

OHH Strategy Document: Construction Environmental Management Plan (CEMP)

One Horton Health

SECONDARY INFRASTRUCTURE DELIVERY – GREEN INFRASTRUCTURE



On behalf of

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Contents

INTRODUCTION.....	4
1. SCOPE OF WORKS AND PROJECT DESCRIPTION	5
2. SITE MANAGEMENT ARRANGEMENTS AND CONSTRUCTION METHODS:.....	6
2.1 Key Personnel and responsibilities.....	7
Contracts Manager;.....	7
Site Manager;	7
The site HSEQ Advisor;.....	8
Site Ecologist / Ecological Clerk of Works (ECoW);.....	8
Contractors and Visitors;.....	9
2.2 Permits and Licenses:.....	9
Hampshire County Council Permits:.....	9
Public rights of way (PROWS)	9
2.3 Ecological and Environmental Toolbox Talks:.....	10
2.4 Noise and Vibration:.....	10
2.5 Control of Lighting on the Proposed Development:.....	12
2.6 Bird Hazard Management Plan:.....	12
2.7 Arrangements for the use of cranes and other tall construction:.....	13
2.8 Measures to Control the Emission of Dust and Dirt during Construction (including transfer of mud to external areas):.....	13
2.9 Protection of the aquatic environment in terms of water quantity and quality:.....	15
2.10 Work in inclement weather:.....	15
2.11 Deliveries:.....	16
2.12 Excavations:.....	16
2.13 Spoil Heaps:.....	16
2.14 Plant and Wheel Washing:	16
2.15 Sediment control:.....	17
2.16 Dealing with silty or contaminated water:	17
2.17 Installation of drainage and SuDS features:.....	18
2.18 Fuel and other chemicals on site:.....	19
2.19 Cement:	19
2.20 Air Quality:	20
2.21 Construction Traffic Management (including parking):.....	20
2.22 Location of site compounds and boundary hoarding:.....	20
2.23 Arboriculture work and tree protection:.....	21
2.24 Measures to ensure no on-site fires during construction:.....	21

2.25 Minimisation, Recycling and Disposing of Waste:.....	21
2.26 Site Storage Arrangements:.....	22
3.ECOLOGICAL AND HABITAT PROTECTION REQUIREMENTS:.....	23
Biosecurity (Invasive species):.....	25
4. PROGRAMME MANAGEMENT ARRANGEMENTS:.....	27
5. MONITORING ARRANGEMENTS AND EMERGENCY PLANS:.....	28
Control of Non-conformance.....	28
6. MANAGEMENT PLANS AND FURTHER ASSESSMENTS:	29
7. SUMMARY AND CONCLUSIONS:.....	29
APPENDIX – RIVER AND WATER COURSE PLANS	31
APPENDIX – ECOLOGICAL CONSTRAINTS PLAN.....	32
APPENDIX - TREE CONSTRAINTS PLAN.....	33
APPENDIX -BIRD HAZARD MANAGEMENT PLAN	34
APPENDIX – SITE SPECIFIC CEMP CONTROLS. TEMPLATE	35
APPENDIX – CEMP WEEKLY INSPECTION/MONITORING FORM	39
APPENDIX – FURTHER RELEVANT DOCUMENTS	41
APPENDIX – CONSTRUCTION TRAFFIC MANAGEMENT PLAN.....	42
APPENDIX – PERMITS AND LICENCES.	43
APPENDIX – CODE OF CONDUCT FOR CONSTRUCTION - CIRIA GUIDANCE DOCUMENT C741: ENVIRONMENTAL GOOD PRACTICE ON SITE.....	44
APPENDIX – BIOSECURITY AND MANAGEMENT OF INVASIVE NON-NATIVE SPECIES FOR CONSTRUCTION SITES AND CONTROLLED ACTIVITIES.	45
APPENDIX – SEPA/NIEA GUIDANCE NOTE – GPP5 GUIDANCE FOR POLLUTION PREVENTION – WORKS AND MAINTENANCE IN OR NEAR WATER.....	46

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Introduction

- The One Horton Heath Team on behalf of Eastleigh Borough Council has developed this strategy document which will inform and form the basis of the environmental management requirements for the secondary infrastructure delivery scheme (SID) and specifically for the green infrastructure.
- The specific Construction Environmental Management Plan and controls will be developed with the Principal Contactor (once in contract) and the specific controls and monitoring arrangements will be submitted to the Planning Authority prior to work commencing on site.
- The purpose of this document is to outline measures to be taken to minimise the impact of construction on the surrounding area and ensure that any potential impacts arising from the construction activity are actively identified, managed, and minimised in accordance with the planning conditions, the OHH Environmental, Health & Safety Policy and procedures.
- The CEMP is intended to cover the construction phase only and will cease to apply on completion of works.
- The One Horton Heath project is a strategic part of the Council's Local Plan for the provision of new homes within the Borough. The secondary infrastructure delivery scheme green infrastructure components are shown in the diagram below (within the red boundary) – figure 1.1 and 1.2.
- This document should be read with related documents set out in the appendices.

Figure 1.1

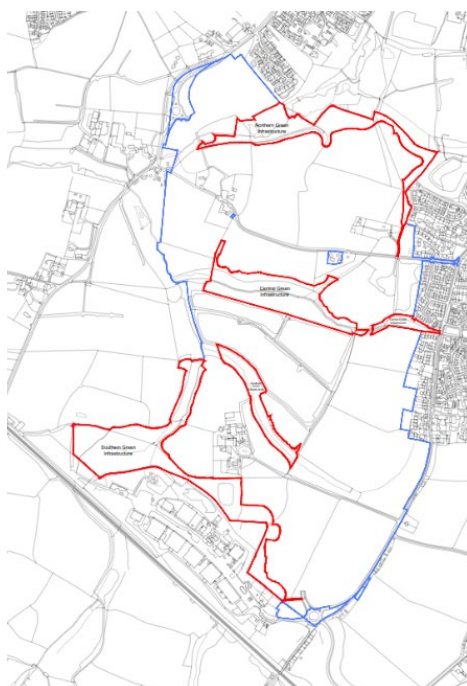


Figure 1.2



1. Scope of works and project description

2.1 Secondary Infrastructure Delivery (SID) involves two phases of works. The first phase includes the design, construction and implementation of a 1.6km Internal Distributor Road, including associated share path facilities, landscaping and sustainable drainage features.

The second phase includes the design construction and implementation of 30+ acres of green open space, a significant upgrade programme to Public Rights of Way (PRoW) across the OHH development, areas of ecological and biodiversity improvements, enhancements and creation, and sustainable drainage features.

This CEMP covers the Secondary Infrastructure Delivery for the green infrastructure:

These phases of works include:

- Creation of Green Open Spaces of 30+ acres.
- Enhancements to and creation of large areas of ecological and biodiversity across the Green Open Spaces.
- Protection and enhancement of established woodland.
- Significant upgrade programme to Public Rights of Way (PRoW) across the development creating much improved pedestrian movement networks and link into the development and wider areas.
- Interaction with residential, education, and commercial development parcels to establish public amenity space early.

A specific CEMP will be developed with the Principal Contractor once in contract. Issues considered will include, but are not limited to:

- The appointment of appropriate responsible persons/organisations.
- Noise, vibration, lighting, air and water quality management.
- Control of lighting on the proposed development during construction.
- Bird hazard management plan.
- Arrangements for the use of cranes and other tall construction.
- Measures to Control the Emission of Dust and Dirt during Construction.
- Protection of the aquatic environment in terms of water quantity and quality:
- Deliveries:
- Excavations:
- Spoil Heaps:
- Plant and Wheel Washing
- Dealing with silty or contaminated water:
- Stream/watercourse diversions:
- Fuel and other chemicals on site:
- Cement:
- Construction Traffic Management.
- The arrangements for temporary site buildings, contractors parking and storage of plant and materials.
- The erection and maintenance of security hoarding – Tree root protection.
- Minimisation, re-use and re-cycle waste; minimise the pollution potential of unavoidable waste; and dispose of unavoidable waste in an environmentally acceptable manner.

- Ecological protection requirements, including protection of bats, birds, dormice and great crested newts or any other European protected species as advised by the ecology consultant.
- Monitoring requirements and emergency plans.

2. Site management arrangements and construction methods:

All works shall be carried out using Best Practicable Means according to the Control of Pollution Act 1974 and with reference to BS5228 “Code of practice for noise and vibration control on construction and open sites” and the Institute of Air Quality Management’s “Guidance on the assessment of dust from demolition and construction”.

Noise, vibration and dust shall be monitored, and good records kept of this, control measures deployed onsite and of any complaints or actions regarding amenity impacts and harm including nuisance due to pollution.

In the case of there being a complaint, this shall be promptly investigated, and remedial actions put in place where pollution is adverse within 24 hours or works shall cease until they can be. Records shall be made available to the Council upon reason request such as when visiting the site offices in relation to a complaint about impact to amenity, harm including nuisance due to pollution.

The Contractors will be required to ensure that they implement the requirements of this plan and all other statutory conditions and this will be monitored on a regular basis by a competent and authorised person.

The Design Team will provide specific guidance on the design and proposed construction methodology to prevent environmental or ecological harm and to minimise any disturbance. The design guidance will be reviewed by The OHH retained ecology consultants to ensure that it is robust and effective.

The Contractors will be required to ensure that they plan and design their works and produce a specific CEMP to be submitted to the Local Planning Authority for review and comment, obey all statutory requirements and obligations and ensure the works do not cause more environmental impact than not worse than expected or predicted by the project’s Environmental Impact Assessment.

The contractors shall monitor and audit the environmental performance of the works and effectiveness of the CEMP on weekly basis by a competent and authorised person who shall submit reports to OHH and OHH will regularly appraise Eastleigh Borough Council of the environmental performance of the works and the ‘health’ of the environmental management onsite and within the contractor and OHH project organisations.

While the works are underway, details of the contractor’s short term and medium-term specific works or phase or sub phase plans for the environmental and ecological management of the site and surrounding areas must be provided to the project team at least 10 working days BEFORE commencement on site to enable review and comments.

The CEMP shall be submitted to the Local Planning Authority for comment and approval prior to the works contract commencing onsite.

2.1 Key Personnel and responsibilities

All key personnel with responsibility for the works will be listed and named below in later versions of this document. The responsibilities listed below may well change as the work develops.

Contracts Manager;

- Ensuring that the CEMP is developed & held on site and that it is implemented throughout all phases of the project. Ensuring the CEMP details are updated as and when relevant information is provided by the stakeholders associated with each section of the CEMP; e.g., further consent conditions, pre-construction surveys, etc.
- Maintaining the CEMP and ensuring that all contractors and visitors comply with it.
- Ensuring that environmental issues identified within the Pre-Construction Information and the pre-construction site surveys and relevant information gathered from agencies, local councils etc are addressed.
- Producing environmental project specific controls for all significant risks identified and implementing control measures to minimise the risk of damage to the environment.
- Communicating the CEMP and other related document to employees, contractors and client representatives.

Site Manager;

- Ensure the site and all stored materials and chemicals are safe and secure.
- Ensure F10 notice, Principal Contractor Sign, and signage indicating where and whom visitors should report to are clearly displayed.
- The site is kept in a tidy and orderly fashion. Waste will be managed in conjunction with the Principal contractors procedure as applicable.
- Controlled access arrangements as so those entering site may avoid hazards.
- Emergency egress arrangement so those leaving site in the event of a pollution or spillage incident may do so safely.
- There are First Aid Facilities and appropriately trained First Aid staff.
- Spill kits are available and appropriately trained staff.
- Undertaking the daily inspections of the working areas and reporting any non-compliance to the Client's Project Manager and HSE team.

To ensure all those that work on site:

- Have Principal contractor induction including briefing and regular toolbox talks on environmental issues relevant to the site.
- Understand and obey the Site Rules.
- Are made aware of the Emergency egress arrangements, Muster points, First Aid facilities and First Aiders, spill and clean up procedures.
- Read and understand the site hazard board.

- Have current certification for activities as required.
- Are aware of all environmental matters which arise on site.

Ensure all activities on site:

- When necessary are carried out under Client Operational Safety Rules.
- Have, task specific risk assessments and method statements (RAMS) in place identifying any environmental issue which may be applicable.
- Are carried out in accordance with the requirements of any associated RAMS.

The site HSEQ Advisor;

Ensuring work carried out is:

- In a safe manner in accordance with any manufacturers' instructions etc., good standards of workmanship.
- Ensure site staff are working in accordance with agreed Risk Assessments and Method Statements (RAMS) particularly where activities have the potential to cause environmental harm.
- Health and safety advisor to complete the site waste management plan and ensure it is followed.
- Ensuring that the CEMP is implemented throughout all phases of the project.

Monitoring HSEQ issues by;

- Carrying out regular checks on site to ensure the site is secure and tidy.
- Weekly checks and "toolbox talks" carried and recorded. Weekly site audits.
- Consulting workers on the effectiveness of measures to reduce risk to the environmental, reviewing and improving conditions or methods/procedures where appropriate.
- Keeping records of and reporting any incidents and close calls (near misses).

Site Ecologist / Ecological Clerk of Works (ECoW);

- Provision of Ecological Toolbox Talk
- Pre-works precautionary walk over survey to confirm no change in condition or need for further mitigation
- Carrying out regular checks on site (as required) to ensure works are following this CEMP and all relevant ecological measures are being implemented – including completion of the Environmental Inspection and audit and reporting this to the Client (OHH team) – See appendices.
- Directly supervising certain works to ensure the ecological measures are being fully and correctly implemented
- Keeping records of and reporting any incidents and corrective actions associated with ecology.
- Provision of ongoing/ad-hoc advice and liaison with EBC and Environment Agency ecologists/Fisheries, Biodiversity Geomorphology.

Contractors and Visitors;

- Ensuring that the control measures identified from environmental surveys are implemented as they are relevant to their work / visit.
- Ensuring that the project management team are notified of any non-conformance of control measures or environmental incident where the environment has been put at risk.

All contractors and visitors to the site will be made aware of the Environmental policy and the controls applicable to their presence and activities on site including but not limited to:

- Method Statements,
- Risk Assessments,
- Site induction which includes Environment Briefings,
- Toolbox talks.

The Project Manager will be responsible for monitoring communications between all relevant parties to the project ensuring that all environmental matters to the project are discussed and managed and observation of the communications will be documented in the weekly site meetings and sent by e-mail. In addition, a copy of all correspondence will be held in this file.

Relevant site layout and location plans/CDM drawing detailing the location and construction of the site compound, storage locations and car parking are to be displayed on an information board at the site entrance.

All works required because of a Protected Species Mitigation Licence (PSML) issued by Natural England, will be supervised by the ecologist who is licensed by Natural England to undertake those works.

2.2 Permits and Licenses:

Hampshire County Council Permits:

Ordinary Water Course Consent applications will need to be made to Hampshire County Council for the water courses.

The main river watercourses on the OHH development site and the ordinary watercourses are shown on the plan below (see appendices).

Public rights of way (PROWS)

Where possible of public rights of way will be maintained and appropriately protected. Where closure or diversion of a public rights of way is required during the construction phase, appropriate consultation and permissions must be sort from the relevant local authority.

2.3 Ecological and Environmental Toolbox Talks:

An ecological toolbox talk will be delivered by a suitably experienced Ecological Clerk of Works (ECoW) who will also supervise key elements of the work. This will occur prior to the works on site commencing and also throughout the works at key relevant stages.

The toolbox talk will be delivered to Contractors and general site visits as required and include the following:

- Introduction to works
- Overview of Working Area
- Summary of protected species evidence
- Protected species legislation
- Areas out of bounds & exclusion features
- Non-licensable Method Statement
- Potential for EPS Licences
- CEMP and Precautionary Method of Works
- Ecological Management and Supervision
- Permit to Work
- Task Risk Assessment
- Communications

ECOLOGICAL TOOLBOX TALK (TBT) REGISTER OF ATTENDANCE

Name	Company / Role	Date	Confirmation TBT Understood	Confirmation of Attendance

2.4 Noise and Vibration:

The location of the site in relation to receptors, suggests that noise and vibration would pose some disturbance to neighbouring properties and sensitive ecological receptors. British Standard BS5228 (code of practise for noise and vibration control on construction and open

sites) provides guidance to minimise the impact of noise and vibration by implementing control and monitoring measures.

Activities as categorised below will be monitored with mitigation carried out as appropriate.

- Site Activity
 - Works only to be carried out within permitted working hours
- General Demolition and Construction Noise - machinery operations and movements, falling debris and site operatives
 - Should not cause an issue outside of the site boundary
 - Plant and equipment to be serviced and kept in good working order
 - Minimise drop heights of falling debris
 - Operatives made aware of the need to keep noise levels to an appropriate level
 - Idle vehicles and machinery not in use will have their engines switched off
 - Levels greater than 80dBA at site boundary require contractor to supply acoustic screening that are of sufficient height to more than break line of sight from the noise sensitive dwelling to the construction plant operating on the site
- Hydraulic Breaker Noise – potential need to break out floor and foundations
 - Short term peak levels of 120dBA at point of works
 - Without screening 90dBA at 10m from source
 - With screening or natural obstruction drop to 80dBA at 10m from source
 - Levels greater than 80dBA at site boundary require contractor to supply acoustic screening.
- Vibration – breaker operation, machinery movements and falling debris
 - Breaker operation most intense, however low frequency and low intensity.
 - Falling debris and rubble, machine and lorry movements should prove minimal in effect.
 - Not normally felt beyond 5m from source

The following list provides examples of key activities which have the potential to generate noise and vibration during the construction period:

- Ground Excavation and Earthworks including piling
- Loading Lorries
- Distribution of material – haulage and dumping load
- Rolling and compaction
- Ground investigation drilling
- Mixing and pumping concrete
- Trenching
- Moving equipment
- Diesel generators providing on-site power
- Sweeping and dust separation
- Spreading chippings / fill
- Landscaping works

The Principal Contractor will be required to comply with recognised industry standards, including BS5228 (A1 2014) – The Code of Practice for Noise and Vibration Control on Construction and Open Sites) in order to reduce noise pollution.

The Principal Contractor must consider introducing noise control measures as part of their standard site set up, for example, hoarding installation, noise screens surrounding cutting equipment and considering the positioning of noisier plant to ensure that, where possible, noisy works are further away from sensitive receptors.

The Contractors noise management controls will be set out in the Construction Phase Plan.

In addition, the following controls will be implemented:

- Regular checks will be undertaken to ensure that the plant is in good working order and not running at a noisier than expected level.
- All workers on site will be made aware of the need to keep noise and disruption to a minimum from plant, radios, and vehicles.
- Site managers will ensure this is conveyed as part of the initial site induction and is maintained with good site management. Regular toolbox talks will also be required to reinforce the message.
- All vehicles waiting to deliver or delivering to the site will wait in a suitable location and have their engines switched off.
- A record of the checks on noise and vibration control measures will be included in the weekly environmental reporting to the OHH team.
- A complaints procedure is in place for ANY health, safety or environmental concerns. These can be reported directly to the OHH health and safety team, along with EBC. All complaints will be recorded, investigated, and reported to both the OHH board and relevant authorities where required.

2.5 Control of Lighting on the Proposed Development:

Where possible lighting should not create unnecessary spill onto adjacent habitats and all lighting should be downward and inward facing (towards the working area). Lighting should be switched off at night. No lighting will be permitted at the boundary of the northern riparian corridor and southern woodland boundary. The southern woodland is ancient woodland designated SINCE, as such it is highly sensitive to light/dust/litter.

All temporary lighting schemes will be reviewed by the ecologist to ensure that these requirements are implemented. Details of the lighting scheme will be included in the Construction management Strategy and Construction Phase Plan prepared by the Principal Contractor.

2.6 Bird Hazard Management Plan:

A bird hazard management plan has been developed and submitted to minimise attractiveness to birds which could endanger the safe movement of aircraft and the operation of Southampton Airport. This plan complements this CEMP and is integral to the overall management requirements.

Section 5.2.1 of the Bird Hazard Management Plan is below (John's Associates J00532 v1.0 April 2021):

"Construction Phase

Control of construction drainage and earth works during the construction phase should ensure that wide areas of permanent open water do not develop which can attract geese, gulls and wading species. If necessary, bare loose soil should be compacted to reduce its suitability for bird species.

The timing of all significant earthworks, particularly topsoil spreading and grading, shall be notified to the airport (Airfield Operations) in advance and scheduled, where possible, at times of lower flying activity.

Grass seeding should be done in phased sections if the area to be seeded is larger than 150m² rather than all at once.

Intervals between discrete blocks should ideally be in the order of 3 days. This will produce staggered germination, reducing the amount of seed available to pigeons, reducing the area affected at any one time and allowing better deployment of passive deterrent measures.

Blocks of ground where construction work has been completed shall be reinstated or covered and re-seeded (where applicable) at the earliest opportunity.

Waste control and disposal for the Site, including food waste, should be controlled to avoid the build-up of scavenging bird species such as gulls and corvids. Waste should be placed in covered skips and bins to reduce risk."

2.7 Arrangements for the use of cranes and other tall construction:

Details of cranes and other tall construction equipment will be included in the Construction Management Strategy and Construction Phase Plan prepared by the Principal Contractor which must be submitted and approved in writing to the Local Planning Authority.

All tall equipment will be managed in line with CAP1096 "Guidance to crane users on aviation lighting" and notification Advice Note 4 'Cranes and Other Construction Issues':

<https://www.aqa.org.uk/wp-content/uploads/2016/09/Advice-Note-4-Cranes-2016.pdf>

2.8 Measures to Control the Emission of Dust and Dirt during Construction (including transfer of mud to external areas):

The contractor will take measures to prevent dust pollution during the construction works. This includes being aware of high winds which may cause dust to be carried into the neighbouring areas.

Appropriate mitigation and monitoring will be implemented as outlined within.

- Guidance on the assessment of dust from demolition and construction - Institute of Air Quality Management
- Best Practice Guidance - The control of dust and emissions from construction and demolition (see appendices)

The suggested hierarchy to control the emissions of dust and other emissions and reduce human exposure is:

1. Prevention
2. Suppression
3. Containment

The following controls should be implemented:

- Disturb the minimum amount of land necessary at any one time (phasing).
- Avoid unprotected loose spoil heaps where possible – for long term storage consideration should be given to planting/covering.
- In dry weather, water suppression will be used to dampen down dust and prevent dust from migrating to neighbouring properties or into local watercourses.
- Mud transfer to local roads will be prevented. Vehicles exiting the site with any waste or dust attached, that could subsequently transfer to the local roads, will be obligated to pass through the washing facility to minimise transfer of dust and waste onto the local network.
- The location of the washing facility must be agreed with the Client to prevent run-off or resulting slurry from adversely affecting the local environment. Loss of sediment into the watercourses must be avoided at all times.
- Washing facilities must be situated or designed so as to prevent washing water and associated mud and sediment from reaching watercourses.

The following guidelines will reduce the risk of dust emissions affecting environmental and human receptors:

- General – Monitoring and Observations
 - Monitor site activities and carry out regular inspections, ensuring appropriate action is taken
 - Record dust and air quality complaints, identify cause and take appropriate action in a timely manner
 - Record incidents and action taken to resolve the issue
 - Mindful of weather and the effect on dust (winds, rainfall and unusually dry)
 - Ensure adequate water supply is available for suppression of dust and particulate matter
- Control of dust will be carried out at the source where possible
 - Use methods of demolition that reduce dust creation
 - Soft strip of buildings prior to hard demolition
 - Minimise drop heights of falling debris

- Use misting sprays or local damping down techniques with water to suppress dust emissions.
- Amount of water used for dust suppression is to be kept to the minimum to avoid creating runoff.

2.9 Protection of the aquatic environment in terms of water quantity and quality:

This CEMP sets out our risk-based approach to avoidance and mitigation.

The control measures will be installed in accordance with CIRIA Guidance document C471 – Environmental good practice on site (4th Edition) and SEPA Pollution prevention guideline PPG5 – Works and maintenance in or near water -

<https://www.netregs.org.uk/media/1418/gpp-5-works-and-maintenance-in-or-near-water.pdf>

(See appendix) and include:

- A buffer zone will be identified to prevent (or strictly control) construction activity within 10 m of a watercourse. The zone will be defined on site by a suitable physical barrier, to be agreed with the site ecologist.
- Where construction activities are required within a watercourse, details of the additional avoidance and mitigation measures will be identified in a task specific risk assessment and clearly set out in Method Statements.
- EA Permits and Ordinary Water Course Consents have been applied for any activities within 8 metres of the main river watercourse (see permit section above). The applications, including the control measures will be appended to this CEMP.
- The control measures taken to ensure that no pollution of the waterways during construction will follow the hierarchy:
 - Contain at source
 - Contain close to source
 - Containment on the surface
 - Containment in a drainage system
 - Contain on or in the watercourse

Full details will be set out in the Contractors Construction Phase Plan and based on SEPA Pollution prevention guideline PPG5 – Works and maintenance in or near water (see appendices)

2.10 Work in inclement weather:

No works which could cause pollution via run-off should occur during periods of heavy rainfall (in particular activities that could result in sediment pollution of downstream water courses). Ground works are due to commence in April 2023 and the timing of ground works close to watercourses will avoid sensitive spawning periods for Atlantic salmon (November/.December – <https://www.cefas.co.uk/iys/salmon-life-cycle/>)

2.11 Deliveries:

- The Site Manager will ensure that site access is strictly controlled to prevent excessive ground disturbance.
- Delivery, set down and fuelling areas will be located to avoid fuels and hazardous materials spillages potentially entering water courses. These areas will be designed to have suitable surfaces with bunding where necessary to manage potential spillages.
- All deliveries are to be supervised by the Site Manager or a suitably trained person with delegated responsibility to ensure that storage tank levels are checked before delivery to prevent overfilling and that the product is delivered to the correct tank.
- Contingency plans are to be agreed and suitable materials available should any incident occur.
- All employees are to be briefed on the actions that are required in the event of a spillage. Emergency plans to be displayed on site and all operatives made aware of the plans on site induction.

2.12 Excavations:

- Measures must be taken to ensure that animals do not enter excavations and that those inadvertently enter excavations are able to escape, i.e. excavations are covered at night and wooden bords laid as escape routes'.
- The means of dewatering excavations in the event there is ingress is to be agreed with the client and ecologist where necessary.

2.13 Spoil Heaps:

- 'Spoil heaps are to be located and configured in a way that will avoid the risk of sediment run-off (covered or stabilised to prevent gullyng or erosion) into, or contamination of watercourses and drainage ditches AND compacted to prevent encouraging bird activity as set out in the Bird Hazard management Plan.
- Arisings from the phase 3 road works will be stored for reutilisation in other areas of the One Horton Heath site, including the FRP / Lower Acre to prevent the need for importing fill material. Location of storage to be agreed in line with the above statement.

2.14 Plant and Wheel Washing:

- To minimise waste and dust which might collect on vehicles and subsequently transfer to the local roads and environs a wheel washing facility will be provided at the site exit. The runoff from wheel washing will be effectively managed to prevent entry into all watercourses by use of proprietary equipment or via catchment and silt traps where necessary.

2.15 Sediment control:

- Control of sediment and runoff will be managed in accordance with the principles set out in the CIRIA SuDs Manual and Works and maintenance in or near water: GPP 5 (See appendices).
- Installation temporary sediment basins/traps/settlement ponds and/or early construction of the permeant SuDs features will be undertaken before any earthworks begin.
- Haul roads will be designed to minimise and control run-off including temporary surfacing and temporary drainage to intercept sediment laden run-off and wetting of surfaces during periods of dry weather.
- Run-off control measures to divert run-off around areas being excavated will be installed in conjunction with sediment basins/silt traps.
- The contractor will minimise the amount of land disturbed at any time to reduce the potential for run-off to enter water courses (phasing).
- The use of methods including, retaining grass and vegetation for as long as possible, in disturbed areas, controlling erosion via the use of straw bale barriers, geotextile silt fences and sediment basins (with regular clearing out of excess sediment off-site) and ensuring that the runoff from the disturbed area passes through sediment control systems before discharge will be required.
- De-watering operations – water pumped out of excavations generally carries a heavy sediment load and should never be discharged direct into watercourses. It should be routed first through features that will allow sediment to be filtered out and settle out.
- Working in or on the banks of watercourses presents a high risk of significant sediment mobilisation and challenges in intercepting it and capturing it once mobilised. The Contractor must consider the temporarily diversion of watercourses around work sites.
- Worked areas should be finished and vegetation established as soon as works are complete, and the area/time ground is left bare and disturbed should be minimised. Where active construction will not take place for more than 60 working days areas should be stabilised by temporary seeding and/or mulching or by other suitable means.
- All discharge of water into local watercourses will be in line with relevant Environment agency licenses and permits.
- All sediment controls will be set out in the Contractors Construction phase plan and will be subject to weekly checks.

2.16 Dealing with silty or contaminated water:

- Silt, including fine silt or other contaminated water must not be allowed to enter watercourses and ditches. The water courses in this area feed into the River Itchen, a

European Special Area of Conservation for wildlife. Pollution of the watercourses could have significant environmental and ecological impact.

- There is a potential for significant silt and run-off from the construction works and storage areas, (which slope down towards the drainage ditches) to enter watercourses and ditches.
- If water is heavily laden with silt, it will be pumped via a settlement tank or lagoon or other silt management techniques (e.g. Silt Busters / Silt Bags) prior to discharge to the SuDS system. This is to ensure silt mobilised as a result of construction activities is captured at source to minimise discharge to on-site watercourses.
- The Principal Contractors will plan their work to contain any contamination, for example, bunding, the use silt barriers/geotextile fencing or alternative effective measures to prevent this occurring. Silt fences will be erected along the boundary of watercourses to minimise silt laden runoff entering the on-site watercourses and these will be monitored, as necessary.
- Catch-pits or silt traps on drains will be used to remove suspended solids such as mud and silt to prevent contaminated water entering surface water drains, surface waters or ground waters, or draining onto the land.
- Contaminated water can arise from excavations, exposed ground, stockpiles, plant and wheel washing, concrete mixing, or other construction activities.
- Wheel washing locations will be located away from watercourses and ditches. Before wheel washing takes place, checks will be carried out to ensure that sediment traps and measures to prevent run-off and the transmission of hydrocarbons/salt/invasive plant seeds are in place during cleaning. These controls will be checked and emptied and at regular intervals.
- Adequate provision for dealing with silty water is to be agreed in advance. Any planned discharges off the site will require prior approval with the appropriate authorities.
- All washings from cement and other cleaning processes must be contained within the site and removed via tanker or other appropriate means to prevent discharge into the local environment.
- All contaminated water must be removed from site and adequately treated prior to discharge under the appropriate permits and licenses.
- Full final details of the silt prevention measures will be included in the Contractors Construction Phase Plan and will be reviewed and agreed with the Clients appointed Ecologist prior to works commencing.

2.17 Installation of drainage and SuDS features:

- Temporary SuDs and/or early installation of the permanent SuDs features will be implemented to prevent silt contamination of high-risk watercourses.

- During construction of the sewers and infrastructure the likelihood of any contamination being caused is slim, however all machines are well serviced and will be fuelled via diesel station located within the compound facilities that will have the appropriate raised blockwork surround with plastic lining to help prevent spillages.
- If there are spillages whilst a machine is onsite, then this can be addressed using the locally located spill kits to prevent any further contamination within the soil. There will also be the appropriate skips for waste materials etc. that will be delivered on a call-off basis to prevent over filling.

2.18 Fuel and other chemicals on site:

- All chemicals used on site have the potential to cause serious pollution and environmental damage. Therefore, all fuel, oil and chemicals used on site must be stored in a secured container on an impervious base. Leaking or empty oil drums must be removed from the site immediately and disposed of via a licensed waste disposal contractor. In addition, the following controls must be adopted.
- Contents of any tank will be clearly marked on the tank itself, with a notice displayed requiring that valves and trigger guns be locked when not in use
- Care will be taken during the transfer of fuel or chemicals on site. A spill kit will be available in any locations that the transfer of fuel or chemicals will be taking place. Drip trays will be provided near any transfer device, such as a hose or nozzle, to prevent chemical ingress into the ground.
- All chemical stores must be appropriately bunded.
- Mobile plant is to be refuelled in a designated area, preferably on an impermeable surface away from any drains or watercourses.
- Hoses and valves are to be checked regularly for signs of wear and turned off and securely locked when not in use.
- Diesel pumps and similar equipment are to be placed on drip trays to collect minor spillages.
- These should be checked regularly, and any accumulated oil removed for disposal.

2.19 Cement:

- Cement is highly alkaline and corrosive and can have a serious impact on watercourses. It is essential to take particular care with all works involving concrete and cement. The following controls should be implemented:
 - Suitable provision is to be made for the washing out of concrete mixing plant or other vehicles so that washings do not flow into any drain or watercourse or seep underground.
 - In the event of a spillage on site, the material must be contained (using an absorbent material such as sand or soil or commercially available booms).
 - All spillages are to be reported to the Project Manager.

2.20 Air Quality:

- An Air Quality Assessment has been prepared by Hydrock which forms part of the planning application.
- The assessment will be used to determine the monitoring requirements and controls required to ensure that proposed work does not significantly affect air quality during the construction phase.
- All monitoring and control measures identified from the assessment will be considered and implemented as far as reasonably practicable.

2.21 Construction Traffic Management (including parking):

- The potential environmental impacts associated with construction vehicle movements are to be addressed through the strategy by way of:
 - Minimising traffic movements where practicable,
 - Minimising fuel consumption using local materials and sub-contractors
- An overall construction traffic management plan (TMP) has been prepared (see appendices). This details the proposed site set up and compound locations, construction traffic routing arrangements, working practices and working hours requirements wheel washing facilities, use of banksmen and consultation with local residence requirements.
- The Principal Contractor must adopt and implement the Traffic Management Plan in order to ensure that the impacts on the local community from construction traffic is minimised and that public access is maintained where reasonably practicable.

2.22 Location of site compounds and boundary hoarding:

- The Site compound, site storage and temporary buildings will agreed prior to start and will incorporate silt traps as part of the design.
- A plan showing the area's to be protected will be produced and appended to this CEMP. This is to follow – note, this will include boundary types e.g., Newt fencing, heras fencing, root protection etc.
- Enabling works for the site will comprise perimeter fencing/security provisions. The construction and maintenance of fencing and hoardings will be carried out to industry acceptable standards to prevent unauthorised access to the construction site, to provide noise attenuation, screening, and site security where required.

There will be different types of fencing will be used:

- Including hoardings used for noise control.
- Site information boards with out of hours contact details, 24-hour telephone number(s) (and email addresses for comments/complaints), community information and information on the works programme, positioned at key locations and,

- Display notices and signs on the site boundaries to warn of the hazards on site, such as deep excavations, construction access, etc. Clear sight lines will be maintained around hoardings and fencing with no hidden corners to avoid, where reasonably practicable, opportunities for anti-social behaviour, crime and to ensure the safety of pedestrians and vehicles.
- Footways of adequate width, to facilitate pedestrian flows, will be provided with appropriate signage to facilitate safe access to the site.
- Adequate lighting will be installed, as necessary, near or on hoardings, as is appropriate.
- Fencing and hoarding will, as far as is reasonably practicable, be located such that it does not damage trees or hedgerows.

2.23 Arboriculture work and tree protection:

- The tree and root protection requirements are set out in the Tree survey report and root protection plan which will be provided to the contractor at tender stage.
- All works must be undertaken in accordance with the Tree Constraints plan included in the appendices.

2.24 Measures to ensure no on-site fires during construction:

- There will be no fire or burning of materials on the site. The project manager and construction liaison officer will ensure that all staff and contractors will be made aware and adhere to this.
- The site and associated accommodation and welfare facilities will have in place appropriate plans and management controls to prevent fires

2.25 Minimisation, Recycling and Disposing of Waste:

- All contractors will follow the waste hierarchy and prevent waste as far as possible in the first instance. Where waste cannot be prevented it should be reused where possible, recycled or subjected to energy recovery processing. Disposal into landfill will be the last and least favoured solution.
- All contractors working on the OHH project will be expected to set out their environmental waste management arrangements at Tender stage and provide full details of how they will manage this on site via their Construction Phase HS&E plans.
- The contractor will be expected to be aware of which materials can be recycled and should try to do so, likewise any non-recyclable material should be disposed of with the appropriate level of care and concern.
- Where possible soil removed will be relocated on site for use in accordance with the ecologist plans for habitat improvements. Materials removed during the Phase 3 link road works will be relocated on the area of the First residential parcel (Lower acre) to prevent the need to import soil.

- A secure compound area will be established on site to provide an area for storage, collection, and disposal of rubbish from the development during the construction phase.
- This compound will contain multiple skips for different materials and will be covered over by netting.
- Waste vehicle movements will only take place between 08:00 and 18:00 (Monday to Friday) and 08:00 to 13:00 on Saturdays in accordance with the Planning Conditions.
- All waste transfer notes must be retained for review and inspection as requested by EBC/OHH teams.

2.26 Site Storage Arrangements:

- Materials used in construction operations, such as oil, chemicals, cement, lime, cleaning materials and paint have the potential to cause serious pollution. All fuel, oil and chemical storage must be sited on an impervious base and secured.
- Leaking or empty oil drums must be removed from the site immediately and disposed of via a licensed waste disposal contractor.
- The contents of any tank are to be clearly marked on the tank, and a notice displayed requiring that valves and trigger guns be locked when not in use.
- The site of all storage must be identified in the Construction Phase Plan.

3. Ecological and habitat protection requirements:

An Ecological Mitigation and Management Plan (EMMP) will be submitted as part of the planning application and will be implemented as one of the planning conditions.

Many species of animal and plant receive some degree of legal protection. For the purposes of this document, legal protection refers to: species included on Schedules 2 and 5 of the Conservation of Natural Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedules 1, 5 and 8 of the Wildlife and Countryside Act 1981 (UK Government, 1981) (as amended).

Legal offences associated with species listed on Schedule 2 of the Habitats Regulations and Schedule 5 of the Wildlife and Countryside Act in England and Wales include inter alia:

- Deliberate capture, injury or killing of animals or taking or destroying their eggs.
- Deliberately disturb animals in a way that would significantly affect their local distribution or abundance, or
 - affect their ability to survive, breed or rear young.
- Intentional or reckless disturbance of an animal in its place of shelter or protection.
- Damaging or destroying a resting place or breeding site.
- Intentionally or recklessly obstructing access to a place of shelter or protection; and
- Possess, control, transport, sell, exchange or offer for sale/exchange any live or dead animal or any part of an animal.

Relevant species listed on these Schedules that are potentially associated with this site comprise bats, great crested newt, hazel dormouse and common reptile species (e.g., slow worm and common lizard).

Bats, great crested newt and dormouse receive full protection from all legal offences listed above which includes disturbance and loss of habitat. Common reptile species receive partial protection under the Wildlife and Countryside Act in that they are protected from killing and injury only.

All species of wild bird are protected under the Wildlife and Countryside Act (1981) (as amended) from killing or injury. In addition, it is an offence to take or damage/destroy their eggs and to damage or destroy a nest whilst it is in use. Species listed on Schedule 1 (such as barn owl) receive additional protection in that it is illegal to disturb birds or their young whilst occupying, or near to, an active nest.

Badgers are protected under the Protection of Badgers Act 1992 (UK Government, 1992) which makes it an offence to wilfully kill, injure or take (or attempt to kill, injure or take) a badger; or to disturb badgers whilst occupying their setts.

A number of wild plants and animals (including grass snake and some species of bat) are also included within Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (UK Government, 2006) which lists flora, fauna and habitats considered by the Secretary of State to be of principal importance for conserving biodiversity.

The publication of the "England Biodiversity List" satisfies the requirements of Section 41 of the NERC Act 2006 for the conservation of biodiversity. Section 40 of the NERC Act

2006 requires public bodies, including local planning authorities, to have regard for the conservation of biodiversity in England, when carrying out their normal functions.

The Ecologist has prepared a plan identifying the ecological constraints (see appendices).

The Ecologist will review the measures required to comply with wildlife legislation and minimise disruption to the environment and ecology of the area. The Principal Contractor must refer to these when preparing their construction phase plan.

There are a number of key environmental and ecological considerations and ecologically sensitive species on, or linked to this site including:

- Designated **wildlife sites** a number of local wildlife sites (SINCs) lie immediately adjacent to the site or connected via the watercourses (SAC/SPA/SSSIs) and these must be protected.
- **Watercourses:** streams on site feed into the River Itchen SAC European Wildlife Site and must be protected from pollution incidents and sediment run-off (see measures above).
- **Boundary/retained habitats** such as hedgerows, trees, grassland habitats and the watercourses themselves.
- **Great Crested Newt (GCN).** A 250m buffer zone around the Chalcroft pond has been identified as potential GCN habitat and GCN licences are in place for the northern area and Chalcroft (to be submitted/approved). All works must comply with the licence requirements and the precautionary method statement provided and/or assessed by the Appointed Ecologist.
- **Bats.** Whilst no bat licences are required for the road, various bat licences are in place across the wider One Horton Heath development and copies of these will be retained by the Principal Contractor. A number of tree roosts are also present across the site. The location of which will be made available to the Principal Contractor and these will be updated/reassessed as required. Lighting impacts on bat foraging and commuting routes during the construction period will be minimised through the careful placing of lighting, avoiding key foraging and woodland habitat. The use of lighting at night will be temporary and for short duration.
- **Dormice.** Foxwood supports hazel dormice which are afforded special protection under the Wildlife and Countryside Act (1981, as amended). An appropriate Natural England Licence is currently in place and precautionary working methods statements will be prepared for works in this area and relevant toolbox talks provided to ensure all operatives are aware of the control measures required. All pre-start checks will be recorded.
- **Barn Owl** are afforded special protection under the Wildlife and Countryside Act (1981, as amended) and are protected from disturbance whilst nesting. Nesting barn owls are present in Chalcroft farm and there are two active nest boxes present on site to the south of Chalcroft and in the centre of Foxwood.

- **Otters** are included in Schedule 5 of the Conservation of Natural Habitats and Species (Amendment) (EU Exit) Regulations 2019. Whilst no evidence of otter has been recorded on site, it is likely that otter will use the watercourses and ditches on site to travel through the landscape. Measures to prevent disturbance or harm to otter are therefore required when works are conducted within or in the vicinity of suitable habitat.
- **Nesting Birds** – Suitable nesting habitat will not be removed during the nesting bird season March-August inclusive, unless checked by the Ecologist and confirmed no nests are present. Any active nests will be protected from disturbance. Works will be timed to prevent disturbance of nesting birds, in addition, precautionary working methods statements will be prepared, and relevant toolbox talks provided to ensure all operatives are aware of the control measures required. All pre-start checks will be recorded.
- **Badgers** - If necessary, a Natural England licence will be sought should any setts be found and are to be impacted either by disturbance / exclusions / closure with the provision of artificial setts created if necessary.
- **Other species** - A list of other potential ecological receptors have been identified or are highly likely to be present within the habitats on site in any area of the OPA include common reptiles.

Biosecurity (Invasive species):

The One Horton Heath Team adopts a robust approach to biosecurity, focusing on avoiding factors and situations that increase the risks of spreading diseases, parasites and invasive non-native plants and animals (INNS).

We therefore fully recognise the potential for our operations to act as a vector for biosecurity risks and the threat our work could pose, in the absence of mitigation, to the spread of diseases, parasites and INNS. The team ensures it mitigates this risk from the outset on each individual project. Our approach starts at home, and covers all aspects of our daily work and all locations that we visit during the day and on the way home.

Within the wider site we have known areas of Japanese knotweed which are currently in year 2 of treatment. There are also areas of Himalayan balsam (adjacent to Quobleigh stream) which must not be spread across the site or downstream.

Management of these invasive species must be undertaken in accordance with industry guidance such as the Ciria guidance document “Invasive species management for infrastructure managers and the construction industry (C679D)” and the SEPA document ‘Biosecurity and management of invasive non-native species for construction sites and Controlled Activities’ - <https://www.sepa.org.uk/media/163480/biosecurity-and-management-of-invasive-non-native-species-construction-sites.pdf> (See appendices).

Our approach to biosecurity is summarized here.

We store and maintain field equipment and materials in a separate location, split into lockable clean/dry and dirty/wet containers, with an outside yard and washdown area available for disinfection. We adopt the three key steps associated with Check - Clean – Dry and the guidance

for Biosecurity in the Field (both on site and at our field depot) and this forms the cornerstone of our Biosecurity policy.

- *Check - Check your plant, equipment and clothing for living organisms. Pay particular attention to areas that are damp or hard to inspect.*
- *Clean - Clean and wash all plant, equipment, footwear and clothes thoroughly, preferably with hot water. If you do come across any organisms, leave them at the location where you found them.*
- *Dry - dry all plant, equipment and clothing - some species can live for many days in moist conditions. Make sure you don't transfer them elsewhere.*

Prior to any site work, a biodiversity risk assessment is completed, which includes consideration of background information (including client knowledge, GIS data, site records) to identify potential hazards, risk ratings and mitigation measures. Where specialist advice is required, this is sought from our professional external advisors and/or from other sources such as best practice guidance documents, the Defra and Non-Native Species Secretariat website, other EU/UK advisory websites and from our clients where appropriate (e.g. Environment Agency).

The outcome of the biodiversity risk assessment feeds into a project task method statement that will be used to deliver a project/site induction with the use of toolbox talks and registers of attendance. Any new members of the team (including sub-consultants and contractors) joining a project will have to complete the induction. Guidance and identification materials (e.g. of INNS) are made available as part of this induction. A biosecurity response plan is developed, and procedures and any required equipment is always available on site as well as being prepared for the office/field depot.

Site work adopts a risk avoidance strategy where possible (e.g. use of advanced knowledge or walkover surveys to ground truth biodiversity risks identified as being potentially present, avoiding driving vehicles off road wherever possible to minimise transfer of soils/spores/seeds, avoiding sensitive times of the year, provision of the right equipment that is easy to manage, following defined paths, use of signage and barrier tapes, checklists, personal cleaning and disinfection, equipment isolation/ washing and disinfection facilities where possible, or isolation and handling at our field depot, confirmation of safe and appropriate disposal pathways for potentially contaminated materials, cleaning and drying (48hrs) of personal protective equipment and sampling equipment.

4. Programme management arrangements:

The programme of works will broadly consist of the following:

- Enabling works including, ecological protection works, perimeter fencing/security provisions, site compound, site clearance, ground investigation, initial service diversion works and access works, arboriculture works.
- Sub infrastructure works, SuDS and other drainage features including temporary SuDS features for use during construction phases,
- Construction of drainage systems and other ground works,
- Road construction
- Landscaping works.

A full and detailed programme will be prepared for each phase.

The following works must only be undertaken following liaison and agreement of the ecologist, and be conducted in line with relevant licences and permits:

- Ecological protection works,
- Works which may cause disturbed of land within 250m of the great crested newt breeding ponds (where applicable).
- Works to remove hedgerows.
- Bat protection works.
- Dormouse or other EPS protection works.
- Tree removal and arboriculture works (stream edge).
- Dewatering (where required) and discharge into water courses.
- Installation of outlets requiring ordinary water course licences.

There are a number of additional seasonal and time related requirements which will be included under the advice of the ecologist and included in the programme. The Principal Contractor must ensure that these are considered when developing the construction programme.

5. Monitoring arrangements and emergency plans:

A robust monitoring regime will be implemented by The Client and The Principal Contractor.

The specific CEMP arrangements implemented by the Contractor will be detailed in the schedule (template located in the appendices).

The Contractor must ensure that appropriate and effective environmental emergency plans are in place and that all relevant personnel are trained in their use. Such plans include, spillages, high winds and/or excess rain/weather incidents.

The Principal Contractor's Site Manager is responsible for the daily monitoring of their implementation of environmental protection measures and the CEMP requirements throughout the construction phase and these must be reported to the Client weekly in accordance with the OHH EHS procedures (see appendices)

The Site Ecologist or Ecological Clerk of Works is responsible for undertaking regular site inspections and audits and reporting these to the OHH HSE team.

A regular, independent environmental inspection will be undertaken on behalf of EBC to review the controls in place. The frequency of formal inspection will be relative to the level of risk and may only be reduced on agreement by all relevant parties.

Representatives of the Client may request documentary evidence of monitoring at any time and will undertake site monitoring visits and supervisory visits both before and during the construction phase.

Control of Non-conformance

Non-conforming products or processes would initiate a Non-Conformance Report, which would identify the nature of the problem, the proposed corrective action, action taken to prevent recurrence of the problem and verification that the agreed actions have been carried out.

All incidents and non-compliance issues found must be reported to the OHH project team and the EBC Pollution Control and Ecology team at the earliest possible opportunity.

A template monitoring form is included in the appendices.

6. Management plans and further assessments:

The following assessments, strategies and management plans will be reviewed and implemented:

- Construction Management Strategies including.
 - Construction Traffic Management Plan

7. Summary and conclusions:

- This “Strategy” document sets out the overall framework and key requirements for the Contractor to develop and submit to the Local Planning Authority for approval specific Construction and Environment Management Plans (CEMP), including the prevention of pollutants entering water courses and managing the movement of construction, delivery traffic to/from the site, monitoring and audit of emissions and impacts etc.
- The contractor must develop specific Construction and CEMP and provide their implementation plans for review by the project team before the commencement of work.
- A completed specific ‘CEMP’ must be included in the Contractors Construction Phase Plan and the Local Planning Authority consulted before works commence on site
- Subsequent to the specific ‘CEMP’ small variations to the CEMP may be necessary as development progresses and the phasing programme may change as a result. If these have the potential to result in adverse environmental or pollution impact, change or enhancement of mitigation or control measures will be necessary, the Local Planning Authority must be consulted on these prior to temporal or physical change to the works.