

Allington Lane Solar Farm Project

Report to inform a HABITAT REGULATIONS ASSESSMENT

Eastleigh Borough Council



Document Information		
Document title:	<i>Allington Lane Solar Farm Project - Habitat Regulations Assessment (HRA) - V1.0</i>	
Date of issue:	<i>05/09/2023</i>	
Status:	Approved for Submission	
Prepared by:	<i>Jake Walker, Ecology & Environmental Consultant.</i>	<i>04/09/2023</i>
Checked by:	<i>Jack Bell, Head of Ecology & Environmental Compliance.</i>	<i>04/09/2023</i>

Version	Date	Purpose of amendment
01	<i>05/09/2023</i>	Original document

Executive Summary

This document presents the results of the screening process to determine whether the proposal – an embedded solar development, consisting of a c. 30MW solar farm with associated infrastructure at Land off Allington Lane - will have any Likely Significant Effect's on any site listed in the National Site Network.

Although this HRA has been prepared to help the Council (Eastleigh Borough Council) discharge its duties under the Habitat Regulations, the Council as the Competent Authority, must decide whether to accept this report or otherwise.

Site/s included in the assessment:

- River Itchen SAC

This report concludes, after a full assessment in line with HRA principals that the proposal will not have any Likely Significant Effects alone, or in combination with, other assessments.

Table of contents

Executive Summary.....	2
Table of contents.....	3
1. Introduction	4
2. Methodology	5
2.1. Habitat Regulations Assessment process	5
3. Screening Assessment	6
3.1. Screening.....	6
3.2. Designated sites	8
3.3. Potential impacts	14
3.4. Pathways for impacts.....	15
3.5. Project details.....	15
3.6. Previous consultation	17
4. Appropriate Assessment.....	19
4.1. Assessment of effects	19
5. Assessment of impacts on SAC	24
5.1. Functionally linked land.....	24
5.2. Habitat loss and disturbance.....	24
5.3. Displacement through disturbance	24
6. In-combination assessment	25
6.1. Discussion	26
7. Conclusions	27

1. Introduction

1.1.1. Overview

In August 2023, Locogen were instructed by *Eastleigh Borough Council* ('the Applicant') to prepare a report to inform a Habitat Regulations Assessment (HRA) for the solar development at land off Allington Lane, over 2km southeast of Eastleigh, Hampshire ('the proposal').

Locogen are acting as the Agent on behalf of the site owner and project developer, Eastleigh Borough Council.

Eastleigh Borough Council will assume the role of the Competent Authority in determining the impacts of the proposed development. For note, this project is not directly connected too, or necessary to the management of any designation in the National Site Network.

This document presents the results of the screening process to determine whether the proposal will have any Likely Significant Effect's (LSE) on any site in the *National Site Network*. Although this HRA has been prepared to help the Council (Eastleigh Borough Council) discharge its duties under the Habitat Regulations, the Council is the Competent Authority, and it must decide whether to accept this report or otherwise – this should be confirmed in due course.

Following the United Kingdom's exit from the European Union (January 2021), *The Conservation of Habitats and Species (amendment, EU Exit) Regulations 2019 (2019 regulations)* came into force to ensure that the *Conservation of Habitats and Species Regulations 2017 - as amended (2017 regulations)* remained efficiently in operation. Most changes involved the transferring of functions from the European Commission to the appropriate authorities in England and Wales, and the creation of a National Site Network. All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant.

Under the 2019 Regulations, a HRA screening opinion must be undertaken to determine if a project is likely to have a significant effect on sites designated within the National Site Network; Special Areas of Conservation (SAC) or Special Protection Areas (SPA) or international RAMSAR site's designated for environmental conservation purposes, and hence whether, or not, an Appropriate Assessment is required.

This document will assess both the direct and in-combination effects of the proposal on the National Site Network.

This document contains the results of *Stage 1 - Screening*, in relation to Site surveys for the proposed development and their results. *Stage 2 - Appropriate Assessment* will aim to conclude whether there is likely to be any effects on the integrity of the National Site Network.

Stage 3 - 4 are only required if the *Appropriate Assessment (Stage 2)* concludes that there is likely to be an adverse effect.

1.1.2. Other relevant reports

Further to the HRA, assessment for ecological, and other environment impacts have been informed by prior ecological assessments of the site and on-going survey effort. Finalised ecological assessments will be submitted as part of the planning application.

2. Methodology

2.1. Habitat Regulations Assessment process

Stage 1 - Screening:

The first stage of the Habitat Regulations Assessment (HRA) process is testing whether a plan '*is likely to have a significant effect*' (LSE) on a designated site. The process identifies the likely impacts of a project upon the *National Site Network*, either alone or in-combination with other plans and projects and it considers whether the impacts are likely to be significant.

Throughout the whole assessment 'precautionary principle' must be applied.

Assessment of the significance of effects is undertaken by a review of the policies and sites in relation to designated nature conservation features and whether any effect would compromise the favourable condition of that site in any adverse way.

If it can be objectively concluded that there is not likely to be significant effects, no further assessment is necessary, and permission may be granted. If significant effects cannot be screened out, it is necessary to undertake a full appropriate assessment.

Stage 2 - Appropriate Assessment:

This stage considers the impacts of the project on the integrity of designated site/s both alone and in combination with other plans and projects, in relation to the site/s conservation objectives. If the assessment determines that there is a likelihood of any adverse impact, plans must be drawn up to avoid or mitigate the effects.

Development consent can then ONLY be given if stages three and four are completed (see below).

Onwards, Stage 3 & 4:

Under stage three and four, it is necessary to assess if there are any alternative solutions and whether there are any imperative reasons of overriding public interest for the proposal. If these tests are met, authorisation may be granted subject to compensation measures being secured.

3. Screening Assessment

3.1. Screening

Sites within 2km of the proposal have been identified, together with detail of the:

- Conservation objectives and characteristics of each site, including vulnerabilities and threats.
- Individual and cumulative impacts of plans, policies, and proposals.
- Connectivity of the proposal with the site.

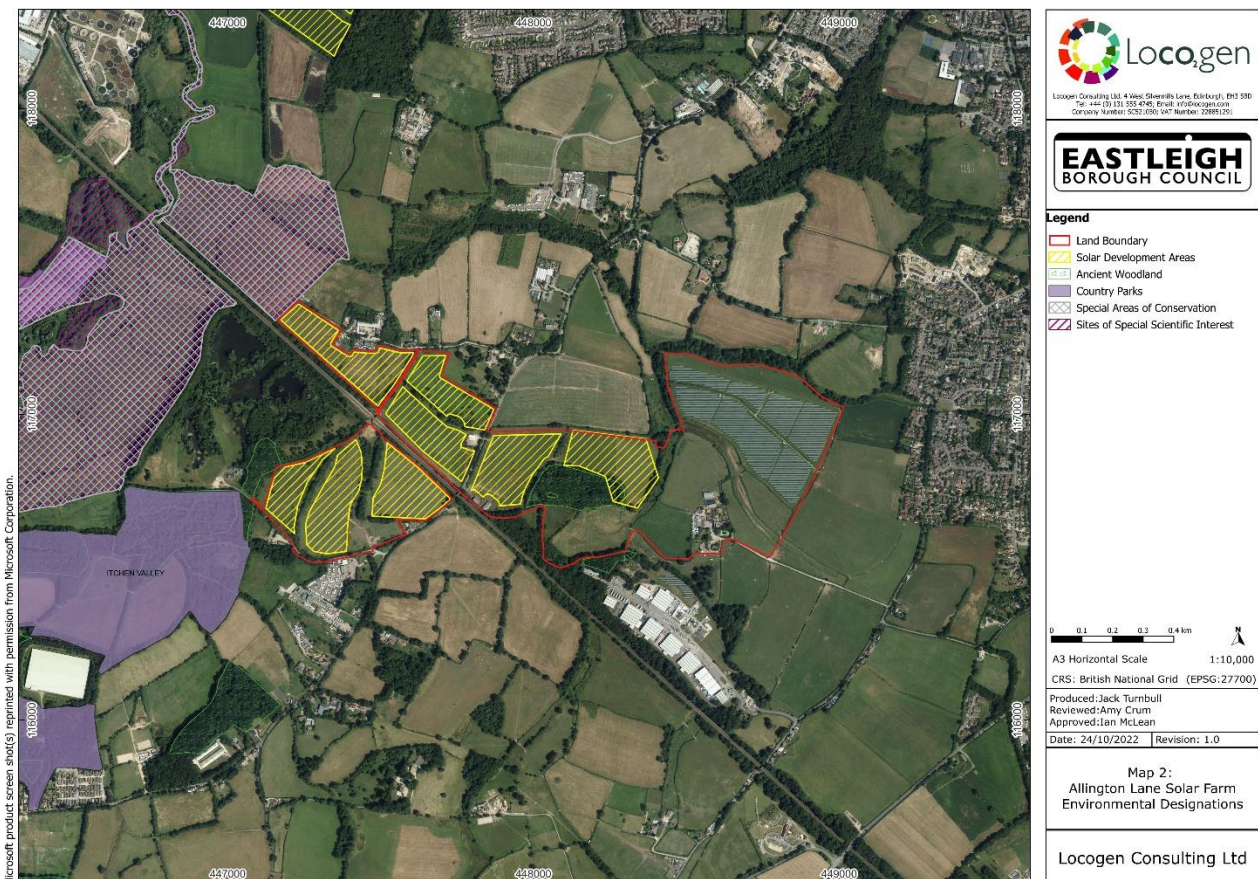


Figure 1: Location of National Site Network sites in relation to initial proposal



Figure 2: Proposal red line boundary.

3.2. Designated sites

The Designated Sites are set out in the table below.

Table 1: Designated Sites

Site	Designation	Distance from proposed development
<i>River Itchen</i>	<i>Special Area of Conservation (SAC)</i>	440m, northwest of site

Sites beyond 2km have been screened out due to the scale and physical nature of the proposal. The River Itchen SAC will be taken forward for the screening assessment; the proposal meets the impact criteria on this site "*Solar Schemes with footprint >0.5 ha*" (Natural England, 2023).

Table 2: National Site Network Covered in Screening (features and vulnerability)

Site Name	Location	Area (ha)	Qualifying Features	Conservation Objectives	Vulnerability of Site
River Itchen SAC	440m Northwest	309.26	Qualifying habitats: The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I: • Watercourses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche Batrachion</i> vegetation. (Rivers with floating vegetation often dominated by watercress). Qualifying species: The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following species listed in Annex II: • Atlantic salmon <i>Salmo salar</i> • Brook lamprey <i>Lampetra planeri</i> • Bullhead <i>Cottus gobio</i> • Otter <i>Lutra lutra</i> • Southern damselfly <i>Coenagrion mercuriale</i> • White-clawed (or Atlantic stream) crayfish <i>Austropotamobius pallipes</i>	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.	• Water pollution; • Invasive species; • Natural changes to site conditions; • Public access / disturbance; • Direct land take from development, and; • Air pollution: impact of atmospheric nitrogen deposition.

3.3. Potential impacts

To make an assessment of whether any *LSE* will impact upon the National Site Network, as a result of the proposed development, or in combination with other developments / plans (both proposed and operational) it is necessary to identify potential impacts that could cause an LSE on a designated site.

The following potential impacts have been identified for assessment (full assessment of effects presented in Section 4 of this report)

Air Quality

- Changes in the composition of air quality because of the proposed development or an increase in traffic near the vicinity of a designated site that could damage the citation features of the designated area.

Water Quality

- Changes in the quality of water composition in the watershed as a result of the proposed development in, or near a designated site and increased pollution that could alter the quality of water entering designated areas having negative effects on species and / or vegetation.

Hydrology

- Changes in hydrological features due to heat, surface run off, loss of permeable surfaces etc. resulting in possible flooding or drought in a designated area; that could cause damage on vegetation or species within that vicinity.

Water Supply

- Changes in the levels of water demand as a result of the proposed development i.e. an increase in the level of water abstraction during construction, potentially effecting hydrologically linked designated sites.

Habitats and Species

- Disturbance to both species and habitats as a result of the proposed development, including halting travelling species (ecological isolation / fragmentation) if the development restricts migration to designated sites and / or that impacts on food resource or breeding grounds.

Recreational

- Disturbance to habitats and / or species as a result of the proposed development, if it significantly increases visitor footfall to the area, brings associated added pollution and possible contamination of sites.

Urban effects

- Unauthorised access to designated sites, predation from cats, litter, fire and changes in lighting & noise.

3.4. Pathways for impacts

To establish if the proposed development could provide a stimulus for any LSE on a designated site, there is a need to ascertain possible pathways where a potential impact could be transferred to a designated area having a negative effect.

Where no pathways exist between the development and a designated area, the potential impacts can be ruled out as they will not have a likely significant effect on the site.

Wind

An assessment of whether potential impacts outlined above, specifically air quality related can reach the designated site.

River / Hydrological Network

Potential hydrological and water quality effects will be assessed, due to possible pathways through the river network which could transfer effects onto the national site network.

Water Supply

An assessment of connectivity through water supply.

Roads and Footpath Network

Distance to designated sites in relation to the road networks and the feasibility of air, noise, and light pollution from increased traffic on roads, due to an increased population or better accessibility or volume of people within the surrounding area.

Species Movement

Distance between the proposed development and the National Site Network and the location of important habitats within the impact zone; functional land, Sites of Special Scientific Interest (SSSI), Country parks and Local Nature Reserves (LNR).

3.5. Project details

The proposal consists of a new embedded solar energy development, consisting of c. 30MW solar farm with associated infrastructure including; tracks, cabling and foundation work. Preliminary proposals estimate that the solar farm will span approximately 22ha.

The proposal is located on land unused agricultural land adjacent to Allington Lane. The site is located approximately 2km southeast of Eastleigh, Hampshire. Planning permission is sought for a period of approximately 35 – 40 years that reflects the expected operational life of the installed technology.

Traffic movements associated with the construction of the proposal will be assessed as part of the Planning Access & Design Statement (PDAS). It is however expected that due to the overall scale of the project the numbers of trips generated are not considered to be significant.

When the solar farm reach end of their operational life (assumed 35 / 40 years), and if no replacement solar array is consented, the proposed solar farm will be decommissioned, dismantled and removed leaving no visible trace of the development. The site will be restored to its current use and character. The solar components will be removed after being dismantled and the foundations (relevant to substations and ancillary equipment only) will be broken down to ground level.

3.5.1. Land take

The total footprint of the proposed development has not yet been finalised (at time of writing).

The overall temporary land take, post construction is considered to be minimal and unlikely to cause any significant effects on habitats or species. No priority habitats or those listed in the SAC citation are within the proposed solar farm footprint.

3.6. Previous consultation

Natural England have been consulted on the application by Eastleigh Borough Council, the response received on 04 August 2023 is detailed below.

Environmental Impact Assessment Screening consultation: EIA Screening Request for Development of a Solar Photovoltaic Farm and battery storage c34MWp DC on unused agricultural land off Allington Lane for a period of 30 – 35 years.

Location: Land West and East of Allington Lane

Thank you for your consultation on the above dated 31 July 2023 which was received by Natural England on the same date.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

It is Natural England's advice, on the basis of the material supplied with the consultation, that there are potential likely significant effects on statutorily designated nature conservation sites or landscapes and further assessment is required.

Schedule 3(2) of the Town & Country Planning (Environmental Impact Assessment) Regulations 2017 requires consideration of the selection criteria for Schedule 2 EIA development and identification of 'environmental sensitivity'.

The proposed development is located within/partly within or has the potential for adverse effects on the following designated nature conservation sites or designated landscapes:

- River Itchen Site of Special Scientific Interest (SSSI)
- River Itchen Special Area of Conservation (SAC)
- South Downs National Park

Figure 2: Summary of Natural England consultation response

4. Appropriate Assessment

4.1. Assessment of effects

Table 3: Assessment of impacts on qualifying features – River Itchen SAC

Humber Estuary SAC:		
Qualifying Feature	Potential Impact	Site Assessment
Annex I habitats: Water courses of plain to montane levels with the <i>Ranunculus fluitans</i> and <i>Callitriche-Batrachion</i> vegetation (Rivers with floating vegetation often dominated by watercress)	- Direct land take - Habitat / community simplification - Physical damage	Construction, Operation, Decommissioning: The project is completely outside of SAC habitats – therefore there are no perceived effects on any level
		No effects
	Changes in surface water flooding / hydrology	Construction, Operation, Decommissioning: Minor connectivity via existing field drainage. However, the proposal will not alter/affect the existing drainage system. The uptake of sealed surface will be minor, and the proposed access track will be permeable and as such should not alter the current hydrology of the site.
		No effects

	Air pollution	Construction and Decommissioning: Construction activities do not include significant levels of dust or NOx generating activities. Construction and decommissioning traffic for the development are not considered to be significant. Operation: Traffic for the operational solar farm, will be insignificant– therefore the effects of operational traffic are negligible over the lifespan of the development.
		<u>No likely significant effects</u>
	- Water pollution - Changes in water chemistry	Construction: Construction impacts are isolated to a small footprint and dust generating impacts are related to the construction of new access tracks, installation of solar pilings and cable laying. There is minor connectivity between the site and the SAC via existing drain systems. These are subject to seasonal variations in flow and water levels, and do not hold water year-round, providing the only hydrological connection between the site and more significant watercourses for ~620m.
		<u>No likely significant effects</u>
		Operation: No perceived effects
		<u>No effect</u>

		Decommissioning: As per construction.
		<u>No likely significant effects</u>
	Urban edge effects	Operational: Although the proposal is situated in proximity to urban settlements, there are no likely increases in public access (both formally & informally) due to the proposal, this is due to the integral nature of the project. Installation of security fencing along the sites boundaries will result in a reduction of footfall across the site. There are no direct or indirect effects that would cause people to utilise designated areas more due to the proposal.
Annex II species present as a qualifying feature. - Atlantic salmon <i>Salmo salar</i> - Brook lamprey <i>Lampetra planeri</i> - Bullhead <i>Cottus gobio</i>	- Water pollution - Changed water chemistry	Construction, Operation and Decommissioning: No suitable direct hydrological habitat/linkage to the River Itchen.
	Species disturbance	Construction, Operation and Decommissioning: The physical distance between the proposal and the River Itchen will provided project integral mitigation against any noise and any physical disturbance that could affect these species. Once operational, physical and noise disturbance will be negligible.
		<u>No effect</u>

Otter <i>Lutra lutra</i>	Disturbance	<u>Construction, Operation and Decommissioning:</u> Habitats of principle importance for otter will be restricted to the River Itchen and directly adjacent habitats. Barriers to dispersal between the proposal site and the SAC will likely preclude use and the physical distance between the site and River Itchen will likely ensure there are no direct impacts to the species.
	- Habitat loss - Physical damage	The proposal will have no impacts on the habitats used by otters. The physical distance between the proposal and the utilised habitat categories will ensure there are no impacts to the species.
	- Water pollution - Turbidity	Habitats of principle importance for otter (River Itchen) are sufficiently separated from the proposal. There is minor connectivity between the SAC and the proposal site via existing drainage systems however, these do not hold water year-round and provide the only hydrological connection between the site and watercourses for ~620m. Subsequently, physical distance will provide integral mitigation.
		<u>No effect</u>
Southern damselfly <i>Coenagrion mercurial</i>	- Water pollution - Changed water chemistry	<u>Construction, Operation and Decommissioning:</u> Habitats of principle importance for Southern damselfly (River Itchen) are separated from the proposal by natural and anthropogenic barriers.
	Habitat loss	Agricultural drains on-site will not provide suitable conditions (permanent flow) for supporting southern damselfly populations.

		<u>No effect</u>
White-clawed (or Atlantic stream) crayfish <i>Austropotamobius pallipes</i>	• Water pollution • Changed water chemistry	Construction, Operation and Decommissioning: There is connectivity via existing drain systems to the River Itchen which supports populations of white-clawed crayfish. However, agricultural field drains on and surrounding the site will likely not offer suitable conditions for habitation. Subsequently, there shall be no impact to the species.
		<u>No effect</u>

5. Assessment of impacts on SAC

5.1. Functionally linked land

5.2. Habitat loss and disturbance

5.2.1. Direct loss

Due to the small overall footprint of the development the actual loss of semi-natural habitat will be minimal through the construction process. The majority of the vegetation present on site will be maintained under the panel area during the operation of the development. As such, habitat loss will be of low magnitude as the infrastructure occupies a small footprint in comparison with other development types (urban development).

Habitat loss will be limited to an access track and minor areas of pile drive supports.

The overall impact from habitat loss is considered to be negligible.

5.2.2. Species disturbance

Industrial and residential infrastructure is already in place around the proposed development site, as such the area already tolerates a level of disturbance. The methods of construction mean noise impacts will be minimal. There may be short term effects of disturbance on species utilising the agricultural fields during construction, however this will likely be limited to an anticipated 50m buffer of infrastructure and not offer any additional adverse impacts.

The overall impact of construction through species disturbance is considered to be minimal, restricted to non-qualifying species of any designation in the Zone of Influence. Citation species of the River Itchen SAC will not be affected by the proposal.

5.3. Displacement through disturbance

Displacement through disturbance is effectively loss of viable habitat for species caused by an action, directly or indirectly, forcing the species from effectively utilising an area. Due to scales of overall population displacement, it can often be of higher magnitude / severity than direct habitat loss, in terms of effects on populations.

The site does offer sub-optimal otter habitat, which could be used sporadically as part of a wider range. However, due to the physical distance from principal habitats, sub-optimal condition and barriers to dispersal, the risk of the otter being impacted from the development was scoped out during the preliminary stage of assessments.

Therefore, due to the nature of proposed development, site location and relatively short construction phase the risk of displacement through disturbance on qualifying species is considered negligible.

6. In-combination assessment

Table 10: Review: Relevant Projects

Plan / Project	Purpose / Context	Timings (anticipated and during construction)	HRA carried out	Effects on National Site Network	In-combination
Solar Farms within 10km:					
<i>F/12/71539 - Chalcroft Solar Park Limited</i>	Solar photovoltaic panel farm (7.3MW) and associated works including 4no. inverter housings, 1no. point of connection facility, access tracks, 2m high security fencing, CCTV cameras and diversion of existing public right of way.	Implemented and operational.	N/A	No effect identified on National Site Network.	N/A
<i>F/14/75012 - Netley Landfill Site</i>	Construction of solar array farm with associated infrastructure (ancillary equipment includes invertors, transformers, and substations), access tracks and security fencing.	Implemented and operational.	No	5km from River Itchen SAC – no identified pathways during ecological assessment.	No

6.1. Discussion

6.1.1. Effects – Alone

The proposal has been assessed against all the vulnerabilities of the qualifying habitats, features and species of the River Itchen SAC. The effects on which are concluded below:

River Itchen SAC:

Due to the low impact nature of the development, natural and anthropogenic barriers between the site and SAC and minor existing hydrological connectivity through field drains, negative impacts on the SAC are considered highly unlikely. Any potential impact during the construction phase of the development will be temporary and can be mitigated for following standard working practices.

No likely significant effect identified due to this proposal (alone)

6.1.2. In combination

Two existing solar farms were identified within 10km of the site. Chalcroft Solar Park is the closest and is sited approximately 1km northeast of the site. Neither of the existing sites are linked to the proposal and no in combination impacts, with either of the existing solar developments, will occur due to the consent of the proposal.

No likely significant effects due the proposal (in-combination)

7. Conclusions

The assessment of the proposal and potential impacts to the River Itchen SAC has determined that due to development type, surrounding landscape and only minor existing hydrological connectivity, through field drains that will not be impacted by the proposal, the integrity of the SAC will not be affected by the proposed development. As such, the project may be authorised.