordshire District Council) to determine whether the proposed works could have a Likely Significant Effect (LSE) on European or Ramsar sites with regard to their conservation objectives without mitigation.

1.2 Project Overview

The Proposed Development is located approximately 50 m south of the village of Postcombe, 450 m north of the village of Lewknor and 4.3 km south of the town of Thame. The 97.5 ha Site consists of two land parcels which border both sides of the M40 motorway, with the A40 to the east, Weston Road to the west and Salt Lane to the north. The Site also includes a 'cable corridor' which extends for approximately 3 km from the substation at the solar site to the substation at Harlesford Solar Farm (point of connection).

The Proposed Development will consist of an array of solar photovoltaic (PV) modules with an export capacity of up to 49.9 MW. The lowest point of the panels will stand approximately 1 m Above Ground Level (AGL) at their minimum point and will be angled up to 60° to the horizontal and arranged in rows. The maximum panel height will be up to 3.1 m AGL. In addition to the panels, associated infrastructure will include:

- Solar PV Panels;
- inverters;
- transformers;
- high voltage (HV) switchgear and control equipment;
- cabling and interconnector;
- cabling for grid route to connection at Harlesford Solar Farm substation;
- on-site substation and control and meeting building;
- customer station compound;
- spares container;
- meteo mast;
- site access and tracks;
- car parking;
- grid route cable;
- security fencing and CCTV; and
- temporary construction compound
- landscaping and ecological enhancement.

The location of the Site is shown in **Figure 1**. The Site is currently predominantly used for arable agricultural purposes with small sections of woodland.

1.3 Relevant legislation and policy

The requirement for an Appropriate Assessment is set out within Article 6 of the Habitats Directive 92/43/European Economic Community (EEC) of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, which was most recently transposed into English law by the Conservation of Habitats & Species Regulations 2017 (as amended), also known as the 'Habitats Regulations'.

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

The Habitats Regulations afford protection to European sites and their interest features. Part 6 of the Conservation of Habitats and Species Regulations 2017 (as amended) sets out the requirements for screening assessments, the circumstances under which an AA is required and the further implementation of Article 6(3) and 6(4) of the Habitats Directive.

The UK left the European Union (Brexit) on Exit Day, 31st January 2020, followed by Completion Day on 31st December 2020. The EU Exit Regulations (2019) establish any EU Exit-related changes to the Habitats Regulations (2017), with these considered to have no material implications on the requirement or process for a HRA of the Project. After Brexit, UK sites designated under the Habitats Regulations became part of the National Site Network (as defined in the interpretation sections of the Habitat Regulations (2017)), with a focus on maintaining ecological coherence throughout the UK.

1.5 National Planning Policy Framework

In addition to the Habitats Regulations, UK Government policy (Office of the Deputy Prime Minister Circular 06/2005) states that internationally important wetlands designated under the Convention on Wetlands 1971, called the Ramsar Convention (Ramsar sites) are afforded the same protection as SPAs and SACs for the purpose of considering development proposals that may affect them. The Government in England also affords the same level of protection to potential SPAs (pSPAs), possible SACs (pSACs) and proposed Ramsar sites and to sites identified, or required, as compensatory measures for adverse effects on any of the above sites, through planning policy such as the National Planning Policy Framework[1].

Paragraphs 194 and 195 relate to European sites (referred to as habitats sites) and state:

"*The following should be given the same protection as* [European] *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 [European] *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 [European] *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*."

[1] Department for Levelling Up, Housing & Communities (2024) National Planning Policy Framework. Available at: https://assets.publishing.service.gov.uk/media/67aafe8f3b41f783cca46251/NPPF_December_2024.pdf [Accessed: 25/4/25].

1.6 Local Planning Policy

South Oxfordshire Local Plan guides planning decisions in the area. Relevant policies are outlined below:

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).

Lewknor Parish Neighbourhood Plan 2023-2040 also includes the following relevant policy:

Policy EN1: Wildlife and Biodiversity

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

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.

1.7 Evidence of technical competence and experience

The assessment was undertaken by Jess Colebrook BSc (Hons), CEnv, MCIEEM, Principal Consultant with SLR. Jess has over 24 years of experience as a professional ecologist, which has included preparing and overseeing assessments under the Habitats Regulations/Directive for multiple projects, including small and large infrastructure projects, in the UK and internationally.

This report has been subject to internal review by Richard Arnold, Technical Director for Ecology & Biodiversity at SLR. Richard has over 25 years of experience in ecological consultancy, including in HRAs and AAs as well as ecological surveys, licensing, mitigation and impact assessments.

2.0 Methodology

2.1 Habitats Regulations Assessment

The methodology used in this report is based on and in accordance with guidance[2] provided by the Department for Environment, Food & Rural Affairs (Defra). The guidance describes three stages, which may not all need completing, depending on decisions at each stage. The stages are:

1 Screening - to check if the proposal is likely to have a significant effect on the site's conservation objectives. If not, there is no need to go through the appropriate assessment or derogation stages.

2 Appropriate assessment - to assess the likely significant effects of the proposal in more detail and identify ways to avoid or minimise any effects such that they will not have an adverse effect on the integrity of any listed or proposed European or Ramsar site.

3 Derogation - to consider if proposals that would have an adverse effect on a listed or proposed European or Ramsar site qualify for an exemption.

In accordance with the law and policy, the assessment includes any areas secured as sites compensating for damage to a European site if the proposal will affect any of these.

2.2 Baseline Data Gathering

An Ecological Impact Assessment (EcIA)[3] of the Project has been undertaken and is reported within Chapter 7 of the Environmental Statement (ES). Baseline data gathering includes a desk study, a UKHab survey, breeding bird survey and dormouse survey. The EcIA initially scoped out further assessment of designated sites and their qualifying features (refer to the Scoping Report at **Appendix 2.1** of the ES). This accords with the Scoping Response dated 16th February 2023 from Natural England which stated that "*The proposal is unlikely to adversely impact any European or internationally designated nature conservation sites (including 'habitats sites' under the NPPF) or nationally designated sites (Sites of Special Scientific Interest, National Nature Reserves or Marine Conservation Zones)".*

However, in its Scoping Response (refer to Appendix 2.2 of the ES), South Oxfordshire District Council requested justification of this stance via preparation of an HRA, which this report will detail.

[2] Defra (2023) Guidance Habitats regulations assessments: protecting a European site. Available at: https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site [Accessed: 26/3/24].

[3] SLR (2023) Ecological Impact Assessment Burringham Road, Scunthorpe.

3.0 Stage one: Screening

3.1 Conservation Management

The Project is a solar farm development and therefore it is not directly connected with or necessary to the management, for the purposes of maintaining or restoring the conservation interest, of any European or Ramsar site. Therefore, it cannot be screened out of further assessment on that basis.

3.2 European Sites

There are two listed European or Ramsar sites within 10 km of the Project Site (**Figure 1**):

- Aston Rowant SAC – located 1.3 km south-east; and
- Chilterns Beechwoods SAC – located 2.1 km east-south-east.

The qualifying features, sensitivities and conservation objectives of the identified European sites are given below, where available online.

There are no proposed European or Ramsar sites and no compensation areas within 10 km.

3.2.1 Aston Rowant SAC

Aston Rowant is one of the largest surviving complexes of beech *Fagus sylvatica* woodland, mixed scrub, juniper *Juniperus communis* and chalk grassland in the Chilterns. The site is designated under Article 4(4) of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I:

- Annex I habitats that are a primary reason for selection of this site: 5130 Juniperus communis formations on heaths or calcareous grasslands
- Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site: 9130 Asperulo-Fagetum beech forests

The SAC data form[4] also outlines the most important threats and pressures impacting the site, which include:

- K04 Interspecific floral relations (inside);
- M02 Changes in biotic conditions (both inside and outside);
- U Unknown threat or pressure (outside); and
- I02 Problematic native species (both inside and outside).

3.2.1.1 Conservation Objectives[5]

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change, the conservation objectives are to:

[4] JNCC STANDARD DATA FORM for sites within the 'UK national site network of European sites' SITE UK0030082 Aston Rowant last update December 2015, available at https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030082.pdf

[5] Natural England European Site Conservation Objectives for Aston Rowant Special Area of Conservation Site Code: UK0030082 published 27 November 2018 (version 3) available at https://publications.naturalengland.org.uk/file/5085928322498560

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats,
- The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely.

The Supplementary Advice on Conservation Objectives (SACOs) also presents attributes which are ecological characteristics or requirements of the designated species and habitats within a site. The listed attributes are considered to be those which best describe the site's ecological integrity and which if safeguarded will enable achievement of the Conservation Objectives. These attributes have a target which is either quantified or qualified depending on the available evidence. The SACOs for Aston Rowant SAC were last updated on 16th January 2019[6].

3.2.1.2 Potential Impact Pathways

One potential pathway has been identified and are described below, which considers the threats / adverse impacts identified within the designated site citation.

1 The non-Annex I habitats within the Proposed Development Site may have a supporting function for the Annex I habitats within the SAC, for example, by supporting some of the same/typical species (such as, but not limited to, hawthorn and blackbird). and by providing connectivity between the SAC and the wider landscape.

   Source: Construction

   Pathway: Habitat loss (hedgerow removal/ reinstatement/ creation)

   Receptor: juniper scrub (Annex 1 reference 5130) and beech forest (Annex 1 reference 9130).

Other pathways have been excluded since:

- Based upon information from the Transport Statement & Construction Traffic Management Plan at Appendix 2.3 of the ES, all construction related traffic is forecast to use the M40 Junction 6, then the A40. According to JNCC guidance[7], road links associated with strategic 'trunk roads' (i.e. the Strategic Road Network (SRN)), such as the M40, are excluded from assessment. The portion of the A40 that would be used is more than 200m distant from both SACs (the IAQM screening distance).
- There is 1.3 km separation distance between the Proposed Development Site and the SAC;

[6] Natural England (2019) European Site Conservation Objectives: Supplementary advice on conserving and restoring site features Aston Rowant Special Area of Conservation (SAC)Site Code: UK0030082 Date of Publication: 16 January 2019 available at https://designatedsites.naturalengland.org.uk/TerrestrialAdvicePDFs/UK0030082.pdf

[7] Chapman, C. & Kite, B. 2021. Guidance on Decision-Making Thresholds for Air Pollution. JNCC Report No. 696 (Main Report), JNCC, Peterborough, ISSN 0963-8091. Air Quality Consultants Ltd. 2021. Decision-Making Thresholds for Air Pollution. JNCC Report No. 696 (Technical Report), JNCC, Peterborough, ISSN 0963-8091. Available at https://hub.jncc.gov.uk/assets/6cce4f2e-e481-4ec2-b369-2b4026c88447

- There are no hydrological links between the Proposed Development Site and the SAC;
- The Proposed Development will give rise to no additional illumination beyond the site boundary during construction/ decommissioning, and there is no additional lighting proposed during operation;
- Qualifying features of the SAC are not sensitive to noise;
- Qualifying features of the SAC do not occur at the Proposed Development Site.

Due to the identified pathway, further screening consideration is given in **Section 3.3**.

It is however also noted that the Proposed Development Site is situated in the SSSI Impact Risk Zone for Aston Rowant NNR and Aston Rowant SSSI which underpin the SAC. The categories listed comprise:

- *Infrastructure: airports, helipads and other aviation proposals.*
- *Air pollution: Any industrial/agricultural development that could cause AIR POLLUTION (including: industrial processes, livestock & poultry units with a floorspace > 500m², slurry lagoons > 200m² & manure stores > 250 tonnes).*
- *Combustion: General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/combustion.*
- *Waste: Landfill. Including: inert landfill, non-hazardous landfill, hazardous landfill.*
- *Compost: Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.*

The Proposed Development, which is for a solar farm and cable corridor, does not fall under any of these categories.

3.2.2 Chilterns Beechwoods SAC

The Chilterns Beechwoods represent a very extensive tract of ancient semi-natural 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*.

- Annex I habitats that are a primary reason for selection of this site: 9130 Asperulo-Fagetum beech forests
- Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site: 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (*important orchid sites)
- Annex II species present as a qualifying feature, but not a primary reason for site selection: 1083 Stag beetle

The SAC data form[8] also outlines the most important threats and pressures impacting the site, which include:

- I02 Problematic native species (both inside and outside);
- I01 Invasive non-native species (both inside and outside);
- K04 Interspecific floral relations (inside); and
- B02 Forest and plantation management and use (inside).

3.2.2.1 Conservation Objectives[9]

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change, the conservation objectives are to;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats and habitats of qualifying species,
- The structure and function (including typical species) of qualifying natural habitats,
- The structure and function of the habitats of qualifying species,
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely,
- The populations of qualifying species, and,
- The distribution of qualifying species within the site.

The Supplementary Advice on Conservation Objectives (SACOs) also presents attributes which are ecological characteristics or requirements of the designated species and habitats within a site. The listed attributes are considered to be those which best describe the site's ecological integrity and which if safeguarded will enable achievement of the Conservation Objectives. These attributes have a target which is either quantified or qualified depending on the available evidence. The SACOs for Chilterns Beechwoods SAC were last updated on 30th November 2018[10].

3.2.2.2 Potential Impact Pathways

Two potential pathways have been identified and are described below, which considers the threats / adverse impacts identified within the designated site citation.

1 The non-Annex I habitats within the Proposed Development Site may have a supporting function for the Annex I habitats within the SAC, for example, by supporting some of the same/typical species (such as, but not limited to, ox-eye

[8] JNCC STANDARD DATA FORM for sites within the 'UK national site network of European sites' SITE UK0012724 Chilterns Beechwoods last update December 2015, available at https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0012724.pdf

[9] Natural England European Site Conservation Objectives for Chilterns Beechwoods Special Area of Conservation Site Code: UK0012724 published 27 November 2018 (version 3) available at https://publications.naturalengland.org.uk/file/4961243408629760

[10] Natural England (2018) European Site Conservation Objectives: Supplementary advice on conserving and restoring site features Chiltern Beechwoods Special Area of Conservation (SAC) Site Code: UK0012724 Date of Publication: 30 November 2018 available at https://designatedsites.naturalengland.org.uk/TerrestrialAdvicePDFs/UK0012724.pdf

daisy and beech) and by providing connectivity between the SAC and the wider landscape.

Source: Construction

Pathway: Habitat loss (hedgerow removal/ reinstatement/ creation)

Receptor: beech forest (Annex 1 reference 9130) and semi-natural dry grasslands (Annex 1 reference 6210).

2 In addition, as the Proposed Development Site includes woodland and deadwood habitat it is possible that it could include a supporting population of the SAC population of stag beetle.

Source: construction

Pathway: loss or damage to potential stag beetle habitat that could be used by a separate but possibly linked population eg via occasional exchange of individuals.

Receptor: stag beetle (Annex II reference 1083).

Other pathways have been excluded, since:

- Based upon information from the Transport Statement & Construction Traffic Management Plan at Appendix 2.3 of the ES, all construction related traffic is forecast to use the M40 Junction 6, then the A40. According to JNCC guidance[11], road links associated with strategic 'trunk roads' (i.e. the Strategic Road Network (SRN)), such as the M40, are excluded from assessment. The portion of the A40 that would be used is more than 200m distant from both SACs (the IAQM screening distance).
- There is 2.1 km separation distance between the Proposed Development Site and the SAC;
- There are no hydrological links between the Proposed Development Site and the SAC;
- The proposed development will give rise to no additional illumination beyond the site boundary during construction/ decommissioning, and there is no additional lighting proposed during operation;
- Qualifying features of the SAC are not sensitive to noise; and
- The proposed development site supports none of the same habitats for which the SAC is designated.

Due to the two identified pathways, further screening consideration is given in section 3.3.

3.3 Likely Significant Effects

3.3.1 Aston Rowant SAC

3.3.1.1 For the project alone

The proposed development results in the permanent loss of 55m and temporary loss/ reinstatement (including translocation) of a 355 m of hedgerow, located more than 1 km from

[11] Chapman, C. & Kite, B. 2021. Guidance on Decision-Making Thresholds for Air Pollution. JNCC Report No. 696 (Main Report), JNCC, Peterborough, ISSN 0963-8091. Air Quality Consultants Ltd. 2021. Decision-Making Thresholds for Air Pollution. JNCC Report No. 696 (Technical Report), JNCC, Peterborough, ISSN 0963-8091. Available at https://hub.jncc.gov.uk/assets/6cce4f2e-e481-4ec2-b369-2b4026c88447

the SAC, which has links with many kilometres of hedgerow network. All hedgerows would be reinstated including with typical species and will again support typical species within a short time period. In addition, 3,377 m of new species rich native hedgerow are also proposed. This reinstatement and creation is driven by landscape requirements, and is not mitigation in respect of likely significant effect. There are no direct links between the hedgerows on site and the SAC as a result of the intervening road network which includes Salt Lane, Nethercote Lane, Lewknor High St and the B4009 (including slip roads to/ from the M40) all of which run broadly SW-NE, thereby repeatedly bisecting any potential direct links. As a result, and in combination with the separation distance, temporary hedgerow removal/ reinstatement including typical species at the Proposed Development Site will result in no lasting effect, and would not have implications for the SACs conservation objectives. Likely significant effect can therefore be ruled out.

3.3.1.2 For the project in combination with other projects and plans

There are no effects which have implications for the SAC's conservation objectives and no potential for LSE as a result of the project alone. Therefore, there can be no in-combination effects with other projects or plans.

3.3.2 Chilterns Beechwoods SAC

3.3.2.1 For the project alone

As mentioned above, the Proposed Development results in the permanent loss of 55m and temporary loss/ reinstatement (including translocation) of 355 m of hedgerow, located more than 1 km from the SAC, which has links with many kilometres of hedgerow network. All hedgerows would be reinstated including with typical species and will again support typical species within a short time period. In addition, 3,377 m of new species rich native hedgerow are also proposed. This reinstatement and creation is driven by landscape requirements, and is not mitigation in respect of likely significant effect. There are no direct links between the hedgerows on site and the SAC as a result of the intervening road network which includes Salt Lane, Nethercote Lane, Lewknor High St and the B4009 (including slip roads to/ from the M40) all of which run broadly SW-NE, thereby repeatedly bisecting any potential direct links. As a result, and in combination with the separation distance, temporary hedgerow removal/ reinstatement including typical species at the Proposed Development Site will result in no lasting effect, and would not have implications for the SACs conservation objectives.

One further connection between the Proposed Development and Chilterns Beechwoods SAC has been identified: construction could lead to loss or damage to potential stag beetle habitat.

However, the proposed development includes retention of all potential stag beetle habitat ie all woodland and all trees with deadwood features. The single tree (referred to as T18 within the Arboricultural Report at **Appendix 2.5** of the ES) that may require felling as part of a visibility splay is a healthy sycamore, with no deadwood features. On that basis, there is no scope for loss or damage to potential stag beetle habitat. The proposal also includes woodland planting (primarily for landscape purposes), and therefore likely significant effects on qualifying features of the SAC can be excluded.

3.3.2.2 For the project in combination with other projects and plans

There are no effects which have implications for the SAC's conservation objectives and no potential for LSE as a result of the project alone. Therefore, there can be no in-combination effects with other projects or plans.

3.4 Stage one: Conclusions and recommendations

It is demonstrated, beyond reasonable scientific doubt, that the project would not, alone or in combination with any other Project or Plan, undermine the conservation objectives of any listed or proposed European or Ramsar site, or compensation site, and therefore likely significant effects on any such site can be excluded. Therefore, there is no requirement to progress to Stage 2, Appropriate Assessment and there will not be an adverse effect on the integrity of any listed or proposed European or Ramsar site, without mitigation.

Figure

460000 465000 470000 475000 480000 485000

210000 205000 200000 195000

425.001363.00001.0008.0 Statutory Designations

N

LEGEND

- Site Boundary
- Site Boundary 10 km Buffer
- Special Area of Conservation (SAC)

Chilterns Beechwoods SAC

Chilterns Beechwoods SAC

Aston Rowant SAC

Chilterns Beechwoods SAC

Little Wittenham SAC

SOUTH OXFORDSHIRE DISTRICT

0 2.5 5

Kilometres

solar2

SLR

POSTCOMBE AND LEWKNOR SOLAR FARM

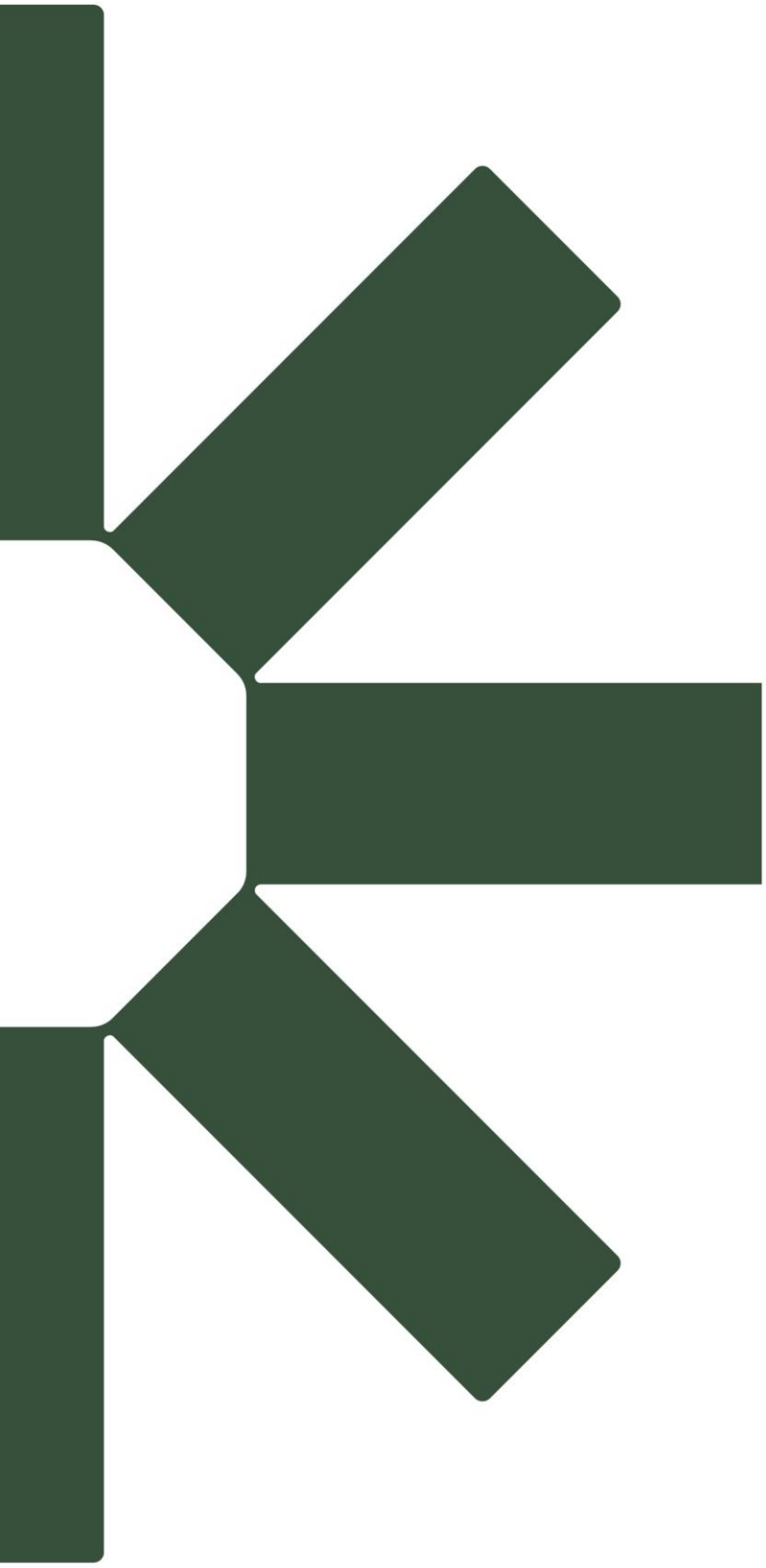
HABITATS REGULATIONS ASSESSMENT

EUROPEAN SITES

FIGURE 1

Scale 1:90,000 @ A3

Date MAY 2025



Making Sustainability Happen