Habitats Regulations Assessment

HRA drafting date:	05/10/22
HRA completion date:	05/10/22
Project reference:	Application No. HCC/2022/0071
Site address:	Land off Chickenhall Lane, Eastleigh, Hampshire
Project description:	Development of an Energy Recovery Facility and Associated Infrastructure
Client project manager:	The Development of a Material Recycling Facility and Associated Infrastructure
Please note that all references in this assessment to the 'Habitats Regulations' refer to The Conservation of Habitats and Species Regulations 2017 (as amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019).	

Stage 1 - details of the plan or project	
European site(s) potentially impacted by the project:	There is one European site[1] within the likely zone of impact of the project: • River Itchen Special Area of Conservation (SAC) (UK0012599).
Is the project directly connected with or necessary to the management of the site (if yes, Applicant should have provided details)?	No. The development is for a materials recycling facility, which is neither connected to nor necessary to the management of any European sites.
Are there any other projects or plans that together with the planning application being assessed could affect the site(s) (Applicant to provide details to allow an 'in combination' effect to be assessed)?	• Southampton to London Pipeline • Eastleigh Borough Local Plan (2016-2036) • Habitats Regulations Assessment for the Eastleigh Borough Local Plan 2016-2036

[1] Following the changes made to the Conservation of Habitats and Species Regulations 2017 by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, SACs and SPAs in the UK no longer form part of the EU's Natura 2000 ecological network and now form part of a UK national site network. In this document they are still referred to as European sites.

Stage 2 - HRA screening assessment

Screening under Regulation 63(1)(a) of the Habitats Regulations – The Applicant to provide evidence so that a judgement can be made as to whether there could be any potential significant impacts of the development on the integrity of the SPA/SAC/Ramsar/pSPA.

Qualifying features (as published by JNCC[2])

River Itchen SAC

Annex I habitats that are a primary reason for selection of this site:

- H3260 Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation

Annex II species that are a primary reason for selection of this site:

- S1044 Southern Damselfly *Coenagrion mercuriale*
- S1163 Bullhead *Cottus gobio*

Annex II species present as a qualifying feature, but not a primary reason for site selection

- S1092 White-clawed (or Atlantic Stream) Crayfish *Austropotamobius pallipes*
- S1096 Brook Lamprey *Lampetra planeri*
- S1106 Atlantic Salmon *Salmo salar*
- S1355 Otter *Lutra lutra*

Conservation objectives (as published by Natural England[3])

River Itchen SAC

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.

[2] https://sac.jncc.gov.uk/site/UK0012599 [Accessed: 05/10/22]
[3] http://publications.naturalengland.org.uk/publication/5130124110331904 [Accessed: 05/10/22]

Threats, pressures and activities with impacts on the sites (as published by Natural England[4])

River Itchen SAC

The following pressures have been identified as potential impacts arising from the proposed development and have been screened into this assessment:

- Water pollution;
- Siltation;
- Hydrological changes;
- Invasive species.

The applicant's HRA (Wardell Armstrong, July 2022) includes noise pollution as a potential pressure/impact pathway, although this is not included within the River Itchen Site Improvement Plan table of Pressures and Threats. However, to maintain consistency with the submitted HRA this potential pressure/impact pathway is also included here.

- Noise

Screening of likely significant effect – proposed development alone

Given the close proximity of the site to the River Itchen SAC (0.2km), the key potential impacts are from changes to hydrology, from siltation and from water pollution. The proposed development will entail substantial construction works, resulting in large-scale soil movements and the use of heavy plant/machinery over extended periods. Post-construction, the site will contain large areas of impermeable surfaces. The proposed drainage system will in part also result in direct discharges into the River Itchen.

Water pollution

A range of activities have been highlighted as potentially resulting in impacts to water quality: soil stripping, vegetation removal and soil compaction, use of machinery on site, earthworks, construction of impermeable surfaces and construction of subsurface infrastructure could each result in the introduction of sediments to the River Itchen. Construction works raise the potential for the introduction of inorganic pollutants (fuels, oils, lubricants) to the water environment. In addition, parts of the proposed drainage system will, following recent modification, enter the existing surface water sewer and discharge into the River Itchen.

Siltation

The construction phase and the land-use changes resulting from the proposed development have the potential to result in increased sediment mobilisation (e.g. from exposed soils, new impermeable surfaces). The modified drainage system will ultimately discharge into the Itchen, thereby creating a direct potential impact pathway for mobilised sediments, potentially leading to siltation of sensitive habitats within the SAC. In their consultation response dated April 2022 Natural England refer to the risk of impacts to Atlantic Salmon populations within the SAC (and the underlying SSSI compartment 108) from increased sedimentation of river substrates. NE specifically refer to the potential for increased suspended sediments entering the SAC (and SSSI) via poorly maintained SuDS features.

[4] http://publications.naturalengland.org.uk/publication/5404054607888384 [Accessed: 05/10/22]

Hydrological changes

The proposed hybrid drainage system will entail an infiltration basin draining hard surface runoff in the north of the site: it is proposed that this water will percolate to ground. In the southern portion of the site surface waters will enter an existing surface water sewer, discharging directly into the SAC. This has potential to result in changes to the volume of water entering the SAC.

Invasive species

No specific pressures from invasive non-native species (INNS) have been identified within the submitted ecological information, and overall the potential risk is generally low. However, aquatic habitats are particularly susceptible to impacts from introduced species and the effects of such may be widespread due to the extensive and interconnected nature of watercourses and associated wetland habitats. Based on the proposed works the greatest risk is from the accidental introduction and spread of invasive non-native plant species such as Himalayan Balsam *Impatiens glandulifera*. Plant material such as seeds or living tissue can be introduced to a new site via vehicles or visitors. The introduction/spread of INNS has the potential to result in ecological changes affecting the qualifying habitats and species of the SAC.

Noise

The potential impacts from noise, especially during the construction period, could result in disturbance of SAC qualifying species such as Otter. Although no direct evidence of Otter presence has been noted within surveyed areas, it is highly likely that this species will occur regularly within the Itchen. Novel or loud percussive noises could result in disturbance.

In addition, construction activities could potentially result in vibration that may affect SAC qualifying fish species within the SAC.

Screening of likely significant effect – in combination with other plans and projects

The applicant has provided an assessment of cumulative impacts of the proposed development with the Southampton to London Pipeline Project. This concludes that none of the potential impacts identified for the pipeline project are likely to act in combination with the proposed development. The HRA submitted for the Pipeline project does not include the River Itchen SAC as a potential sensitive receptor. It is concluded that the Pipeline project can be screened-out at this stage, primarily due to the distance between the proposed scheme and the SAC.

The submitted EIA includes the following three planning applications within the assessment of cumulative impacts:

Eastleigh Borough Council Planning Ref: O/14/75735 - Outline Consent for 950 dwellings, primary school, secondary school, village centre and local centre to the west of Horton Heath, c.2km to the east of the Site (Chalcroft Farm and land west of Horton Heath Burnetts Lane Eastleigh Southampton SO30 2HU.

Information submitted with this application was assessed by the competent authority (Eastleigh Borough Council) as unlikely to lead to a likely significant effect on the interest features of the River Itchen SAC. Potential impact pathways identified were: impacts to water quality, impacts from INNS, impacts to otters, and changes to hydrology. Permission was granted, with avoidance and mitigation measures secured by condition.

Planning Ref: O/16/79354 - Outline Consent for up to 450 dwellings on land adjacent to above (Fir Tree Farm and Victoria Farmhouse Firtree Lane Horton Heath Eastleigh SO50 7DF). 2km east of the Site.

Impacts assessed within the ecological submissions for this proposal were water quality, hydrological changes and INNS. Permission was granted by the competent authority (Eastleigh Borough Council) and avoidance and mitigation measures secured by condition.

Planning Ref: F/17/81397 - Full Consent for Open Storage and Ancillary offices, storage buildings and parking (Chickenhall Lane, Eastleigh Central, Eastleigh, SO50 6RQ). Adjacent to the Site.

The submitted HRA for this proposal (EAD Ecology, September 2017) concluded that impacts to the River Itchen SAC were unlikely and that any potential impacts could be addressed through the submission of a Construction Environment Management Plan (CEMP). This view was accepted by Natural England and the District Ecologist. Permission was granted, with the CEMP secured by condition.

Would the proposal lead to a likely significant effect on a European site?

Stage 1 of this assessment has identified that the project **could potentially have a likely significant effect** on the River Itchen SAC through the following impact pathways:

- Water pollution;
- Siltation;
- Hydrological changes;
- Invasive species;
- Noise.

Therefore, further assessment (the Appropriate Assessment) is needed to determine whether the project would adversely affect the integrity of the designated site. This is set out in the following section.

Stage 3 - Appropriate Assessment

Appropriate Assessment under Regulation 63(1) - if there are any potential significant impacts, the applicant must provide evidence showing avoidance and/or mitigation measures to allow an Assessment to be made. The Applicant must also provide details which demonstrate any long-term management, maintenance and funding of any solution.

Assessment scope

This section considers effects on the integrity of the River Itchen SAC from water pollution, siltation, hydrological changes, invasive species and noise.

Water Pollution, Siltation and Hydrological Changes

As detailed in the submitted HRA, the laying and installation of drainage (including swales and infiltration basins) would be undertaken primarily in the early phases of the construction. The completed drainage works would assist with preventing any pollutants from entering the groundwater and reaching the SAC during construction works. In addition, the following measures will be implemented:

- Dedicated refuelling areas and bunded chemical and oil storage areas within the site compound.

A Construction Environment Management Plan (CEMP) will be submitted and will include measures that accord with industry best practice in relation to pollution prevention:

- Environment Agency. Pollution Prevention Guidelines 1: General Guide to the Prevention of Pollution (PPG1);
- Environment Agency. Pollution Prevention Guidelines 2: Above Ground Oil Storage Tanks (PPG2);
- Environment Agency. Pollution Prevention Guidelines 6: Working at Construction and Demolition Sites (PPG6);
- Environment Agency. Pollution Prevention Guidelines 7: Refuelling Facilities (PPG7);
- Environment Agency. Pollution Prevention Guidelines 8: Storage and Disposal of Used Oils (PPG8);
- Environment Agency. Pollution Prevention Guidelines 21: Pollution Incident Response Planning (PPG21);
- CIRIA. Control of water pollution from construction sites C532 (2001); and - CIRIA. Environmental Good Practice on Site C650 (2005).
- Plant will be well maintained to limit leakage from engines or hydraulic systems.
- Spill kits will be carried to contain any accidental releases.
- Refuelling will be undertaken in designated areas where any spills can be contained.
- Pumps and other similar equipment will be placed on drip trays with refuelling undertaken following strict procedures for spill control.
- Chemicals and other construction materials will be stored and contained in safe areas.
- Maintenance protocol to ensure that sediment control measures, drains and potholes are regularly inspected, cleared, infilled and/or repaired.
- The preparation of pollution incident response plans, identifying the type and location of onsite resources (spill kits, absorbent materials, oil booms etc.) available for the control of accidental releases of pollution and other environmental incidents. These resources will be available to contractors at all times of operation.

The proposed drainage system will comprise a hybrid system, containing a combination of ground infiltration and attenuated discharge to an existing surface water sewer. Surface water will enter a SuDS network. The proposed treatment sequence includes swales, basins and proprietary systems that will provide treatment, ensuring the removal of potential pollutants/sediments before entering the existing discharge sewer. Trapped gullies and catchpit manholes will also provide additional treatment for surface water and minimise the risk of contaminants/sediments entering downstream receptors.

Hardstanding in the north of the Site will drain to an infiltration basin. Infiltration rates in the vicinity of this basin are good and no shallow groundwater was encountered in this location. As such, surface water from this area would infiltrate to ground and would not discharge to the River Itchen. Surface runoff to the south will be directed to the surface water sewer via the SuDS. Discharge to the surface water sewer will be restricted to greenfield runoff rates (QBAR). As such, there will be no increase in the volume of runoff from the Site that could adversely affect the River Itchen SAC.

It is concluded that through the implementation of these measures the potential for impacts from water quality, siltation and hydrological changes will be avoided. No impacts to European site integrity are expected.

Invasive Species

No evidence of INNS has been noted within the site and therefore the risk of spread from indigenous sources is considered negligible. In order to avoid the potential for INNS to be transported into the site it is recommended that the CEMP includes details of biosecurity protocols. With the submission of the CEMP, and the implementation of biosecurity protocols it is considered that potential impacts to European site integrity can be avoided.

Noise

The submitted noise assessment provides estimates for noise levels during construction at the nearest Noise Sensitive Receptor (NSR), Chickenhall Cottages, which is a residential dwelling located 35m to the north of the site entrance and approximately 170m north of the proposed MRF building. The assessment predicts that existing noise levels of 55 decibels (dB) will increase by up to +19dB when construction operations are at their closest point to the property i.e. at 35m, although for activities undertaken 170m away from the property there is no increase in existing noise levels.

The assessment also predicts that at another NSR, Campbell Road located 260m away, existing noise levels will not increase as a result of the construction works. On this basis, it is concluded that as the River Itchen SAC is located 230m away it can be inferred that there will be no significant increase in noise at the SAC and therefore no LSEs on qualifying species using the SAC will occur.

The 2020 Extended Phase 1 Habitat survey recorded no evidence of otter resting places, and the on-site water bodies were dry and therefore considered unsuitable for this species. The site is effectively isolated from the River Itchen SAC by commercial and industrial development to the west, north and east. A raised railway embankment separates the south-western boundary of the Site from suitable otter habitats beyond. It is concluded that noise disturbance is not likely to result in impacts to European site integrity through disturbance of SAC qualifying species.

In terms of vibration, the results of the noise assessment show that no significant vibration levels are likely to occur at residential receptors during construction and the highest likely vibration levels are below 1mm/sec. As the nearest residential receptor is located 170m from vibration sources during construction, it is concluded that no impacts from vibration will occur within the River Itchen SAC which is located 230m from the Site.

In-combination effects

It is concluded that through the implementation of site-specific avoidance and mitigation measures on the development sites considered, there will be no cumulative impacts on the River Itchen SAC or its qualifying habitats and species.

The integrity test

The HRA concludes that the proposed development will not adversely affect the conservation objectives of the River Itchen SAC, or their component attributes and targets, alone or in combination with other plans and projects.

Stage 4 – Summary of the Appropriate Assessment (To be carried out by the Competent Authority (the local planning authority) in liaison with Natural England

Following consideration of a range of potential impact pathways, it is concluded that through the implementation of site-specific avoidance and mitigation measures any potential impacts arising from the development, along and cumulatively, can be avoided. In conclusion, the application will have no adverse effect on site integrity, alone or in combination with other plans and projects.
Natural England Officer: