

OHH Strategy Document : Construction Environmental Management Plan (CEMP)

One Horton Health

PHASE 3 LINK ROAD



On behalf of

ONE HORTON HEATH TEAM
EASTLEIGH BOROUGH COUNCIL
EASTLEIGH HOUSE
UPPER MARKET ST
EASTLEIGH
HAMPSHIRE
SO50 9YN

OHHP3RoadCEMP/BJM24042023

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	6
2.1.1 Contracts Manager;	6
2.1.2 Site Manager;	6
2.1.3 The site HSEQ Advisor:	7
2.1.4 Site Ecologist / Ecological Clerk of Works (ECoW)	8
2.1.5 Contractors and Visitors:.....	8
2.2 Task specific risk assessment:	8
2.3 Permits and Licenses:.....	9
2.4 Ecological Toolbox Talk – Phase 3 Link Road:	11
2.5 Noise, Vibration, Lighting and Air Quality Management:	13
2.6 Control of Lighting on the Proposed Development	14
2.7 Bird Hazard Management Plan:	14
2.8 Arrangements for the use of cranes and other tall construction:	15
2.9 Measures to Control the Emission of Dust and Dirt during Construction (including transfer of mud to external areas):	15
2.10 Protection of the aquatic environment in terms of water quantity and quality:	16
2.11 Work in inclement weather:	16
2.12 Deliveries:.....	16
2.13 Excavations:.....	17
2.14 Spoil Heaps:.....	17
2.15 Plant and Wheel Washing:	17
2.16 Sediment control:.....	17
2.17 Dealing with silty or contaminated water:.....	18
2.18 Stream/watercourse diversions:.....	19
2.19 Installation of drainage and SuDS features:.....	19
2.20 Fuel and other chemicals on site:	20
2.21 Cement:.....	20
2.22 Air Quality:	20
2.23 Construction Traffic Management (including parking):	21
2.24 Location of site compounds and boundary hoarding:	21
2.25 Arboriculture work and tree protection:	21
2.26 Measures to ensure no on-site fires during construction:	22
2.27 Minimisation, Recycling and Disposing of Waste:	22

2.28 Site Storage Arrangements:	22
3. ECOLOGICAL AND HABITAT PROTECTION REQUIREMENTS:.....	23
3.2 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:	30
8. APPENDICES:	31
APPENDIX A – RIVERS AND WATER COURSE PLAN INCLUDING OWC APPLICATION AND PLANS.	32
APPENDIX B - ECOLOGICAL CONSTRAINTS PLANS.....	33
APPENDIX C - TREE CONSTRAINTS PLAN.....	34
APPENDIX D – BIRD HAZARD MANAGEMENT PLAN	35
APPENDIX E – SITE SPECIFIC CEMP CONTROLS – TEMPLATE	36
APPENDIX F – CEMP WEEKLY INSPECTION/MONITORING FORM DRAFT (SEE EHS MANAGEMENT SYSTEM CURRENTLY UNDER REVIEW).....	39
APPENDIX G– FURTHER RELEVANT DOCUMENTS.....	40
APPENDIX H – SITE COMPOUND AND SALES OFFICE LOCATION PLAN.	42
APPENDIX I – CONSTRUCTION TRAFFIC MANAGEMENT PLAN.....	43
APPENDIX J – PERMITS AND LICENCES.	44
APPENDIX K – ENVIRONMENTAL AUDIT TEMPLATE	45
.....	60
APPENDIX L – CODE OF CONDUCT FOR CONSTRUCTION - CIRIA GUIDANCE DOCUMENT C741: ENVIRONMENTAL GOOD PRACTICE ON SITE	64
APPENDIX M – BIOSECURITY AND MANAGEMENT OF INVASIVE NON-NATIVE SPECIES FOR CONSTRUCTION SITES AND CONTROLLED ACTIVITIES.	65
APPENDIX N – SEPA/NIEA GUIDANCE NOTE – GPP5 GUIDANCE FOR POLLUTION PREVENTION – WORKS AND MAINTENANCE IN OR NEAR WATER	66

Revision	Prepared By	Checked By	Date
01	Bryony Mitchell	Emma-Lousie Spicer	28.07.21
02	Bryony Mitchell (EBC)	Ben Mitchell (John's Associates)	13.12.21
03	Bryony Mitchell (EBC)		16.03.22
04	Bryony Mitchell (EBC)	Matt Johns (John's Associates)	07.09.22
05	Bryony Mitchell (EBC)		04.10.22
06	Bryony Mitchell (EBC)		24.04.23

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 each parcel specific Construction Environmental Management Plan (CEMP).

The parcel specific Construction Environmental Management Plan will be fully 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 (current in draft for consultation and potential adoption by wider EBC).

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 phase 3 link road is shown as the dotted line in figure 1.1 below.

The phase 3 road layout runs through areas with a number of specific environmental and ecological requirements for protection (see appendices).

This document should be read with related documents set out in the appendices.

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 phase 3 link road is shown as the dotted line in figure 1.1 below.

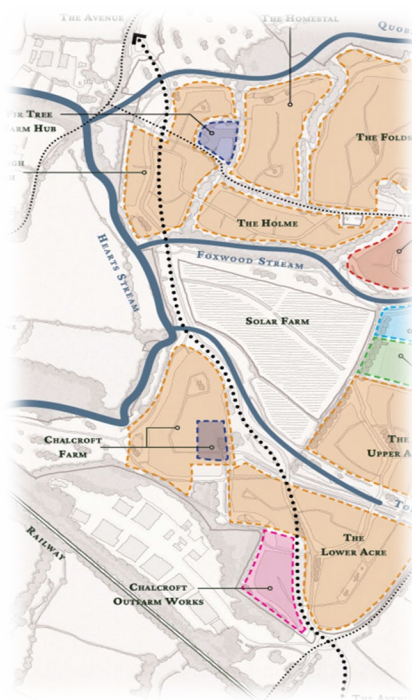


Figure 1.1

1. Scope of works and project description

1.1 This CEMP strategy document covers the phase 3 link road development which links the new infrastructure sections and will allow access to pedestrians, vehicular and other traffic to flow from the north to south of the site.

1.2 This phase of works include:

- Installation of protective measures for all European Protected Species as per license conditions and other environmental protection works.
- Ground works and soil stabilisation.
- Temporary working including de-watering.
- Stream diversion.
- Either full depth construction or soil stabilization options for road and bridge construction.
- Installation of street lighting, signage and other services.
- Hard and soft landscape works.
- Footways / cycleways.
- SuDS and associated infrastructure.

1.3 This CEMP has been developed to consider the conditions relevant to this phase of development. These 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:

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.

The Contractors specific CEMP shall include and not be limited to the following.

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.

2.1.1 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.

2.1.2 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.

2.1.3 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).

2.1.4 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/CSM 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 appendix K.
- 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.

2.1.5 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 Task specific risk assessment:

A task-based risk assessment will be undertaken by the Principal Contractor with assistance from the Site Ecologist. The Risk assessment will be based on the following template.

Task based risk assessment – Phase 3 Link Road

Date	Risk Assessment Reference:	
Prepared by		
Description of Task		
Risk Item	Receptor	
Injury / Killing		
Disturbance		
Damage / Destruction of Habitat		
Confirmation that risk of an offence is low as per the Non-licensable Method Statement		
Signed		

2.3 Permits and Licenses:

2.3.1 Environment Agency Permits:

The Environmental Permitting (England and Wales) Regulations 2016 require a permit or exemption to be obtained for any activities which will take place on or within 8 metres of a main river (Quobliegh Stream).

A permit has been applied for from the Environment Agency for the Construction of the Phase 3 Road main river and watercourse crossings.

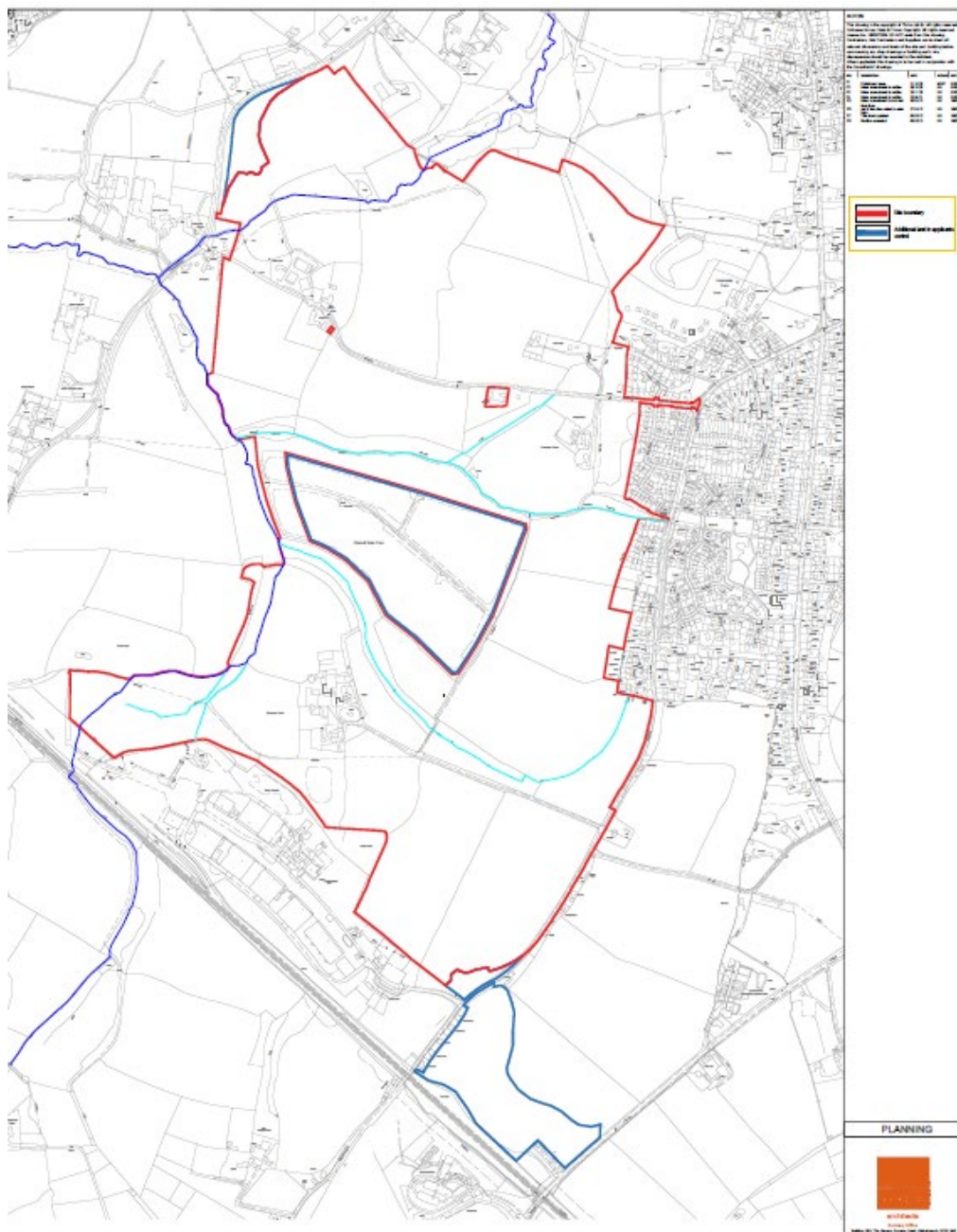
A Temporary dewatering permit will also be applied for and provided to the Principal Contractor prior to works commencing = <https://www.gov.uk/government/publications/temporary-dewatering-from-excavations-to-surface-water/temporary-dewatering-from-excavations-to-surface-water>

2.3.2 Hampshire County Council Permits:

In addition to the EA permits, Ordinary Water Course Consent applications have been made to Hampshire County Council for the remaining water courses.

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

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.



2.3.3 Natural England Licences:

Natural England Licences will be applied for and complied with for the following European Protected Species:

- Bats
- Great Crested Newts
- Dormice

Once granted the permits and licences will be appended to this CEMP and all works must be undertaken in accordance with the relevant permits (see appendices).

2.3.4 EBC/OHH Ecological Permits:

No works will be undertaken unless a valid ecological permit to work has been signed and issued by the OHH Site Manager or the OHH Supervising Ecologist.

Ecological Permit to work:

Date	PERMIT TO WORK REFERENCE:	
Prepared by		
Description and Location of Task		
Confirmation all staff have attended toolbox talk		
Confirmation all pre-work checks have been completed by ecologist		
Confirmation task/day specific risk assessment has been completed and no outstanding issues remain		
Confirmation of tasks where ecologist presence is required		
Confirmation that contractor has all appropriate equipment/personnel etc. in place.		
I confirm that an Ecological Permit to Work for the task / work on the date specified has been reviewed and approved.	Supervising Ecologist/Site Manager Name:	Signature:

2.4 Ecological Toolbox Talk – Phase 3 Link Road:

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 Phase 3 Link Road
- 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
 - a. GCN
 - b. Bats
 - c. Dormice
- CEMP and Precautionary Method of Works
- INNS (invasive non-native species)
- 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

Name	Company / Role	Date	Confirmation TBT Understood	Confirmation of Attendance

2.5 Noise, Vibration, Lighting and Air Quality Management:

“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 following list summarises 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.

2.6 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 SINC, 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.

2.7 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."

2.8 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.aoa.org.uk/wp-content/uploads/2016/09/Advice-Note-4-Cranes-2016.pdf>

2.9 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. 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.
- Spoil and arisings from the phase 3 road will be stored for re-used on the First Residential Parcel (The Lower Acre) to reduce the requirement for importing soil.

2.10 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)

2.11 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/>)

The following activities give rise to potential risks to water course contamination:

2.12 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.

2.13 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 and this must be undertaken in accordance with the relevant EA permit where necessary (See appendices).

2.14 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 to prevent the need for importing fill material. Location of storage to be agreed in line with the above statement.

2.15 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.

2.16 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.

2.17 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.

2.18 Stream/watercourse diversions:

- Rerouting of watercourses will be required for the installation of bridge and walkway. All works will be undertaken in accordance with the Environment Agency Permits (see permits section). Works which will impact the immediate environment and any European Protected Species (EPS) will be undertaken in accordance with the method statement reviewed and agreed with the OHH Ecologist and all relevant license conditions. The maintenance of a buffer zone to the edges of the streams will allow the continuity of the channel for the uninterrupted movement of water-based mammals such as otters and others.

2.19 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. Where strategic SuDS features cannot be implemented or are not yet effective (e.g. before vegetation establishment which can typically take up to 3 years) temporary SuDS will be installed.
- 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.

2.20 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.

2.21 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.

2.22 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.

2.23 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.

2.24 Location of site compounds and boundary hoarding:

- The Site compound, site storage and temporary buildings will be sited as per drawing reference 10413-SEG3-514 (see appendices) 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 based on. 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.

2.25 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.

2.26 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

2.27 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 (FRP/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.

2.28 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:

3.1 An Ecological Mitigation and Management Plan (EMMP) has been 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). A dormouse licence is being prepared (and will be attached to this CEMP) that will be required to allow tree or woodland removal in the vicinity of Foxwood. 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** – 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.

- **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.

Habitat protection measures will be applied to all sensitive habitats on site, including those outside of the construction boundary but near the construction area.

3.2 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).

3.2.1 Our approach to biosecurity is summarized here.

Storage and maintenance of 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 the 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:

4.1 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 works and access works,
- Sub infrastructure works, SuDS and other drainage features including temporary SuDS features for use during construction phases,
- Stream diversion works
- Soil stabilisation works (to be confirmed)
- Construction of foundations and other ground works,
- Road and bridge construction
- Landscaping works.

A full and detailed programme will be prepared by the successful contractor.

4.2 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, including stream diversions.
- 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.

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.

For example, groundworks within 10m of a watercourse are to be undertaken outside of the key dates for salmon spawning (November and December).

Arboriculture and hedgerow works are to be undertaken outside of the nesting bird season and any root structures within the 250m buffer zone of the GCN pond must not be removed during periods of potential hibernation.

All works which may affect European Protected Species will be undertaken in accordance with the Natural England License requirements.

The Principal Contractor must ensure that these are considered when developing the construction programme.

The works programme will be reviewed and agreed with the Site Ecologist and/or Ecological Clerk of Works PRIOR to works commencing.

5. Monitoring arrangements and emergency plans:

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

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

5.3 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.

5.4 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)

5.5 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.

5.6 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.

5.7 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

5.8 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.

5.9 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 prepared and implemented:

- Construction Management Strategies including.
 - Construction Traffic Management Plan
 - Construction Management Strategy (Cranes)
 - Noise Risk Assessment and Management Scheme (Construction phase)
 - Invasive species method statement (Construction phase)
 - Ecological Mitigation and Management Plan (EMMP) – Construction phase
 - Waste Management strategy (TBC in accordance with planning requirements)
 - Materials Management Plan (as per the CL:aire DoW protocol)

7. Summary and conclusions:

- This report sets out the overall framework and key requirements for the Construction Environment Management Plan (CEMP), including the prevention of pollutants entering water courses and managing the movement of construction and delivery traffic to/from the site.
- The contractor must review, develop, and implement this CEMP and provide their implementation plans for review by the project team before the commencement of work.
- A completed 'CEMP' Control measures document must be included in the Contractors Construction Phase Plan.
- It is acknowledged that small variations to the CEMP may be necessary as development progresses and the phasing programme may change as a result.
- Any significant changes to the CEMP will be re-submitted to the planning authority.

8. Appendices:

Appendix A – Rivers and Water Course plan

Appendix B - Ecological Constraints Plans

Appendix C - Tree Constraints Plan

Appendix D – Bird Hazard Management Plan

Appendix E – Site specific CEMP Controls – TEMPLATE

Appendix F – CEMP weekly inspection/monitoring form DRAFT (see EHS Management system currently under review)

Appendix G– Further relevant documents

Appendix H – Site compound and sales office location plan.

Appendix I – Construction Traffic Management Plan.

Appendix J – Permits and licences.

Appendix K – Environmental Audit Template

Appendix L – Code of Conduct for Construction (INCLUDING Ciria guidance document C741: Environmental Good Practice on Site)

Appendix M – Biosecurity and management of invasive non-native species for construction sites and Controlled Activities.

Appendix N – SEPA/NIEA Guidance note – GPP5 Guidance for Pollution Prevention – Works and Maintenance in or near water

Appendix A – Rivers and Water Course plan including OWC application and plans.

Appendix B - Ecological Constraints Plans

Appendix C - Tree Constraints Plan

Appendix D – Bird Hazard Management Plan

Appendix E – Site specific CEMP Controls – TEMPLATE

Project/Task title: Phase 3 Link Road

Principal Contractor: **TBC**

Start date: **TBC**

Duration: **TBC**

Site Manager: **NAME AND CONTACT DETAILS TBC**

Site Environmental Representative: **NAME AND CONTACT DETAILS TBC**

Environmental / Ecological issues	Control measures to be implemented - EXAMPLES	Location of control measures	Comments
Noise and vibration	Noise assessment & identification of noisy plant/works to be undertaken. Use of low noise/vibration equipment (procurement strategy). Separation of noisy & vibrating equipment (prevention at source)- acoustic barriers. Location of equipment away from sensitive receptors. Maintenance of equipment. Avoid machinery idling. Traffic management plan – hours of work. Noise awareness campaign and toolbox talks.	TBC	
Lighting	Lighting faces downwards and into site to avoid spilling onto adjacent habitats. No lighting on boundary of sensitive areas (TBC). Lights turned off at night.	TBC	
Dust / air quality	Avoid unprotected spoil heaps – seeding/cover if long term storage required. Dust suppression to be used where necessary (run off to be captured and treated/settled prior to discharge) – any discharge to be in accordance with EA permit.	TBC	
Bird hazard management	See bird hazard management plan (BHMP). Construction of SuDS basins to prevent attracting wading and water birds. Notification of grass seeding to the airport authorities – See section 5.2 of the BHMP Full details of arrangements to be added.	TBC	

Soil stabilization – use of cement / lime	TBC - Details of arrangements to be added.	TBC	
Use of chemicals / fuel on site.	All fuel and chemicals to be stored in a secured container on an impervious base with sufficient bunding capacity to prevent ground contamination in the event of failure. All chemicals must be properly labelled. All fueling in designated area away from water courses. Drip trays must be used for all fueling operations. All hoses and valves to be checked regularly for damage/wear and tear. Spill kits must be available AND all operatives trained in their use. Emergency procedures must be in place and all operatives trained in them. All spillages must be reported to the site manager AND the site Environmental Representative as soon as possible. A record of all incidents must be kept and reported to the Client as soon as possible.	TBC	
Water quality – dewatering / discharge (sediment control)	Control of sediment and runoff will be managed in accordance with the principles set out in the CIRIA SuDs Manual. 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. Any discharge to be in accordance with EA permit.	TBC	
Water quality/mud transfer – wheel wash and cement washout.	Wheel wash and cement slurry to be in purpose-built system to ensure water is reused, silt, sediment and invasive species are prevented from transfer or contamination or water courses. Cement wash-out to be retained and returned to supplier – or contained for treatment - TBC.	TBC	
Stream / watercourse diversions.	Stream diversion requirements including damming and temporary rerouting the stream – details TBC	TBC	
Tree removal and tree root protection	Tree removal in the area of the stream must be undertaken in accordance with the EA permit requirements. Tree route protection requirements set out in the relevant arboricultural reports will be implemented.	Detail specific root protection zones on plan.	
Waste management	Waste management strategy to be prepared and implemented following the waste hierarchy – prevention,	To be prepared	

	reuse, recycling, energy recovery, disposal. Soil from the Phase 3 Road is to be used on the First residential parcel to avoid the requirement for importing soil.		
Prevention of run-off (spoil storage)	Location of spoil heaps to be furthest from watercourses and bunded/water capture used to prevent silt run off.	TBC	
Great Crested newts	GCN licenses are in place for the northern area and Chalcroft (to be submitted/approved). All works must comply with the license requirements.	TBC	
Owls	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 center of Foxwood.	TBC	
Nesting birds	Nesting birds must not be disturbed. Where possible, removal of trees and hedgerows should not be undertaken during the nesting season. If works must be undertaken during this time, then a pre-works check by a competent ecologist must be made to ensure that no nesting birds are present.	TBC	
Bats	A number of tree roosts are present across the site. The location of which will be made available to the Principal Contractor, and these will be updated/reassessed as required.	TBC	
Dormice	Foxwood supports hazel dormice. All works around Foxwood Stream will be undertaken in accordance with the dormouse license is being prepared (and will be attached to this CEMP	TBC	
Invasive species - Japanese knotweed (<i>Fallopia japonica</i>) and Himalayan balsam (<i>Impatiens glandulifera</i>).	There are areas of Himalayan balsam (adjacent to Quobleigh stream) which must not be spread across the site or downstream . A method statement for removal or treatment to be agreed in writing by the local planning authority PRIOR to any works in this or adjacent areas. Biosecurity measures including: Timing of removal. Vehicle and personal decontamination (wheel wash and footwear washing). Cleaning and disinfecting tools. Signage and training for all operative.	TBC	
OTHER			

Appendix F – CEMP weekly inspection/monitoring form DRAFT (see EHS Management system currently under review)

Project/Task title: Phase 3 Link Road

Date of inspection: **TBC**

Time of inspection: **TBC**

Details of person undertaking inspection: **TBC**

Principal Contractor: **TBC**

Site Manager: **NAME AND CONTACT DETAILS TBC**

Site Environmental Representative: **NAME AND CONTACT DETAILS TBC**

Licenses and permits;

License/Permit	Number	Issue date	Issued by
Great Crested Newt License	TBC	TBC	Natural England
Bat License	TBC	TBC	Natural England
Dormouse License	TBC	TBC	Natural England
Ordinary water course consents	TBC	TBC	Hampshire County Council
Tree removal (Quobleigh Stream)	TBC	TBC	Environment Agency
Bridge and outfall application (Quobleigh Stream)	TBC	TBC	Environment Agency
OTHERS			

Environmental / Ecological issues	Control measures checked AND adequate YES/NO	Signed / dated	Actions required / Comments
Noise and vibration			
Lighting			
Dust / air quality			
Bird hazard management			
Soil stabilization – use of cement / lime			

Use of chemicals / fuel on site.			
Water quality – dewatering / discharge (sediment control)			
Water quality/mud transfer – wheel wash and cement washout.			
Stream / watercourse diversions.			
Tree removal and tree root protection			
Waste management			
Prevention of run-off (spoil storage)			
Great Crested newts			
Owls			
Nesting birds			
Bats			
Dormice			
Biosecurity - Invasive species - Japanese knotweed (<i>Fallopia japonica</i>) and Himalayan balsam (<i>Impatiens glandulifera</i>).			
OTHERS			

Incidents/accidents/near misses reported this week:	
Toolbox talks undertaken this week:	
Actions required from this inspection:	
Inspection findings reported to:	<i>Name, role and date.</i>
Additional Comments:	
Signature:	

NOTE: This form must be completed WEEKLY and submitted via iAuditor OR via ohh_hsereports@eastleigh.gov.uk

Appendix G– Further relevant documents

Document	Author	Reference/Date/Version/Link
Bird Hazard Management plan	John's Associates	Appended
Tree Constraints Plan	Tyler Grange	Assessment reference 11705_R05a_JP_HM dated 15 December 2020
Construction Traffic Management Plan	PBA	August 2021 (appended)
Environmental Mitigation and Management Plan (EMMP)	Johns Associates	
OHH Environmental Strategy Chapter 8.	Johns Associates	
OHH Environmental Strategy Chapter 10 - Landscape and Ecological Mitigation Masterplan (LEMP)	Johns Associates	ES Appendix 10.12 Landscape and Ecological Mitigation Masterplan, 11th May 2021. Johns Associates
OHH Environmental Strategy Chapter 11.	Johns Associates	ES Appendix 11.5 One Horton Heath: Water Quality Outline Monitoring and Management Plan. Johns Associates
Pollution Prevention Guidelines - Works and maintenance in or near water: PPG5		https://www.netregs.org.uk/media/1418/gpp-5-works-and-maintenance-in-or-near-water.pdf
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
CIRIA C741 – Environmental Good Practice on Site – 4 th Edition 2015		https://www.ciria.org/CIRIA/CIRIA/Item_Detail.aspx?iProductcode=C741&Category=BOOK

Appendix H – Site compound and sales office location plan.

Appendix I – Construction Traffic Management Plan.

Appendix J – Permits and licences.

Append and update as received:

Environment Agency permits

- Tree removal (Quobleigh Stream)
- Bridge and outfall application (Quobleigh Stream)

Hampshire County Council Permits

- Ordinary water course consents – See planning drawings Northern and Southern Sections

Natural England Licenses:

- Great Crested Newt License
- Bat License
- Dormouse License

Appendix K – Environmental Audit Template

Section 1 - Pollution prevention and response



Pollution is the release of any substance that can harm people or animals, plants, soil, water or air. Common pollutants from construction sites include: silt, oil (including fuel), cement, concrete, grout, chemicals, sewage, waste materials, dust or smoke.

Common causes of pollution include: illegal discharges, burning waste, pollutants carried by rainwater runoff, poor maintenance or supervision, accidental spillage and vandalism.

The water environment is vulnerable, pollution can kill fish and affect other users such as farmers, industry and drinking water abstraction. Surface and groundwaters have legal protection. It is an offence to pollute them. This can occur through less obvious methods such as silt or oil entering rivers via surface water drainage systems or groundwater by percolating through soil and permeable rocks.

Land and soil support a wide range of biodiversity including legally protected species and is a hugely valuable resource. Biodiversity can be directly affected by chemical and oil pollution or changes to pH. Soil quality can be affected in the same way with potential effects to agricultural crops and human health.

Emissions to air (e.g. gas, dust or odour) can affect people's health, be a nuisance to site neighbours and have an impact on ecology.

Noise, light and vibration can all create nuisance-affecting people's quality of life and health, as well as affect biodiversity and other resources.

The Principal Contractor's primary approach to minimise these risks is one of pollution prevention and response.

Pollution Prevention and Response are based on best practice guidance and relate to the safe storage, handling, disposal of chemicals and other materials and pollution response procedures¹ as well as the Principal Contractor Site Environment plan.

Table 1 sets out the individual EQS and auditing results (to be completed during the primary site audit) associated with each section.

Table 1. Section 1 - Pollution prevention and response - standards and auditing results

Reference	Standard	Auditing results (Y-yes / N- No)
Section 1 - Pollution Prevention Planning		
	a) Have you consulted with the project environmental advisor / manager (if one has been appointed)? b) Have you reviewed your Environmental Management System (EMS) if you have one? c) Are you diverting water on site? If yes, have you received permission from the Environment Agency to do so? d) Have you identified: a. the potential pollutants? b. the potential to cause pollution on site? c. any historical contamination? If so, where is risk management documented? d. control measures to prevent pollution? e) Are pollution prevention methods recorded? If so, where? f) Have pollution prevention requirements been communicated to those working on site? g) Have you identified pollution prevention communication & awareness sessions for those working on site, e.g. Tool Box Talks? h) Have you identified drainage on site? i) Has drainage been colour coded? j) Have you identified all surface water and groundwater on, under and around the site? k) Have you contacted local regulators? l) Have you invited them to visit the site if appropriate? m) Have pollution incidents been planned for and do you have an incident plan? n) Have you nominated a 'responsible person' for pollution prevention on site? o) Have site personnel been trained to use spill kits? p) Have you considered how to minimise and manage your waste on site? q) Have you identified local weather conditions and the means to keep updated throughout the project?	

Reference	Standard	Auditing results (Y-yes / N- No)
	r) Have you developed a site inspection routine to check for pollution incidents or potential problems?	
1:2 Vehicles and Deliveries		
	a) Is a Traffic Management Plan in place? b) Has a location for deliveries (the delivery point) been identified? c) Is the delivery point located away from watercourses, drains and hazards? d) Have times for deliveries been identified to avoid disruption to operations or neighbours? e) Have suppliers and staff been informed of the delivery point and delivery times? f) Has a designated 'responsible person' been identified to supervise deliveries? g) Has the condition of drums, containers or tanks been inspected and verified fit for purpose before accepting the delivery? h) Are emergency response plans and spill kits located at delivery points? i) Have you planned how you will prevent mud being taken off site by delivery vehicles?	
1:3 Materials Storage, Stockpiles and Exposed Ground		

Reference	Standard	Auditing results (Y-yes / N- No)
	a) Are stockpiles located to minimise the risk of pollution? b) Are appropriate methods in place to safeguard the condition, structure and quality of top and sub soils during stripping, handling, storage and reinstatement. c) Are they away from watercourse, ditches or drains? d) Are stockpiles protected or damped down to reduce dust? e) Are stockpiles covered and/or protected to reduce or intercept silt runoff? f) Are contaminated stockpiles located in an appropriate area? g) Are there arrangements for containing packaging waste?	
1:4 Oil² Storage, Use and Refuelling		
	a) Is there documentation to demonstrate compliance with legal requirements for oil storage, use and refuelling. b) Are oil storage areas away from high risk areas?³ c) Are oil storage areas on an impermeable surface? d) Are tanks, drums or containers in good condition with no sign of damage or corrosion? e) Have oil stores and containers for secondary containment? f) Is secondary containment sufficient to contain contents of the containers? g) Are bunds/drip trays being kept up to date for oil and rainwater leaks? h) Are oil store maintenance and inspection records being kept up to date? i) Is refuelling equipment stored within secondary containment when not in use? j) Are oil storage containers and stores secure e.g. kept lock shut when not in use? k) Are emergency plans and spill equipment available at oil storage	

² Oils, biofuels, lubricating and hydraulic oils, synthetic and mineral oils.

³ Risk of damage from impact or collision, within 50m of a spring well or borehole, within 10m of a watercourse, ditch or drainage channel, where spillages could enter open drains, loose fitting manhole covers or unmade ground, where spillages could run over hardstanding to enter a watercourse, unmade ground or drain, where a tank vent pipe can't be seen from its filling point, or on roofs.

Reference	Standard	Auditing results (Y-yes / N- No)
	areas? l) Are emergency plans and spill equipment available at refueling areas? m) Have staff been trained in the use of spill kits and in emergency procedures? n) Has a responsible person been designated to oversee implementation of the emergency plan?	
1:5 Cement, Concrete and Grout – NA		

Reference	Standard	Auditing results (Y-yes / N- No)
	a) Have control measures been put in place to prevent cement, grout or concrete wash-off entering watercourses or drains? b) Are staff aware that they shouldn't let cement, grout or concrete washings enter surface waters or surface water drains? c) Are designated wash-off areas provided? d) Are wash areas contained and sited away from surface waters and surface water drains? e) Has the treatment and disposal of wash-off effluent been considered? f) Is cement powder stored carefully on site to prevent leaks and dust? g) Have you considered the products ordered, quantities and timing?	
1:6 Chemicals and Hazardous Substances – NA		
	a) Do you only order and store the quantities you need? b) Are chemicals and hazardous substances stored in bunded areas away from watercourses and drains? c) Are storage facilities located to avoid damage from site traffic or vandalism? d) Are the storage facilities locked when not in use? e) Are all chemicals and hazardous substances clearly labelled? f) Is a spill kit or emergency response equipment kept at the storage point? g) Have you produced an emergency plan for the site? h) Are all staff trained in how to deal with chemicals or hazardous substances they use as part of their job? Do they know how to prevent pollution in an emergency? i) Are the Safety Data Sheets provided by the supplier stored with the emergency plans?	

Reference	Standard	Auditing results (Y-yes / N- No)
1:7 Excavations		
	a) Has the site been investigated for contamination? b) If there is contaminated soil, do you have procedures in place to manage it? c) Have you checked with the Environment Agency if you need permission for extraction, dewatering or discharge? d) Do you have any necessary permissions in place before you start work? e) Have you taken measures to prevent water entering excavations? f) Have the staff working on excavations been made aware of risks and control measures? g) Have you identified all watercourses culverts and drains on or close to the site? h) Have you got vegetation corridors alongside the watercourse or drain to act as a buffer to help prevent silt entering them? i) Have you the necessary permissions if you plan to dispose of water to a drain or watercourse?	
1:8 Site Environment Plan		
	a) Has The Principal Contractor Site Environment Plan been completed/being updated regularly, as required?	

Section 2: Nuisance Emissions



Nuisance emissions include those associated with the production of smoke (e.g. from burning waste, which should not occur), noise (typically unavoidable as construction inevitably results in noise generating activities and equipment, but can be controlled), vibration (can be limited in extent and duration), lighting (e.g. security lights, which can be

minimised) and dust (can be prevented using tried and tested methods).

Some of these emissions are a 'statutory nuisance' and the conditions, which define whether there is a statutory nuisance are set out in legislation. In addition, there are also non-statutory nuisances that can affect other environmental receptors such as wildlife (e.g. lighting and its effect on roosting bats). These may also have legal implications if the species affected are themselves legally protected.

The Environment Agency describe the most common nuisances as being:

• **Dust** – e.g. if there's the potential to generate dust on site, can you erect a physical barrier at the site boundary to prevent it becoming a nuisance to your neighbours?

• **Light** – this can cause disturbance to adjacent residents and ecology, especially temporary lighting. This nuisance can be prevented through screening, effective programming of work, directional lighting and type of lights used, amongst others.

• **Noise** – this can be generated throughout construction activities. Establish baseline noise levels, the noise levels before you start work, and identify who and what may be affected by noise, i.e. neighbours and ecology. If you expect to generate considerable noise – above the baseline – throughout the contract or for specific activities, such as piling, then consider applying for a Section 61 consent with the relevant local council. A Section 61 consent is a process whereby the local council approves your working methods, including methods to reduce and manage noise, before work starts. Approval for a Section 61 can take time and you will need to fully consider the work and methods to reduce noise. Once approved, you must complete the work in accordance with the approved methods, including monitoring requirements. Note that Section 61's only apply to nuisance and don't consider disturbance to ecology.

• **Insects and vermin** – standing water, or unclean sites, can lead to insects and vermin breeding and creating a nuisance.

• **Emissions/smoke** – this can be caused by poorly maintained plant, exhausts near to neighbours and/or property (nuisance only). There should be no reason for generating smoke on site through normal activities. But if you expect to generate smoke, contact your regulator to approve the method of work before work starts.

• **Vibration** – this is caused by the same sources as noise, but travelling through solid objects. This can cause a nuisance to neighbours and to ecological habitats. The potential to cause vibration nuisance should be identified in line with noise."

The Principal Contractor's primary approach to minimise the risks associated with nuisance emissions is based on its own well-established good practice principles, pollution prevention and response, adopting the key recommendations made by the Environment Agency in PPG6 and through their own Environmental Plan and site supervision.

The EQS for the site, associated with EQSA 2: Nuisance Emissions are based on recent best practice guidance and common sense and relate to the avoidance of activities (unless unavoidable) that will generate unacceptable levels of the principal nuisance emissions of dust, smoke, lighting, noise and vibration. As such, the EQS are qualitative (e.g. is burning prohibited on site?).

Table 2 sets out the auditing results (to be completed during the primary site audit)

Table 2. Nuisance Emissions

Reference	Standard	Auditing results
Section 2 - General Good Practice		
	a) Have you identified potential	

	nuisances before starting work? b) Have you put in place a control measure to minimise each nuisance that you've identified? c) Have you found out and complied with any restrictions such as working hours and noise levels? d) Have you a procedure for dealing with complaints from neighbours? e) Has the scope of work been communicated to neighbours? f) Have you made site workers and sub-contractors aware of nuisance restrictions? g) Is nuisance monitoring required? If so, do you have monitoring equipment and a programme in place? h) If your monitoring shows you have a problem, put it right!	
2:2 Site Environment Plan		
	a) Has the The Principal Contractor Site Environment Plan been completed/being updated regularly, as required?	

Section 3: Emissions to water



Formal drainage systems (e.g. gully pots, slot drains, French drains, swales) can act as a pathway to spread pollutants, particularly to watercourses. Such pollution is unlawful and can result in prosecution. Other informal drainage pathways can also result in the same consequences.

These types of pathway could include ruts caused by vehicles, permeable ground (e.g. type 1 stone), sloping ground, as well as other features such as ditches. Small amounts of pollutants (such as oil) can spread large distances in water. Drains can also make pollution invisible: a large-scale pollution incident can happen on site without it being recognized. It is essential therefore, that as a primary action to prevent water pollution, all drains and drainage pathways are identified and controlled appropriately.

Formal discharges (e.g. of site runoff or overflow from sedimentation lagoons) to ditches, watercourses or to ground require formal consent from the Environment Agency.

Typical construction activity can also generate silt-laden water through the removal of surface vegetation, exposure of soils to rainfall, and the disruption of existing soil drainage systems. Silt pollution is a key risk to the health and quality of watercourse causing significant damage to habitats, fish and other organisms.

Other construction activities can also result in pollution, which can then enter watercourses.

The Principal Contractor's primary approach to minimise the risks associated with emissions to water is based on its own well-established good practice principles, pollution prevention and response, adopting key recommendations made by the Environment Agency in the former PPG6 and through its own Environmental Plan and site supervision.

Emissions to Water are based on recent best practice guidance and common sense and relate to pollution prevention (see section 1) and the careful management of drainage pathways.

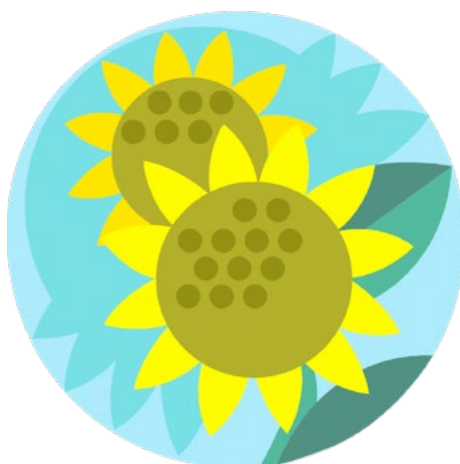
Table 3 sets out the individual auditing results (to be completed during the primary site audit)

Table 3. Section 3 : Emissions to Water

Reference	Standard	Auditing results
3:1 Silty Water		
	a) Can you avoid exposing areas of bare ground until you need them?	
	b) Have you got vegetation corridors along any watercourse or drain to act as a buffer to help prevent silt entering them?	

Reference	Standard	Auditing results
	c) Have you identified all the potential sources of silty water on site? d) Have you the necessary permissions in place if you plan to dispose of water to a drain or watercourse? e) Are silt controls in place to prevent silt entering watercourses or drains? f) Have you installed cut-off trenches or other features to minimise the amount of run-off on site? g) Are you required or have you considered using SuDS? h) Do you have an inspection and maintenance programme for all your silt treatment systems? i) Are plant, wheel and boot washing facilities sited at least 10 metres away from surface waters?	
3:2 Drainage		
	a) Have all drains on site been located, and identified as either surface water or foul? b) Have drains been checked for existing protection? c) Have pollution risks to the drains been identified? d) If anything will be discharged to drains, have you applied for a permission? e) Have plans been put in place to prevent pollution entering watercourses in emergencies? f) Are spill kits located near drains? g) Are you required to use or have you considered using SUDS? h) Have silt traps and oil separators been identified / installed? i) Has an inspection & maintenance schedule for drains and protections measures been established?	
3:2 Site Environment Plan		
	a) Has the The Principal Contractor Site Environment Plan been completed/being updated regularly, as required?	

Section 4: Ecology



Construction sites typically support a range of plants and animals that can include those with legal protection as well as others which are also valued because of their rarity, importance, public interest and/or wider biodiversity value. There is also the potential for a construction site to be located within land that is afforded either a statutory or non-statutory designation.

Construction activities have the potential to have very significant effects on ecology. This includes the injury or killing of animals, loss of valued vegetation and damage or destruction of habitats from vegetation removal, excavation and other groundworks, demolition, exposure to pollutants, disturbance from noise, vibration or lighting as well as a change in land use or introduction of physical barriers.

Due to the legal protection afforded to a wide range of wildlife, there is a significant risk of criminal offences occurring if the appropriate safeguarding measures have not been put in place. It is essential that this is completed before any works commence on site.

The Principal Contractor's primary approach to minimise the risks associated with ecology is based on its own well-established good practice principles, any ecological method statements, mitigation strategies and licences associated with a site and through its own Environmental Plan and site supervision.

Section 4 - Ecology is based on recent best practice guidance and common sense, relate to those presented elsewhere in terms of pollution and disturbance and in particular, relate to site specific ecological plans. As such, the EQS are qualitative (e.g. is the reptile fencing intact?).

Table 4 sets out the auditing results (to be completed during the primary site audit)..

Table 4. Section 4: Ecology

Reference	Standard	Auditing results
4:1 General Good Practice		
	a) Have all ecological surveys been completed and reports issued?	
	b) Have all necessary method statements/mitigation strategies been produced and approved by the appropriate regulator?	
	c) Have all ecological licences been issued?	
	d) Do the construction phasing plans take into account seasonal ecological constraints?	

Reference	Standard	Auditing results
	e) Are there detailed drawings/descriptions covering any habitat creation/planting etc proposals? f) Has a project ecologist been appointed (by The Principal Contractor or the Client) if necessary? g) Have all the pre-construction mitigation measures been completed? h) Has an ecological toolbox talk been provided to site staff? i) Is there an ecological checklist available to all staff (e.g. in the canteen)? j) Is the site fencing intact and in good condition? k) Is there a provision for a daily check of the reptile fencing? l) Are there plans for regular site checks from the project ecologist? m) Are there procedures to check the (legally) agreed ecological method statement and programme against the evolving construction timetable, including when/how to extend/modify any licences? n) Are there good communication methods to inform the project ecologist of any changes in construction methods or timing?	
4:2 Site Ecological Method Statements/Mitigation Strategies		
	a) Have the site-specific ecological method statements/mitigation strategies been implemented? / being updated regularly, as required? b) Have protected species (e.g. water vole,) been excluded from the working area in accordance with agreed mitigation strategies, planning conditions and Natural England licences? c) Have all habitat creation measures been implemented at the correct time? d) Have all replacement habitats been erected? e) Has all habitat creation been undertaken in accordance with the plans? f) Is a mechanism in place to hand over management of newly created habitats to WWT/land owner (including any modifications to the required management)?	
4:2 Site Environment Plan		
	a) Has The Principal Contractor Site Environment Plan been completed/being updated regularly, as required?	

Section 5: Landscape & Trees



Construction activity can have a significant effect on the local landscape. This can arise from the removal or change in vegetation cover (e.g. removal of trees and exposure of topsoil), changes to landforms and topography (e.g. introduction of large soil stockpiles), introduction of buildings and other built features such as roads and changes in night time lighting. These can have a negative effect on the character and quality of the landscape, with associated implications for visual receptors and views.

Works may also occur in designated landscape areas such as nationally important Areas of Outstanding Natural Beauty (AONB) or National Parks or locally important areas. Certain landscape features may also have statutory protection (e.g. Scheduled Monuments, hedgerows important under the Hedgerow Regulations 1997 or trees protected by Tree Preservation Orders).

Works can also damage trees, shrubs and hedgerows through compaction of the root protection zone (RPZ), damage to roots, trunks and branches from machine operation or trenching etc. Changes to soil drainage can also impact on trees.

A construction project will normally have an associated landscape plan and precautionary method statement that will govern the necessary consideration and safeguarding provided to landscape features and effects and trees, hedgerows and other vegetation⁴.

In addition, these plans (and those associated with the main design drawings) will illustrate the expectations for the final restored site once all construction work is complete and landscape planting has been implemented.

The Principal Contractor's primary approach to minimise the risks associated with landscape and trees is based on its own well-established good practice principles, any landscape and arboricultural method statements, and relevant permissions associated with a site and through its own Environmental Plan and site supervision.

Section 5: Landscape and Trees are based on good practice guidance and common sense and in particular, relate to site specific landscape and arboricultural plans. As such, the EQS are qualitative (e.g. are the tree protection measures intact?).

Table 5 sets out the auditing results (to be completed during the primary site audit).

Table 5. Section 5 : Landscape & Trees

⁴ N.B these features are also usually of ecological value - see EQS4.

Reference	Standard	Auditing results
5:1 Landscape		
	a) Have all landscape surveys been completed and reports issued? b) Are there any sensitive or protective landscape issues/designations and if so, have these been dealt with through relevant permissions/agreements? c) Have all necessary landscape designs, planting schedules/method statements/been produced and approved by the appropriate regulator? d) Has the role of landscape contractor been appointed? e) Do the construction phasing plans take into account seasonal landscaping constraints? f) Are there detailed drawings/descriptions covering any landscape/habitat creation/planting etc proposals? g) Have all the pre-construction mitigation measures been completed? h) Has a toolbox talk been provided to relevant site staff? i) Is the site demarcation fencing intact and in good condition? j) Is there a provision for a daily check of the fencing? k) Are there procedures to check the agreed landscape method statement and programme against the evolving construction timetable, including when/how to extend/modify any restoration proposals? l) Are there good communication methods to inform the landscape contractor of any changes in construction methods or timing? m) Has the site landscape been restored/re-planted in accordance with the detailed landscape designs associated with the planning permission? n) Is a mechanism in place to hand over management of newly created landscapes to WWT/landowners (including any modifications to the required management)?	
5:2 Arboriculture		

Reference	Standard	Auditing results
	a) Have the site-specific arboricultural method statements/tree protection plans been implemented? b) Have Root Protection Zones for retained trees been marked out? If not, why not? c) Has tree protection fencing been installed (if appropriate)? d) Have the trees associated with the site been left/managed in accordance with the detailed arboricultural proposals associated with the planning permission? e) Has all tree surgery required as part of the construction activity been completed? f) Has all tree planting (as part of the landscape design) been completed? g) Is a mechanism in place to hand over management of trees back to WWT/Landowner (including any modifications to the required management)?	Y
5:2 Site Environment Plan		
	a) Has the Principal Contractor Site Environment Plan been completed/being updated regularly, as required?	

Section 6: Land Contamination and Invasive Species



Construction sites can often be contaminated by a range of pollutants derived from historic land uses, particularly on brownfield sites. Contaminants can be present in the soil, in buildings or other structures as well as surface and groundwater, or all of these locations.

Common contaminants include asbestos, hydrocarbons, and hazardous heavy metals and solvents. The risk of contamination needs to be established in advance of any contamination in order that appropriate remedial solutions

can be put in place to avoid harm to human health (including the workforce) as well as the wider environment. It is equally important to ensure that the construction activities themselves do not result in future land contamination. If this occurs, prosecution may occur and significant financial penalties may be levied to remediate any contamination. Close working with the local regulator is necessary to avoid these risks.

A number of plants growing in the UK are considered as invasive non-native species. Many have a significant impact on construction sites as they spread easily, are difficult to eradicate, can damage structures, contaminate soil and also damage the local native ecology. Invasive plants can be either land or water based e.g. Japanese Knotweed, Himalayan Balsam and Giant Hogweed. The owner / occupier of a site is required by law to manage and prevent the spread of invasive plants. If you knowingly spread, or allow these plants to spread, through the construction activities an offence will occur. In the same way as land contamination, it is important to establish the presence of such plants in advance of construction so that an appropriate management or eradication plan can be developed and implemented.

The Principal Contractor's primary approach to minimise the risks associated with land contamination and invasive species is based on its own well established good practice principles, pollution prevention and response, adopting the key recommendations made by the Environment Agency in PPG6 and through its own Environmental Plan and site supervision.

Table 6 sets out the individual EQS and auditing results (to be completed during the primary site audit)

Table 6. Section 6 : Land Quality and Invasive Species

Reference	Standard	Auditing results
6:1 General Good Practice		
	a) Have you investigated the site history to check for potential land contamination? b) Have areas of land contamination or invasive plants been identified before starting work? c) Are all areas of land contamination and/or invasive species marked on site drawings? d) If there are contaminants, have you contacted the Environment Agency to discuss how you will deal with them? e) If there are invasive plants on site, are you confident you can manage them effectively and comply with your duty of care? f) If you plan to treat invasive plants in or near water with herbicides, have you contacted the Environment Agency for permission? g) Is it necessary to gain expert advice to deal with any land contamination? h) Is there a remediation strategy for dealing with any contamination? i) Are control measures in place to ensure contaminants or invasive plants are not spread within or outside the site? j) Are staff aware of how to recognise land contamination, and what to do if they find any?	

Reference	Standard	Auditing results
	k) Are staff aware of how to recognise invasive plants, and what to do if they find any? l) Have you planned for stockpiling contaminated materials carefully to prevent spread of pollution? e.g. more than 10 metres away from watercourses, on impermeable surface, banded and covered. m) If contaminated soil needs to be removed from site or treated on site it may be considered waste	
6:2 Site Waste Management Plan		
	a) Has the The Principal Contractor Site Waste Management Plan been completed/being updated regularly, as required?	
6:3 Site Environment Plan		
	a) Has the The Principal Contractor Site Environment Plan been completed/being updated regularly, as required?	

Section 7: Waste



Construction activities can generate and use a wide range of materials that can be considered as waste. Waste has a complex legal definition that includes discarding of materials that are not longer wanted, as well as its recovery and reuse.

A lack of, or inappropriate waste management can cause pollution at construction and demolition sites, which can also be transported offsite by water, wind or by vehicles. This can arise from air pollution from illegal waste disposal such as burning on site, soil and water pollution from the breakdown of waste materials, risks to human and wildlife health from contaminants within a waste

There is a wide range of legislation and policy associated with waste that The Principal Contractor will comply with.

The Principal Contractor's primary approach to minimise these risks is one of meeting its 'duty of care' requirements, implementing robust pollution prevention and response measures, adopting the key recommendations made by the Environment Agency in PPG6 and the adoption of its project specific Site Waste Management Plan.

Section 7: Waste procedures are based on recent best practice guidance and The Principal Contractor's project specific Waste Management Plan.

Table 7 sets out the auditing results (to be completed during the primary site audit).

Table 7 Section 7: Waste

Reference	Standard	Auditing results
7:1 General Good Practice		
	a) Do you have copies of all waste carriers' registration certificates? b) Are waste carriers' registrations in date? c) Have you identified your most common European Waste Catalogue (EWC) codes / List of Waste Codes (in England and Wales) to help people on site complete waste transfer notes and consignment notes correctly? d) Do you have a system for keeping waste transfer notes and consignment notes? e) Have you made plans to secure all waste in vehicles leaving site and skips are covered where appropriate? f) Is waste contained securely and safely on site to prevent escape? g) Are waste containers (skips, bins) impermeable to prevent liquid wastes leaching? h) Have you allocated sufficient space on site for waste storage and segregation? i) Are skips and bins on site labelled for different waste types to help segregation, and checked regularly?	
7:2 Site Waste Management Plan		
	a) Has the Principal Contractor's Site Waste Management Plan been completed/being updated regularly, as required?	

Appendix L – Code of Conduct for Construction - Ciria guidance document C741: Environmental Good Practice on Site

Appendix M – Biosecurity and management of invasive non-native species for construction sites and Controlled Activities.

Appendix N – SEPA/NIEA Guidance note – GPP5 Guidance for Pollution Prevention – Works and Maintenance in or near water