



ecosupport



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Report	eCEMP
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1.0 INTRODUCTION

1.1 Background

Ecosupport Ltd have been commissioned to produce an Ecological Construction Environmental Management Plan (eCEMP) for Land East of Fathom's Reach.

This was in response to the following comments (**APP/22/00001**):

“Construction activities are highly likely to result in disturbance of the adjacent SPA supporting habitat and no firm details of how these impacts will be avoided/mitigated are provided: I would suggest that noise levels sufficient to result in disturbance are inevitable. Further details of proposed avoidance/mitigation measures are required before the Local Planning Authority can conclude no Likely Significant Effect”.

1.2 Aim

The aim of this eCEMP is to protect the ecological interests adjacent to the site. This report details the approach which construction workers will adopt in dealing with the potential ecological impacts associated with various construction activities. The approved eCEMP shall be adhered to and implemented throughout the construction period strictly in accordance with the approved details, unless otherwise agreed in writing by the local planning authority.

1.3 Activities

The main construction activities will involve:

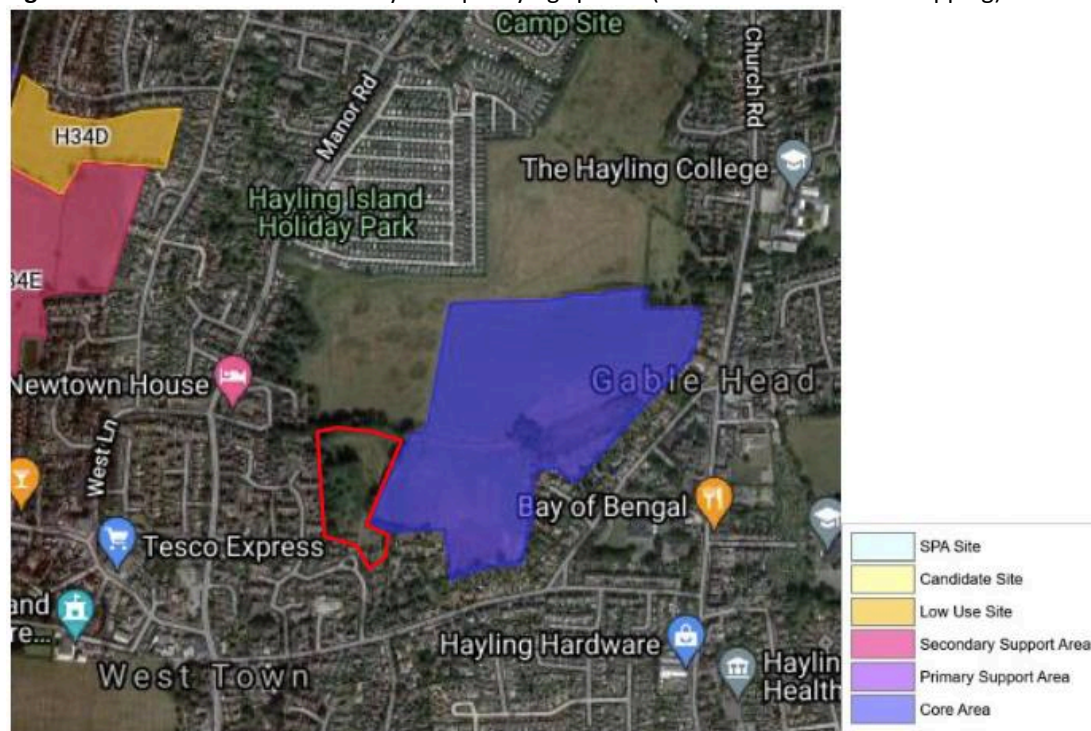
- Demolition
- Vegetation clearance and topsoil stripping
- Site establishment
- Excavations
- Movement of materials
- Sub-structure foundations
- Drainage
- Construction of houses and access roads
- Landscaping including establishing gardens and boundary fencing.

2.0 FEATURE OF ECOLOGICAL VALUE

2.1 “Core Area” (H46B)

The arable field immediately adjacent the site to the east is classified as a “Core Area” (H46B) for waders and Brent geese in the Solent Waders and Brent Goose Strategy (**Figure 1**).

Figure 1. Location of sites utilised by SPA qualifying species (identified in SW&BGS Mapping).



Records provided by HBIC showed only two qualifying birds species were recorded using the SPA-supporting site – Curlew and Dark-bellied Brent Goose, from data collected between 2013 and 2017 (Ecosupport, 2021). These species are both considered to be over-wintering (non-breeding) birds who will use the site during the winter months. A Core Area is defined as a site that has either:

- A network value;
- And/or the max score of 7 in the 3 metrics: GB importance, SPA importance and SPA Assemblage;
- And/or a max count of bird use of 1000 or more.

2.2 Potential impacts

Very loud (>70dB) and percussive noises have the potential to disturb birds, increasing time spent alert and in flight, and reducing the time available to feed. Peak levels of sound are most likely to occur from the impact of pneumatic drilling and concrete breaking during site preparation and piling during construction. These activities can have an impact on bird species at a distance of up to 250m (Environment Agency, 2008).

Stillman et al. identify median distances for Brent Goose and some Waders within which the birds commonly respond to human activity, thereby causing changes in behaviour or

displacement from otherwise suitable habitats. This response distance is around 80-100m for most species analysed in the Solent area.

3.0 NOISE MITIGATION

To avoid disturbing birds using the area, works that produce a high amount of noise will be undertaken outside of the winter months (October to March, inclusive). The Phasing of the construction timetable will allow for this wherever possible (i.e. works along the western boundary will take place within the summer months).

Where works must be undertaken within winter months, construction noise will be kept to below 70dbAmax (as measured at the western site boundary). Practical measures to reduce noise include:

- Prior to any works getting underway on site erect noise source screening structures (**Figure 2**):

Timber noise barriers offer up to a 32dB reduction in noise. A deep V tongue and groove style fence prevents sound travelling through the barrier. Timber barriers should be made from kiln-dried, pressure-treated timber to ensure minimal maintenance and durability, and should come with a long guarantee. As timber remains impermeable, timber noise barriers will perform well for many years.

Metal barriers offer up to a 28dB reduction in noise. For the barrier to work effectively, the barrier should have a minimum mass of 10kg/m² to prevent any unwanted sound leaking through.

Acrylic and Perspex noise barriers reduce noise by up to 32dB.

Earth bunds could be created by performing excavation works to the south, which is furthest away from the Core Area. Surface mass of barrier material must be greater than 7kg/m², with the length at least 5 times its height. This can achieve noise reduction of 5 - 10 dB(A).

The style of barrier will ensure noise is reduced to <70dbAmax measured at the western boundary.

Figure 2. Indicative location of where a noise barrier will be erected (yellow line) during construction works (GoogleMaps).



- Ensure site compound is located away from the western boundary (at least >100m from the western boundary).
- Locate noisy equipment and plant as far away from the western boundary as possible.
- Shut down all plant and equipment in intermittent use between work periods or throttled down to minimum idling speed.
- Avoid simultaneous operation of noisy equipment.
- Maintenance and servicing of equipment and vehicles in accordance to manufacturers recommendations especially for noise mitigation components e.g. retaining silencers and mufflers supplied with construction equipment.

Select quiet equipment whenever possible i.e. silenced/super silenced compressors or electric compressor (when mains power available, hydraulic concrete cutters and crushers, and rock drills (up to 20 dB noise reduction and pneumatic breakers fitted with mufflers and damping collars (up to 21dB noise reduction).

4.0 WATER QUALITY

Some general practical measures and sensitive working practices with regard to water quality are provided in **Table 1** below.

Table 1. Practical measures and sensitive working practices involving water during construction.

Issue(s) to Control	Best Practices to be Adopted
Stormwater polluted with debris /chemicals	• Minimise the areas of exposed ground • Locate siltation traps at key points on the site and discharge all runoff through the traps. • Provide adequate drainage channels lined with impervious material. • Ensure integrity of hoarding to prevent uncontrolled discharge to stormwater drains outside site boundaries. • If it is not possible to install temporary water drainage works, as above, use sand bags (and sealed hoarding) to divert site water run-offs to siltation tank and water treatment systems. • Avoid carrying out earthworks during the rainy season and if is not avoidable ensure that the works are kept to a minimum. • Surround earthworks by dykes or embankments for flood protection and cover earthworks as appropriate. • To prevent soil erosion, compact earthworks final surfaces and perform subsequent permanent work/surface protection immediately after surface formation and provide appropriate drainage. • Cover and seal manholes (including newly constructed ones). • Ensure that the road from the wheel washing facilities to the end of the site is paved with backfall to prevent runoff of wash water.
Concrete	• Recycle wastewater from washing of mixer trucks, drum mixers and similar equipment wherever practical to minimise wastewater discharge. • Treat all contaminated surface water from concrete operations with appropriate facilities.

5.0 AIR QUALITY

Construction activities have the potential to impact on air quality. Construction activities are associated with the generation of nuisance dust (larger particles) and PM₁₀ emissions. The larger particles tend to fall out quickly and therefore the impacts are generally most likely to be felt within 200m of the development (Bureau Veritas, 2013). As a result, the boundary hedgerows may be negatively impacted.

Any piles of sand, soil or other small particle materials should be kept damp on days of strong winds and/or covered with geo-textile fabric to prevent the amount of dust and debris leaving the site as outlined above. **Table 2** provides a selection of techniques in order to prevent/minimise air and dust pollution.

Table 2. Practical measures and sensitive working practices involving water air pollution control.

Issue(s) to Control	Best Practices to be Adopted
Emission of Dark Smoke from Plant and Equipment	• Conduct routine and major maintenance in accordance to manufacturer's instructions, and maintain records of all inspections and maintenance works. • Use fuel of quality specified by manufacturer/supplier. • Shut down all vehicles and plant in intermittent use between work periods or throttle down to a minimum idling speed (if the former is not possible).
Open Burning on Site	• Forbid open burning of wastes
Dust Emission from Construction /Demolition Activities	General requirements: • Operate air pollution control equipment properly and effectively, in accordance to manufacturer's instructions. • In the event of a malfunctioning or breakdown of any air pollution control equipment, suspend the plant, process(s) or activity(s) concerned as soon as practicable until the equipment is restored to its proper function.
	Site boundary and entrance: • Provide vehicle washing facilities at every vehicle exit point. • Where a site boundary adjoins a road, street, service lane or other area accessible to the public, provide hoarding of not less than 2.4 m high from ground level along the entire length of that portion of the site boundary except for a site entrance or exit.
	Access road (main haul road): • Pave with concrete, bituminous materials, hard core or metal plates, and kept clear of dusty materials; or • Spray with water; • Keep the portion of any road leading only to a construction site that is within 30 m of a discernible or designated vehicle entrance or exit clear of dusty materials.

Issue(s) to Control	Best Practices to be Adopted
	Exposed earth: • Treat properly by applying water spray, surface compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or temporary covers. • Schedule construction programme to complete works on open areas as quickly as possible.
	Dusty materials: • Dispose of cement, pulverized fuel ash or any other dusty materials collected by fabric filters or other air pollution control system or equipment in totally enclosed containers.
	Stockpile of dusty materials: • Cover stockpile over 50m³ entirely by impervious sheeting with enclosure extending at least 1 m above and beyond the stored materials. • Place in an area sheltered on the top and the 3 sides. • Spray with water.
	Loading, unloading or transfer of dusty materials: • Spray all dusty materials (except cement and PFA) with water immediately prior to any loading, unloading or transfer operation. • Control height from which excavated materials are dropped to a practical minimum.
	Pneumatic or power-driven drilling, cutting, polishing, breaking or crushing: • Spray water continuously on the surface during operation.
	Use of vehicles: • Wash every vehicle to remove any dusty materials from its body and wheels immediately before leaving the site. • Restrict vehicles to minimum practicable speed limits (< 10 km/h). • Where a vehicle leaving a construction site is carrying a load of dusty materials, cover the load entirely by clean impervious sheeting, which extends over the edges of properly fitting side and tail boards and dampen materials before transportation. • Make sure dusty materials are not loaded to a level higher than the side and tail boards.
	Debris handling: • Cover debris entirely by impervious sheeting or store in a debris collection area, sheltered on top and 3 sides. • Enclose every debris chute by impervious sheeting or similar materials. • Before debris is dumped into a debris chute, spray with water.
	Excavation or earth moving: • Spray working area of any excavation or earth moving operation with water immediately before, during and immediately after the operation.

Issue(s) to Control	Best Practices to be Adopted
	Cement: • For every stock of more than 20 bags of cement cover entirely by impervious sheeting or place in an area sheltered on top and three sides. • For cement delivered in bulk, store in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line such that an audible alarm is triggered and the material filling stops within one minute. • Do not overfill silos used for the storage of cement • Carry out loading, unloading, transfer, handling or storage of bulk cement in a enclosed system or facility, and install effective fabric filter or equivalent air pollution control system on vent or exhaust systems.

6.0 HAZARDOUS SUBSTANCES

A number of hazardous materials are associated with construction projects. This can lead to contaminated soil. **Table 3** contains a variety of procedures to prevent ecological implications from hazardous substances.

Table 3. Practical measures and sensitive working practices involving hazardous substances.

Issue(s) to Control	Best Practices to be adopted
Containers	• Use containers designed to minimise spills. • Ensure that containers used are appropriate to the substances contained (e.g. do not react with the substance, resistant to corrosions). • Ensure that containers are maintained in good conditions and securely closed. • Locate secondary containment store as far away from water discharge points as possible. • Store goods away from heavily trafficked areas to avoid container damage. • In each storage area: • Ensure that only the substance(s) specified are stored. • Provide secondary containment or drip trays, and impermeable floor and bunding. • Prevent unauthorised access by providing locks to the storage areas.
Cleaning up minor spills	• Use sand, saw dust, or spill kit to absorb the spill and prevent it from spreading. • Dispose of the contaminated absorbent material as chemical waste. • Ensure that saw dust, spill kits, etc are readily accessible and of enough quantity.
Inspection and Maintenance	• Periodically inspect, and where necessary test, the condition of storage drums, tanks and pipelines (especially flanges and gaskets) • Inspect and maintain all plant and equipment to prevent leakage of chemicals/fuel.
Major Spills*	• Contain the spill to minimise reduce land contamination and pollution of nearby watercourse. • Inform the Project Manager immediately. • The Project Manager shall arrange for appropriate removal and disposal of the chemicals by authorised organisations, and determine if other parties (e.g. Environment Agency) need to be informed.

Spills on the worksite are likely to be hydraulic oil or engine oil spilled from plant items. If a spillage occurs the following procedure is to be followed:

- Immediately identify the spilled material and notify the Site Management Team. The Site Manager's are to notify the BHL Project Manager.

- Contain the spill as soon as possible so it doesn't spread. Refer to Material Safety Data Sheets (MSDS) for personal protective clothing needed
- If containment is required, contain using earth mound and/or absorbent socks/spill kit. If you can't do this let your Supervisor know.
- Use the relevant clean up procedure as instructed by the MSDS.
- Once the spill has been contained, your Supervisor will arrange removal and disposal as soon as possible. Dispose of material using a licensed contractor and keep records of disposal on site.
- Complete an Incident Reporting Form (form F03) and forward it to the Project Manager.

7.0 RESPONSIBILITY

The eCEMP will be distributed to the project team, including sub-contractors, to ensure that the environmental requirements are communicated effectively. **Table 4** below describes the different roles and associated responsibilities throughout the construction period.

Table 4. Key roles and responsibility.

Role	Appointment by	Responsibilities
Project Manager	Insert Name	- Responsible for ensuring all developers comply with environmental legislation - Overall responsibility for the implementation of this eCEMP
Site Manager	Insert Name	- Prepare CMS taking into account compliance of this eCEMP - Review implementation of eCEMP - Carry out weekly site audits and prepare monthly reports - Ensure corrective actions are dealt with in a timely manner
Site Management Team	Insert Name	- Responsible for delivering the site inductions of environmental aspects - Tool box talks to all contractors to ensure implementation of good practice - Assist Site Manager in weekly site audits - Monitor sub-contractors work for compliance - Manage Considerate Constructors Scheme compliance
Principal Contractor	Insert Name	- Assist Site Manager in preparation of the CMS - Prepare site specific Risk Assessments and Method Statements taking into account all environmental issues
Contractor/Sub-Contractors	Insert Name	- Ensure workforce is fully aware of the environment issues and are implemented - Take appropriate action to rectify any non-conformance
Community Liaison Officer	Insert Name	Responsible for public liaison and handling complaints

7.1 Training Awareness and Competence

Site staff shall be competent to perform tasks that have the potential to cause a significant ecological impact. Competence is defined in terms of appropriate education, training and experience. Ecological awareness and training shall be achieved by:

- Site induction, including information on the adjacent habitat and the importance of minimising disturbance.
- The locality of Designated Sites, their associated protection and importance will be highlighted.
- Information on protected species will be given including field signs to look out for during construction work.
- Environmental posters and site notices will be erected around the site.

Training will be recorded in the Project records by each Developer.

7.2 Communication

During the construction phase, internal communication will include regular progress meetings, which should cover training undertaken, progress reports, inspections, audits and non-conformance and objective / target achievement, including reporting on environmental performance along with other forms of communication (**Table 5**).

External communication, including liaison with an Ecologist and statutory authorities will be overseen by the Project Manager.

Table 5. Communication throughout construction.

Means	Frequency	Purpose/Action	Responsible Party
Site Environmental Log Book	Continually	Written record of what has been observed and done related to environmental issues, including implementation status of mitigation measures.	Project Environmental Officer
Site meeting	Monthly	Face-to-face communications between construction and client.	Project Environmental Officer
Environmental briefing / training session	Quarterly	Briefing or Training on environmental issues to key site staff and staff of subcontractors.	Project Environmental Officer
Environmental Complaint Log	When necessary	To handle and respond environmental complaints.	Project Environmental Officer

7.3 Line of Communication Regarding Ecological Issues

Prior to works getting underway, all staff will be aware of the ecological features and associated issues on and adjacent to site. They will also be mindful during works of field signs of protected species and finally of the steps to take in the eventuality that an ecological situation arises. Therefore, as soon as an issue is uncovered/advise is needed, the Project

Manager will be consulted. They will then contact the Ecologist who will visit the site and advise accordingly.

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