2.2.4 Construction Traffic & Environmental Management Plan

Construction Traffic & Environmental Management Plan

(England & Wales)

Panattoni Poyle Slough

Revision Number:	Description of changes made:	Updated by:	Date of Update:
V1	New CEMP	Laila Yasar	28/09/2023
V2	Include traffic management plan	Amit Patel	13/10/2023
V3	Updated to include comments from the Council	Amit Patel	21/11/2023

This plan is to be reviewed at least every three months

Contents

1. INTRODUCTION

This Construction Environmental Management Plan (CEMP) has been developed to identify and manage the environmental risks associated with Panattoni Poyle Slough and is a fundamental requirement of the Winvic Construction Limited (WCL) environmental management system.

A copy of the WCL ISO 14001 certificate is provided in Appendix 1. The WCL Environment Policy Statement should be clearly displayed, as well as Panattoni Environmental Policy statement on site noticeboards. WCL recognises the environmental impacts associated with this project and is committed to continually improving its environmental performance. The WCL Policy sets out the aims of the CEMP for the construction of the proposed development with the various aims summarised below:

- To meet the requirements of all relevant environmental legislation, agreements, authorisations and commitments.
- To ensure that all environmental undertakings and obligations of WCL are fulfilled.
- To adopt working practices that will achieve good environmental practice on site.
- To ensure that subcontractors and suppliers are aware of the environmental constraints and opportunities of the site and follow any necessary procedures in order to ensure good environmental practice.
- To identify the responsibilities of staff and contractors in achieving good environmental practice on site
- To mitigate the effects of the construction works on businesses, highway users and the general public.
- To assist in the development of the company environmental management system, not only for the requirements of this project but for future use.

All personnel are required to understand and implement the requirements of this CEMP.

Prior to issue, all environmental documentation on this Project, including this CEMP, has been reviewed and approved by (tbc), who is the Project Manager, as well as being reviewed by the Environmental Advisor. All amendments to this CEMP must be made by project management in consultation with the Senior Environmental Manager / Environmental Advisor or HSEQ Manager.

WCL will maintain records for all aspects of the work on Winvic's Intranet System (i.e., Union Square), namely:

- Environmental permits
- Environmental risk register and management systems, including instructions for methods of work and any pollution control plans
- All operating procedures
- Staff competence and training records
- Routine monitoring results such as water quality
- Monitoring and compliance checks, findings of investigation and actions taken
- Environmental incidents, non-conformance and near miss reports, findings of investigation and actions taken
- Complaints made, findings of investigation and actions taken
- Audits of management systems
- Management reviews and changes made to the management system.

2. ENVIRONMENTAL SETTING & REQUIREMENTS

The area of the proposed development covers approximately 7, 320 sqm (of commercial floorspace) and the national grid reference number for the site is TQ 03259 75695. The scope of the construction site is subject to a number of environmental sensitivities (as shown in the Environmental Constraints Map / site drainage plan) as summarised below.

2. 1 Geology and Hydrogeology

Ground conditions typically comprised Made Ground (thickness 0.20- 0.35m) consisting of concrete or brick paving over gravelly sand/ sandy gravel, over Alluvium to depths 1.45m bgl, inferred as sandy clay/clayey gravelly sand. The underlying Principal Aquifer (Shepperton Gravel Member); Highly permeable geology directly underlying the site, there is the potential for any mobile contaminants within soils to impact groundwater. Also, shallow groundwater has the potential to connect with the nearby land drain and Wraysbury River. The EA data indicates that the Site is not in a designated Groundwater Source Protection Zone (GSPZ).

2. 2 Hydrology

The site does not sit within proximity to a watercourse, nor does there appear to be a public surface water sewer located in Horton Road. There are high recorded levels of groundwater on site, as such infiltration devices such as soakaways are not deemed acceptable. The presence of nearby surface water features (Land drains, Wraysbury Reservoir and Wraysbury River) within the wider area. The site is underlying a Principal Aquifer (Shepperton Gravel Member).

Method	Suitability	Suitability for Development
Infiltration to Ground	Yes	The underlying sand and gravel geology means infiltration is a suitable means of draining the majority of the site, in areas located above the identified groundwater levels.
Connection to Watercourse	No	Wraysbury River located to the east of the site at a higher ground level.
Connection to Surface Water Sewer	No	No surface water sewer in close proximity.
Connection to a Foul / Combined Sewer	Yes	Due to the presence of high groundwater levels, infiltration will not be feasible to all areas and thus a connection to the foul sewer will also be required at reduced flow rates.

2. 3 Ecology (flora / fauna)

There are no trees within or immediately adjacent to the application site which have features of potential value for roosting bats.

Most of the application site comprises existing built form, and does not provide any nesting or foraging opportunities, and any other opportunities for protected or notable faunal species, such as mammals, reptiles or amphibians.

Based on the ecological surveys undertaken, the application site is not of intrinsic value from a nature and conservation perspective.

The site has no soft landscape features or trees of any note within the redline boundary. The detailed landscape plans set the planting the planting scheme with a mixture of native and ornamental trees and shrubs. Plans have been revised to increase tree sizes and species diversity. The proposal would result in the loss of the existing mature trees along the western boundary (need to ensure whether these trees are under a Tree Preservation Order or not).

The net gains in biodiversity are provided by the significant increase of planting on the site which include, Hebe Rakaiensis which attract bees and other pollinating insects. Given the quantity of landscaping that would replace the areas to be lost, together with the ecologically focused planting; the proposal is considered to result in net gains for biodiversity.

2. 4 Cultural Heritage (archaeology / SAMS / listed buildings)

Berkshire Council states there are no known archaeological constraints.

2. 5 Existing Site and Surrounding Land Use (neighbours / protected areas)

The site is accessed by the south at Horton Road. Junction 14 of the M25 is circa 500 metres to the east. To the north, east, and west, the site neighbours are other businesses within the Poyle Estate. The Poyle Park Private Estate which comprises the residential static homes are located on the southern site of Horton Road.

Historically, explosives works and later, and iron works shown to the north of the site between 1914 and 1932. By 1972, a furniture works, engineering works, steel works, motor depot located east of

the Site (Viscount Industrial Estate), a steel works and engineering to north and north west of the site respectively. An engineering works located immediately west of the site. From 1972, various other commercial/ industrial works are present in the wider surrounding area, with multiple ASTs and electricity substations associated with them.

2. 6 Contamination (soils / geology / water)

Petroleum hydrocarbons, polycyclic aromatic hydrocarbons, semi-volatile organic compounds and metals were locally identified above laboratory detection limits.

Hotspots of localised and marginally elevated concentrations of metals and polycyclic aromatic hydrocarbons were identified within groundwater. The source of hydrocarbon contamination in the north of the site is considered to be from the fuel tanks on site. One above ground storage tank is known to have been removed, and it is unknown whether the other thank remains underground. If the tank is present, it will require removal prior to development and contaminated soils disposed off-site.

In 2007, TPH (total petroleum hydrocarbon) concentrations were identified within the Alluvium deposits and the Sheppterton Gravel Member, and in multiple plumes in the groundwater. Gas monitoring detected elevated methane and carbon dioxide concentrations at several locations. A quantitative risk assessment indicated that the contamination plume had the potential to extend beyond the site boundary and migrate towards surface waters close to the development, this remediation work was recommended to be undertaken.

Offsite disposal proposed remediation Enabling Works and Groundwater Remediation by Provectus is the use of 'bio-treatment', the beneficial reuse of hydrocarbon impacted soils in landfill restoration schemes. Use of natural biological degradation to break down and remove hydrocarbons contaminants, ensuring efficient and eco-friendly remediation.

If there is the presence of asbestos in soils, strict measures to ensure safe handling and disposal will be implemented.

3. ENVIRONMENTAL CONSENTS / PERMITS / LICENCES & OTHER REQUIREMENTS

The need for any environmental consents, permits and / or licences and exemptions relating to work associated with Poyle Slough has been identified during the environmental risk assessment process. Consequently, the necessary environmental permissions for this project are listed within the Environmental Risk Register (E02).

The applicable other environmental requirements to be delivered by the project, in addition to WCL targets, are summarised below, and may include contractual requirements, as well as any conditions required by the Local Authority with respect to Planning or nuisance mitigation for the local community.

Reference should be made to pre-construction information and the Pre-Start Environmental Checklist (E01).

PROJECT SPECIFIC ENVIRONMENTAL REQUIREMENTS	
External (client / enforcing authority) requirements	3 (Ecology) The development hereby approved shall be carried out in accordance with the paragraphs 5.3.2. & 5.3.3. of the Ecological Assessment by Ecology

	Solutions (ref. 11329.EcoAss.vf1); Dated April 2023; Rec'd 27/04/2023. accordance with the approved details. 4 (Contamination) The development hereby approved shall be carried out in accordance with the land contamination remediation strategy set out in the Outline Remediation Strategy (Ref. No. 70106611-ORS), dated June 2023, and prepared by WSP UK Ltd.ge over the 5 (Contamination Remediation Validation) No development within or adjacent to any area(s) subject to remediation works carried out pursuant to the Outline Remediation Strategy (Ref. No. 70106611-ORS), dated June 2023, and prepared by WSP UK Ltd shall be occupied until a full final Validation Report for the purposes of human health protection has been submitted to and approved in writing by the Local Planning Authority. The report shall include details of the implementation of the remedial strategy and any contingency plan works approved pursuant to the Phase 3 condition above. In the event that gas and/or vapour protection measures are specified by the remedial strategy, the report shall include written confirmation that all such measures have been implemented by a competent installer and then verified by a qualified independent third party/Building Control Regulator. the approved details. 9 (Submission of construction waste measures) No development (with the exception of demolition) shall commence until a waste management plan for the construction phase has been submitted to and approved in writing by the Local Planning Authority. The waste management plan shall include measures to: a) Minimise, re-use and re-cycle waste and materials b) Dispose of unavoidable waste in an environmentally acceptable manner - Flow direction 10 (Construction Traffic Management Plan) Prior to any construction works (excluding demolition) taking place a Construction Traffic Management Plan has been submitted to and agreed in writing by the Local Planning Authority. The Plan shall include details of: a) A site set up plan displaying hoarding/fencing extents, vehicle and pedestrian access points during construction, provision for storage of materials, waste and recycling facilities/areas, contractor parking, turning space for construction vehicles, unloading area for deliveries, site office and wheel cleaning facilities during the construction period. b) Construction vehicles and to comply with Euro VI Emissions Standard as a minimum and machinery to comply with Table 10 of the Low Emissions Strategy Guidance. c) Delivery hours and working hours. Deliveries shall be made outside peak hours of 0800 0900 and 1700 1800 d) Details of traffic management measures to control deliveries to site

	and pedestrian movements on footways in proximity to the site in order to minimise the impact of construction on the safe operation of the surrounding highway network. e) Vehicle routing plan for HGVs. HGVs shall avoid weight restrictions and local schools at collection/drop off time. f) Details of dust control measures and wheel washing facilities to be provided on site. g) Confirmation of whether any abnormal loads will be required for the construction or demolition. If so, the LHA must be notified of any abnormal loads at the following location: https://www.slough.gov.uk/licences-permits/abnormal-loads/1. The development herby permitted shall thereafter be carried out in accordance with the approved Construction Traffic Management Plan. 11 (Working Method Statement) Prior to any construction works taking place details of a scheme (Working Method Statement) to control the environmental effects of construction work shall be submitted to and approved in writing by the Local Planning Authority. The scheme shall include: a) Control of noise (refer to section 5.5 nuisance management, which covers our mitigation measures that will be employed during the construction stage) . c) Control of water run-off (refer to section 5.2- water management, which covers our mitigation measures that will be employed during the construction stage d) Appropriate hoarding to site boundaries (refer to section 5.5 – nuisance management, which covers our strategy for this). e) Proposed method of piling for foundations (refer to section 5.5 nuisance management which cover our piling strategy). The development herby permitted shall thereafter be carried out in accordance with the approved Working Method Statement.		
BREEAM / LEED / Passivhaus	Target rating	Tbc	
	Construction Waste Volume Target (by m^3 volume or tonnage) tbc	Tbc	
	Waste Diversion from Landfill Target	Demolition	tbc
		Construction	tbc
		Excavation	tbc
Watercourses/drainage/ dewatering	No known watercourses nearby, thus no discharge permit is required. Trade Effluent Consent for dewatering to be applied before.		
Waste (significant waste streams that will be generated)	tbc		
Contaminated Ground	See 2.6		
Cultural Heritage & archaeology	n/a		

Materials & Design	tbc
Sensitive Neighbours	See 2.5
Ecology & Biodiversity	See 2.3

4. ENVIRONMENTAL RISK ASSESSMENT

The Pre-Construction Manager and Project Manager, in collaboration with the Senior Environmental Manager and Environmental Advisor, have completed an environmental risk assessment, which is shown in the Environmental Risk Register (E02) that encompasses the pre-construction, construction and commissioning phases of the project.

Throughout the duration of this project, the environmental risk assessment will be reviewed and updated on a monthly basis during the '4-week planning meeting' (S01) that is held between the Project Manager and the HSEQ Manager. The purpose of this review is to ensure that the risk assessment remains suitable, adequate and effective in identifying and managing environmental risks.

Further details concerning the methodology employed to assess project environmental risks are detailed within the WCL Project Environmental Management Working Instruction (WI 01).

Subcontractors whose specific construction work packages pose a risk to the environment will develop and implement a RAMS to mitigate those risks, which will be reviewed and approved by WCL (via completion of the Method Statement Review Sheet (S05)).

Subcontractors must manage all risks associated with their work activity / package in accordance with this CEMP. Where a subcontractor identifies additional environmental risk(s), the subcontractor must inform the WCL Project Manager and request that the Environmental Risk Register (E02) is amended.

5. ENVIRONMENTAL CONTROL MEASURES

In addition to the project-specific environmental control measures detailed within the Environmental Risk Register (refer to E02) the mandatory control measures described below also apply to this project:

5.1 Waste Management

The environmental control measures defined below apply to all personnel including WCL staff, subcontractors, suppliers and third parties, and all activities and operations associated with the project. These environmental control measures are in addition to the project specific control measures defined with the Environmental Risk Register (E02).

Any Client specific environmental and / or sustainability requirements / targets / KPIs related to waste management required by any certification schemes (e.g., BREEAM / CEEQUAL / Well Standard) should be retained. This may include confirmation of the specific format and content of information, and evidence to satisfy the applicable scheme.

Risk	Environmental Control Measure(s)	Project Applicable (Yes / No)
Waste storage, handling and segregation	• Store wastes in areas away from surface / foul drains and watercourses • Segregate all construction wastes, at a minimum, into hazardous and non-hazardous waste streams • Segregate construction wastes into dry recyclables • Cover waste containers if there is a risk that wastes may be blown out or the wastes contained therein are water sensitive e.g., plasterboard wastes • Use waste signage i.e., labels that specify waste contents • Secure waste containers *(Note: On insecure sites or in areas where theft and vandalism may occur, skips should be lockable).*	Y
Off-site disposal of site waste streams	• Develop, implement and maintain a Site Waste Management Plan (E04) throughout the duration of the project • Ensure the removal of inert / non-hazardous wastes is recorded on Waste Transfer Notes (WTNs). Season tickets may also be used for multiple transfers over a 12-month period • Use consignment notes for the off-site disposal of all hazardous wastes • Retain all WTNs for at least three years • Register the site with NRW if more than 500kgs / year of hazardous waste is to be sent for off-site disposal. Renew this registration on an annual basis *(Wales only)* • Only use licensed waste carriers to transport wastes from site and obtain documentation to demonstrate registration • Obtain full copies of the Environmental Permits or Exemptions for the disposal locations of site waste streams • Periodically follow a waste vehicle to its destination (refer to EG06) where: – The condition of the waste contractor's vehicle is poor, or – The waste contractor's waste paperwork is weak, or – A waste contractor uses a lower tier waste haulage company, or – A higher risk waste is being transported e.g., asbestos or oily wastes – There is a suspicion that wastes may be taken to a non-licensed site • Contact the HSEQ Manager immediately if site wastes are not taken to a licensed waste disposal / recycling facility.	Y
Reporting	Report project waste performance on a monthly basis (WI 10).	Y

Refer to the Site Waste Management Plan (E04) that has been developed for this project.

5.2 Water Management

The environmental control measures defined below apply to all personnel including WCL staff, subcontractors, suppliers and third parties, and all activities and operations associated with the project. These environmental control measures are in addition to the project specific control measures defined with the Environmental Risk Register (E02).

Any Client specific environmental and / or sustainability requirements / targets / KPIs related to water pollution management required by any certification schemes (e.g., BREEAM / CEEQUAL / Well Standard) should be retained. This may include confirmation of the specific format and content of information, and evidence to satisfy the applicable scheme.

Risk	Environmental Control Measure(s)	Project Applicable (Yes / No)
Abstraction, impounding & dewatering	• Obtain an abstraction licence from the EA / NRW for the abstraction of more than 20m^3 of water / day from any controlled water (refer to EG05) • Obtain an Environmental Permit from the EA / NRW if clean uncontaminated temporary dewatering effluent is being discharged to surface watercourses for longer than three consecutive months • Obtain an abstraction licence if waters from dewatering activities are to be used e.g., for dust suppression • Obtain an Impounding Licence from the EA / NRW prior to any impounding works commencing • Ensure that the WCL Permit-to-Pump (E12) system is used for all effluent pumping activities (refer to EG05) • Ensure that a pump head rose is used to reduce the risk of harm to aquatic life • Ensure conformance to requirements of obtained licences / authorisations.	Y
Discharges to surface water or groundwater	• Consult with the EA / NRW as to the need for an Environmental Permit for the discharge of effluent to surface waters prior to the discharge proceeding • Obtain an Environmental Permit for the discharge of effluent to surface waters if chemical dosing agents are to be used (e.g., coagulants and / or flocculants) as a means of treating silt laden effluent • Ensure that the WCL Permit-to-Pump (E12) system is used for all effluent pumping activities (refer to EG05) • Obtain permission to discharge silt laden waters to land from the landowner and consult with the EA / NRW prior to discharge • Ensure all effluent discharges from site cabins are directed into sewers (with permission from the local water company) or holding tanks • Ensure conformance to requirements of obtained permits / authorisations.	N
Discharges to sewer	• Obtain a trade effluent discharge consent from the local water company or written permission from the sewer owner prior to the discharge of any trade effluent into a foul sewer • Ensure that the WCL Permit-to-Pump (E12) system is used for all effluent pumping activities (refer to EG05) • Ensure conformance to requirements of any obtained consent.	Y
Works in, near or over water	• Obtain an Environmental Permit / Exemption from the EA / NRW for the construction of any structure in, over or under a main river (refer to EG05) when: – Within 8m of the bank of a main river, or 16m if it is a tidal main river – Within 8m of any flood defence structure or culvert on a main river, or 16m on a tidal river, or where it is a sea defence structure • Obtain a Land Drainage / Ordinary Watercourse Consent from the Lead Local Flood Authority (LLFA) for the construction of any structure in, over or under an ordinary	N

	watercourse, including the construction of dams, weirs, mills, channel diversions and culverts (refer to EG05). • Give the EA / NRW at least seven working days' notice of any intention to temporarily or permanently divert the flow of a main river, carry out works over or within a main river channel, commence operations in a main river channel or work on or near foul sewers • Give LLFAs at least seven working days' notice of any intention to temporarily or permanently divert the flow of an ordinary watercourse, carry out works over or within an ordinary watercourse or commence operations in an ordinary watercourse channel • Develop, communicate and implement a suitable, adequate and effective method statement, where any watercourse diversion is to be undertaken • Consult with the EA / NRW as to the need for an abstraction licence where overpumping operations are to be undertaken • Obtain formal approval from the EA / NRW prior to the use of any herbicide in or near a watercourse (i.e., within 10m of a watercourse) • Plant and equipment entering or working alongside watercourses should be well maintained, clean and free from oil leaks • Prevent liquid / solid debris falling into a watercourse or onto an embankment during construction activities. • Ensure conformance to requirements of any obtained consent / approval.	
Works in tidal waters	Consult with the Marine Management Organisation / EA (in England) the NRW (in Wales) before any construction works commence in, near, under or over tidal waters to ensure that all appropriate consents are obtained.	N
Site Drainage	• Develop and display a site drainage plan that identifies surface and foul water drainage systems and nearby controlled waters • Implement and maintain control measures to ensure site drainage does not contaminate drains or watercourses e.g., cut-off ditches / silt fences • Provide toolbox talks to relevant personnel and contractors that effluent must not be poured down surface / foul water drains without permission.	Y
Washing Activities	• Conduct all washing and cleaning operations (including the washing of vehicles and / or plant) in a designated area, which should be isolated from the surface water drainage systems and within hardstanding areas • Ensure no detergent contaminated wash down effluent is allowed to enter controlled waters unless permitted by the EA / NRW • Direct detergent contaminated wash down effluent via the foul sewer, after having gained permission from the Water Company, or ensure that it is contained for off-site disposal • Establish an impermeable concrete / mortar washout area at least 10m away from drains, surface waters or trees.	Y
Monitoring	Monitor the quality of watercourses potentially affected by site activities at least once per day and at agreed locations whilst construction operations are in progress, which may involve visual monitoring and / or physical (e.g., pH, suspended solids, total organic carbon) sampling.	N

5.3 Ecological Management

The environmental control measures defined below apply to all personnel including WCL staff, subcontractors, suppliers and third parties, and all activities and operations associated with the project. These environmental control measures are in addition to the project specific control measures defined with the Environmental Risk Register (E02).

Any Client specific ecological and / or biodiversity requirements stipulated by the Client and / or any certification

schemes (e.g., BREEAM / CEEQUAL / Well Standard) should be retained. This may include identifying requirements and responsibilities for providing and interpreting site investigations, environmental reports, surveys and consents, and confirmation of the specific format and content of information, and evidence to satisfy the applicable scheme.

Risk	Environmental Control Measure(s)	Project Applicable (Yes / No)
Works in protected areas	• Consult with Natural England / NRW and / or the local Planning Authority before works commence within a conservation area e.g., Ramsar site, SAC, SPA, AONB, SSSI, NNR, ESA, NHA or a local conservation designation • Develop and submit a method statement to NE / NRW • Ensure a Phase 1 Habitat Survey has been conducted by a competent person (e.g., qualified ecologist and / or arboriculturist), where necessary • Communicate control measures defined within the Habitat Survey to all staff and relevant subcontractors • Provide information (e.g., site induction / toolbox talks) to site personnel.	N
Protected species	• Ensure a Phase 1 Habitat Survey has been conducted by a competent person (e.g., qualified ecologist) where the presence of protected ecological resources is known / suspected • Ensure an extended Phase 2 Habitat Survey is conducted by a competent person to assess the potential presence of protected fauna and / or flora, if required as a result of a Phase 1 Habitat Survey • Ensure protected faunal species surveys (e.g., bat surveys) are conducted where their presence have been identified • Develop and implement a method statement, (that should be agreed with NE / NRW), for the management of protected species that includes all relevant recommendations made within ecological surveys • Obtain and fully implement the conditions of a European Protected Species Licence i.e., Development Licence, if required • Phase all construction activities to ensure that proposed construction works avoid disturbance and / or damage to local ecological constraints • All site clearance works would be undertaken outside bird nesting season (March to August inclusive); however, if works cannot be avoided during the nesting season an ecologist should supervise clearance works • Create a physical separation between construction operations and ecologically sensitive areas e.g., fencing • Staff and subcontractors to report any protected flora / fauna discovered during construction to site management. Suspend all works within that area until authorised by an ecologist and site management • Provide information (e.g., site induction / toolbox talks) to site personnel.	N
Tree & hedgerow protection	• Consult with the local planning authority to determine whether there are any TPOs in effect or whether trees are within a conservation area • Consult with the local planning authority to determine whether hedgerows are designated as an 'important' hedgerow • Ensure permission (i.e., section 211 Notice / Tree Felling Licence) is obtained from the local planning authority / Forestry Commission / NRW for works to protected trees e.g., tree surgery / felling and / or uprooting • Ensure a Tree Felling Licence is obtained from the Forestry Commission / NRW for the felling of more than $5m^3$ of non-protected trees • Ensure a Hedgerow Removal Notice is formally submitted to the local planning authority if the full or part removal of a hedgerow is required • Ensure a Phase 1 Habitat Survey has been conducted by a competent person (e.g., qualified arboriculturist) where the presence of Tree Preservation Orders (TPOs) /	Y

	important hedgerows is known / suspected • Create a physical separation between construction operations and ecologically sensitive areas e.g., fencing • Erect tree fencing to protect tree roots from construction activities e.g., vehicle and / or plant use, installation of underground services and / or hard or soft surfaces • Provide information (e.g., site induction / toolbox talks) to site personnel.	
Invasive species	• Ensure a Phase 1 Habitat Survey has been conducted by a competent person where the presence of invasive species is known / suspected • Develop and implement a method statement for the management of invasive species as well as the disposal of invasive species wastes • Segregate invasive plant species locations from construction activities using durable fencing • Prevent the spread of invasive species through use of exclusion zones, boot wash facilities, wheel wash facilities etc. • Provide information (e.g., site induction / toolbox talks) to site personnel.	**N**
Biodiversity Net Gain	Where there is a contractual requirement to achieve Biodiversity Net Gain (BNG) all recommendations stipulated within the biodiversity enhancement plan, developed by the Pre-construction / Design team, should be implemented.	**N**

Additionally, WCL recognises our role in maintaining and enhancing, where possible, resilient ecological habitats. Consequently, WCL will implement this project specific Biodiversity Action Plan (BAP), which will be completed during Pre-construction and Construction phases of our works. Examples below.

Actions	**Mitigation**	**Enhancement**	**Eradication**	**Requirement by Planning / Ecologist / BREEAM / WCL**	**Pre-Construction Status** *(Programme date, whether in progress or completed, who's responsible for collating evidence)*	**Construction Status** *(Programme date, whether in progress or completed, who's responsible for collating evidence)*
Biodiversity Net Gain e.g., significant increase of planting of site to increase pollinating insects.		✓		Planning	Ongoing	
SUDS system		✓		Planning	Ongoing	

5.4 Land Use Management

The environmental control measures defined below apply to all personnel including WCL staff, subcontractors, suppliers and third parties, and all activities and operations associated with the project. These environmental control measures are in addition to the project specific control measures defined with the Environmental Risk Register (E02).

Any existing site surveys, investigations and other environmental requirements, including responsibilities for providing any additional site surveys and investigations along with interpretation of reports, should be retained as part of the design development and compliance.

Risk	**Environmental Control Measure(s)**	**Project Applicable (Yes / No)**

Earthworks	• Develop an earthworks method statement where more than 50m^3 of spoil is to be excavated, refer to WI 09 • Avoid stripping soil following periods of heavy rainfall (i.e., 5mm or more in a 24-hour period), when practicable • Keep areas of exposed ground to a practicable minimum • Segregate top and subsoil stockpiles • Handle soils carefully to minimise potential soil structure damage • Keep temporary stockpile heights as low as possible given space restrictions e.g., 3m for topsoil and 4m for subsoil • Minimise run-off from stockpiles by light compaction and at an angle of no more than 45°, use of trenches and locating stockpiles away from drainage systems and watercourses • Protect stockpiles to minimise erosion losses and weed infestation if storage is to be longer than 6 months (e.g., seeding or light compaction) • Protect stockpiles (e.g., using berms) from flooding to avoid soil losses • Keep traffic off soil stockpiles, as much as possible, throughout the period of soil storage • Display clear and unambiguous signage to notify site personnel of the presence of different types of soil stockpiles • Avoid reinstating soils following periods of heavy rainfall (i.e., 5mm or more in a 24-hour period), when practicable • Reinstate subsoil to maintain natural drainage patterns and avoid settlement • Reinstate topsoil by rendering into a loose and workable condition, as well as contouring to maintain the profile with the adjacent undisturbed area • Implement effective temporary and / or permanent soil erosion control measures, where necessary • Implement and maintain suitable, adequate and effective control measures to prevent run-off from stockpiles contaminating surface waters.	Y
Contaminated Land	• Cordon off areas of contamination from those that are uncontaminated • Develop and implement a remediation and / or disposal strategy for the management of contaminated land • Use competent contractors to implement any defined remediation and / or disposal strategy • Ensure all appropriate environmental permissions have been obtained where remediation, reuse and / or disposal of contaminated soils is to be undertaken e.g., a Mobile Plant Licence or an Environmental Permit or Exemption, Waste Acceptance Criteria Testing has been undertaken on treated and / or untreated soils when disposing to landfill • Store contaminated soils in areas effectively demarcated from construction works and access / egress routes • Place soils on impermeable surfaces to prevent contamination of the underlying ground • Cover stockpiles to prevent windblown dust or the ingress of rainwater, where practicable • Implement controls for containing surface water run-off from contaminated stockpiles to prevent the uncontrolled discharge of contaminated effluent • Display clear and unambiguous signage to notify site personnel of the presence of contaminated soils.	Y

5.5 Nuisance Management

The environmental control measures defined below apply to all personnel including WCL staff, subcontractors, suppliers and third parties, and all activities and operations associated with the project. These environmental control measures are in addition to the project specific control measures defined with the Environmental Risk Register (E02).

Any Client specific environmental and / or sustainability requirements / targets / KPIs to minimise the risks of nuisance from vibration, light and noise pollution required by any certification schemes (e.g., BREEAM / CEEQUAL / Well Standard) should be retained. This may include confirmation of the specific format and content of information, and evidence to satisfy the applicable scheme.

Risk	Environmental Control Measure(s)	Project Applicable (Yes / No)
Noise and vibration controls	• Limit operation times to agreed working hours • Comply with Section 61 Agreements, (agreement with Local Authority to limit noise), if applicable • Notify and consult with all potentially affected parties that may be adversely affected from construction site noise either via verbal face to face communications or letter drops • Provide the local authority with advance notice of any works scheduled to take place outside agreed working hours • Assess (e.g., via structural surveys) any and all structures that may be adversely impacted by vibration from vehicles or site activities • Select inherently quiet plant, where appropriate • Ensure all major compressors are 'sound reduced' models fitted with properly lined and sealed acoustic covers, where appropriate, that are kept closed whenever the machines are in use • Ensure all ancillary pneumatic percussive tools are fitted with mufflers or silencers of the type recommended by the manufacturers • Position ancillary plant (e.g., crushers, screeners, generators, compressors, pumps) to reduce noise disturbance i.e., furthest from receptors or behind noise barriers • Ensure subcontractors properly maintain and operate all plant according to manufacturer's recommendations so as to avoid causing excessive noise • Place vibrating equipment or plant on a base separate to that on which any sensitive structure is located, to reduce vibration impacts • Programme deliveries to arrive during daytime hours only • Take care when unloading vehicles to minimise noise • Route delivery vehicles so as to minimise any noise disturbance to local residents as well as reducing potential vibration impacts upon structures • Do not leave plant engines unnecessarily idling • Erect site hoarding, screens or barriers, as necessary and practicable, to shield noisy activities. • Existing perimeter will be utilised and where needed heras panel will be used which will be double clipped. • Regularly monitor both on and off site to ensure minimal noise and vibration impacts upon local neighbours and wildlife.	Y
Dust & Odour Controls	• Finished ground / road surfaces will be set down as early as is feasible to seal the ground to ensure that the generation of dust is kept to a minimum • Surfaced and unsurfaced access roads will be kept clean and will be watered as necessary using a water bowser, which will be monitored on a daily basis during dry weather • A means of wheel washing will be utilised, as required • No burning of any materials is permitted, unless authorised by the Project Manager • Ensure all construction traffic follows specifically designated routes: – Implement speed limits for all vehicular movements – Cover all vehicles carrying loose materials – Dampen down haul roads, as necessary, to reduce dust emissions • Conduct all cutting and grinding operations in a manner to reduce the risk of dust	Y

	migration e.g., wet cutting techniques • Adopt dust suppression techniques (e.g., water suppression) to reduce dust emissions from crushing and screening activities • Locate stockpiles away from any sensitive receptors, where feasible • Seed / seal soil stockpiles to reduce the risk of dust migration • Any exposed soil or material stockpiles will be damped, if necessary, using sprinklers and hoses. A windsock will be located on the site and where this indicates a prevailing wind toward sensitive receptors, particular attention will be given to the damping of exposed soil and material stockpiles • All areas of completed earthworks that are not subject to subsequent works such as drainage will be covered with topsoil and vegetated, as soon as is practicable. • Compliance with NRMM.	
Visual impact & Light controls	• Erect site hoarding, screens or barriers, as necessary, to screen site activities • Choose and assemble site lighting to reduce light nuisance impacts to local neighbours and wildlife • Position lighting properly and direct light downwards to minimise impacts of light pollution on neighbours and wildlife • Switch off site lighting or minimise its use during periods of site inactivity • Lighting will be directed downwards to illuminate the target area to reduce spill light • Specifically designed lighting equipment will be installed to minimise the spread of light near to or above the horizontal • To keep glare to a minimum, the main beam angle of all lights directed towards any potential observer will be kept below 70° • Keep site boundaries clean and tidy at all times • Maintain hoarding and / or fencing to be free of graffiti and non-project specific posters • Repair damaged or unsightly hoarding and / or fencing, as soon as possible. •	Y
Noise & Vibration Monitoring	• To establish the noise emission levels, a noise monitoring programme will be carried out to determine the noise levels at the closest receptors.	Y
Dust Monitoring	• Visual dust monitoring will be conducted around the site perimeter during dry periods to check for dust deposition on vegetation, cars and other objects	Y

Piling Strategy

Our piling strategy as set out by our contractor Vibro Menard is as follows:

4 TECHNICAL

4.1 Description of the ground improvement technique

Vibro Stone Columns are formed by inserting a vibroprobe into the soils to compact and incorporate granular material into the ground and create vertical inclusions with high stiffness, shear strength and drainage characteristics.

Under uniformly loaded structures such as embankments and slabs-on-grade, Vibro Stone Columns are installed on a regular grid spacing. Treatment by Vibro Stone Columns results in a reduction of the total and differential settlements.

Vibro Stone Columns can also be installed as a group to support isolated loads (shallow pads) or directly under linear loadings such as strip footing or retaining walls. In this case, Vibro Stone Columns increase the bearing capacity of the soil while reducing the magnitude of settlement.

4.2 Method of Execution

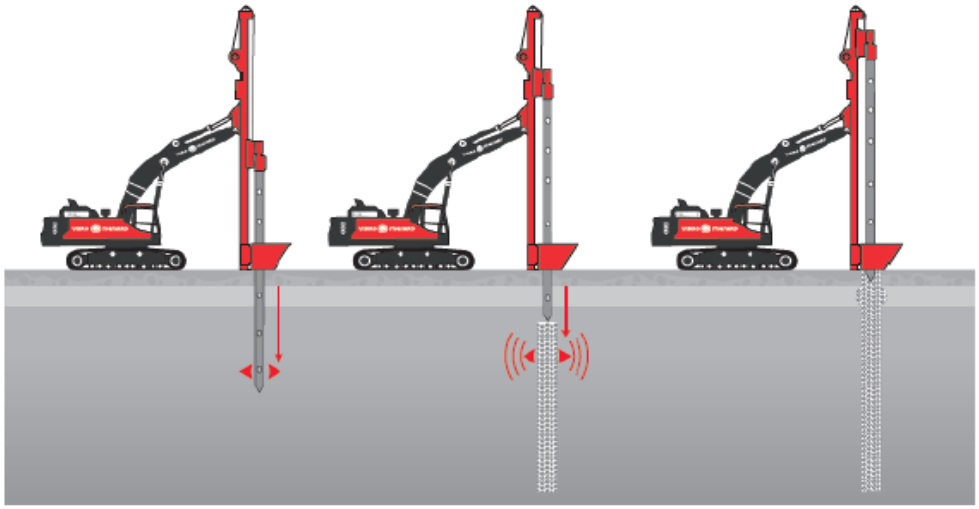


Figure 2 - VSC installation process

The soil is penetrated to the required depth by the combined effects of Vibroprobe weight and vibration (plus jetting action by air if free hanging). The in situ soil is displaced sideways.

The vibroprobe is then lifted out. Coarse gravel, crushed stone or slag is tipped into the hole in increments of typically 500mm of the column bore. The vibroprobe is re-inserted and the stone infill is compacted under the weight and vibration of the vibroprobe. Radial forces produced by the vibroprobe force the stone infill material horizontally out against the in situ soil.

When the required degree of compaction has been reached, the vibroprobe is again removed. The filling / compacting cycle is repeated step by step up to the working platform level. Thus, a continuous column of dense granular material interlocking with the surrounding ground is formed through the treatment zone.

VIBRO MENARD

The diameter of the vibro stone column constructed is typically between 300-600mm and is subject to the properties of the surrounding soil: in softer soils, the compaction process results in higher lateral expansion of the columns. Over the length of the entire column, variable diameter could thus be created due to variable layers with different soil conditions.

Figure 3 – VSC rig on site

5.6 Resource Management

The environmental control measures defined below apply to all personnel including WCL staff, subcontractors, suppliers and third parties, and all activities and operations associated with the project. These environmental control measures are in addition to the project specific control measures defined with the Environmental Risk Register (E02).

Any Client specific environmental and / or sustainability requirements / targets / KPIs related to the efficient use of materials required by any certification schemes (e.g., BREEAM / CEEQUAL / Well Standard) should be retained. This may include confirmation of the specific format and content of information and evidence to satisfy the applicable scheme.

Risk	Environmental Control Measure(s)	Project Applicable (Yes / No)
Energy conservation	• When possible, procure electricity supplies through WCL preferred suppliers • Ensure time controls and thermostats are set to take account of unoccupied periods so that heaters are off when there is no one around • Ensure WCL and subcontractors use ECO-rated site accommodation • Ensure windows / doors are closed when the heating systems are on • Ensure light sensors and timers are correctly set • Make sure generator(s) are correctly sized for their proposed use • Ensure generators or other diesel plant are not left unnecessarily idling	Y

	• Ensure generator(s) are regularly maintained by the owner / supplier • Ensure construction plant are well maintained to maximise fuel efficiency • Ensure compressors are correctly sized for their proposed use • Ensure compressors are turned off to avoid being left unnecessarily idling • Make sure compressor(s) are regularly maintained by the owner / supplier • Ensure unused office equipment (e.g., printers, fans, coffeemakers, radios), that drain energy when not in use, are turned off and / or unplugged • Ensure power management features are enabled (i.e., sleep mode) on all office equipment (e.g., photocopiers, printers and computers) • Ensure office equipment (e.g., computers, monitors, photocopiers) are turned off at the end of the workday • Ensure photocopiers / printers are set to default by printing on both sides • Ensure electrical appliances (e.g., fridges) have an Energy Rating of A or B • Provide employees / subcontractors with awareness training regarding conserving energy and hence reducing costs • Encourage employees / subcontractors to suggest energy saving ideas.	
Water Conservation	• Turn off hose pipes when not in use • Switch off taps when not in use • Ensure there are no water leaks • Within site accommodation, use water boilers rather than kettles to encourage water savings • Where possible, install water efficiency measures e.g., low water flush toilet cisterns • Where feasible, implement rainwater harvesting on site • Provide employees / subcontractors with awareness training regarding water conservation • Encourage employees / subcontractors to suggest ideas for saving water.	Y
Material reuse	• Records of material reuse will be retained to demonstrate actions taken to avoid waste • Records will summarise materials provided to exchange / reuse networks, charitable and community groups, and reuse with other WCL projects.	Y

5.6.1 Sustainable Procurement

The environmental control measures defined below apply to all personnel including WCL staff, subcontractors, suppliers and third parties, and all activities and operations associated with the project. These environmental control measures are in addition to the project specific control measures defined with the Environmental Risk Register (E02).

Risk	Environmental Control Measure(s)	Project Applicable (Yes / No)
Supplier assessment	Ensure procurement teams undertake a supplier pre-qualification assessment that focuses on business management including environmental and social issues (Q25 / Q65).	Y
Material ordering	• Avoid over-ordering of construction materials i.e., material waste allowance rates should be kept ≤5% • Encourage suppliers and subcontractors to provide take-back construction / product wastes e.g., pallets, packaging.	Y
Timber Procurement	• Ensure all timber / timber products purchased for either temporary or permanent works are certified as legally and sustainably sourced, as defined by the UK Government Central Point of Expertise on Timber • Periodically conduct checks upon the delivery of timber / timber products to site: – Verify that FSC / PEFC Chain of Custody (CoC) certificate(s) are valid and genuine – Check the CoC certificate number matches the delivery note – Check that the relevant claim to each product supplied (e.g., Mix 70%, 100%,	Y

	Recycled Credit) is specified on the delivery note.	
Aggregates procurement	• Maximise the use of cement replacement products in concrete mixes • Maximise the use of Recycled Concrete Aggregate (RCA).	Y
Reduce packaging waste	• Minimise packaging waste on products supplied • Work with suppliers to implement packaging take back schemes.	Y
Local suppliers	Where possible, use local suppliers to reduce transportation costs and maintain a low carbon footprint.	Y

5.6.2 Hazardous Materials Management

The environmental control measures defined below apply to all personnel including WCL staff, subcontractors, suppliers and third parties, and all activities and operations associated with the project. These environmental control measures are in addition to the project specific control measures defined with the Environmental Risk Register (E02).

Risk	Environmental Control Measure(s)	Project Applicable (Yes / No)
Hazardous materials storage	• Develop a Spill Response Plan (E11) • Store hazardous materials more than 10m from a watercourse or surface water and / or foul water drainage gullies • Undertake COSHH assessment for hazardous materials (S73) • Segregate COSHH raw material stores and COSHH waste stores • Develop a COSHH Register for materials stored and handling requirements (S74) • Store hazardous material containers on secondary containment systems that will contain 110% of the contents of the largest container or 25% of the total, whichever is greater • Protect hazardous material containers so as to minimise the ingress of rainwater and secure them against accidental damage • Maintain and inspect hazardous material bunds and spill kits • Monitor hazardous material storage areas for leaks and signs of spillage • Provide site spill kits with instructions in areas of high risk (refer to EG04) • Undertake spill response exercises / drills at a frequency as defined within the Spill Response Plan (E11) • Train staff in the use of spill kits and the correct disposal of used material.	Y
Refuelling	• Undertake all plant refuelling on hardstanding or within defined areas that utilise drip trays / plant nappies • Provide secure valves and nozzles on fuel storage tanks / bowsers • Conduct refuelling activities at least 10m away from watercourses or surface / foul water drainage gullies • Locate spill kits in all appropriate locations, with instructions for use • Ensure training has been provided to those that conduct refuelling activities on correct refuelling procedures.	Y

5.6.3 Raw Material Storage

The environmental control measures defined below apply to all personnel including WCL staff, subcontractors, suppliers and third parties, and all activities and operations associated with the project. These environmental control measures are in addition to the project specific control measures defined with the Environmental Risk Register (E02).

Risk	Environmental Control Measure(s)	Project Applicable (Yes / No)
Storage of raw materials	• Store and handle all construction related materials so as to prevent: – Damage & degradation of material quality characteristics – Contamination of the material and / or the external environment – Excessively long on-site storage periods – Loss through theft and vandalism • Conduct site inspections to review construction related material handling and storage practices to ensure that material integrity and quality are being maintained and that their handling and storage is not contributing to an adverse environmental impact.	Y

5.6.4 Aggregates

The environmental control measures defined below apply to all personnel including WCL staff, subcontractors, suppliers and third parties, and all activities and operations associated with the project. These environmental control measures are in addition to the project specific control measures defined with the Environmental Risk Register (E02).

Risk	Environmental Control Measure(s)	Project Applicable (Yes / No)
Import of recycled aggregates	• Include the wording provided in EG07 in all purchase orders for recycled aggregates • Ensure that recycled aggregates have been produced in conformance with the Aggregates Quality Protocol: Production of Aggregates from Inert Wastes if more than 5,000 tonnes (over a 3-year period) are to be imported. Retain documentation, as detailed within EG07, to verify conformance to the Aggregates Quality Protocol ***(Note: grading certificates should be no longer than 3 months old)*** • Obtain a U1 Environmental Permit Exemption for the import of less than 5,000 tonnes (over a 3-year period) of recycled aggregates that does not conform to the Aggregates Quality Protocol • Ensure that an Environmental Permit is obtained if more than 5,000 tonnes (over a 3-year period) of recycled aggregates that do not conform to the Aggregates Quality Protocol are planned to be imported to site • Reject all loads of delivered recycled aggregates that does not appear to meet the defined material specification e.g., 6F2, 6F5, Type 1, Type 2 • Reject all loads of delivered recycled aggregates that contain more than 1% by mass of Class X materials i.e., wood, plastic and / or metal • Reject all loads of delivered recycled aggregates that contain any asbestos materials or smells of hydrocarbons e.g., oils / diesels.	N
Crushing inert aggregates	• Ensure that subcontractors' crushing plant has been issued with a PPC Permit issued by a Local Authority. Retain a copy of the issued PPC Permit within site documentation • Obtain and retain confirmation from the subcontractor operating the crushing plant that a Deployment Notice has been submitted to the local authority where the crusher is registered, if the crusher is operating outside the registered local authority • Ensure that recycled aggregates are produced in conformance with the Aggregates Quality Protocol if more than 5,000 tonnes (over a 3-year period) are to be produced. Retain documentation, as detailed within EG07 to verify conformance to the Aggregates Quality Protocol • Obtain an Environmental Permit if more than 5,000 tonnes (over a 3-year period) of aggregates / soils are to be screened on-site • Obtain a T5 Environmental Permit Exemption if less than 5,000 tonnes (over a 3-year period) of aggregates / soils are to be screened on-site • Obtain a U1 Environmental Permit Exemption for the use of less than 5,000 tonnes (over a 3-year period) of crushed recycled aggregates that does not conform to the Aggregates Quality Protocol • Develop (via the Geotechnical Services Manager) and / or obtain a Materials Management Plan (compliant with the CL:AIRE Code of Practice) or an Environmental Permit for the use of more than 5,000 tonnes (over a 3-year period) of recycled aggregates that does not conform to the Aggregates Quality Protocol.	Y

The following opportunities for materials reuse have been identified during Pre-Construction. These include the generation of materials on site and / or the import of processed materials from donor sites, as well as use of purchased recycled materials that are imported. *Note: If none of the below apply, please insert "NA".*

SITE WON MATERIALS				
Material Prediction	**Volume to be Generated**	**Volume to be Reused On-site**	**Volume to be Exported Off-site**	**Control(s) Allowing Reuse**
Aggregates	tbc			Choose an item.
				Choose an item.
IMPORTED MATERIALS				
Material Prediction	**Volume to be Generated**	**Volume to be Reused On-site**	**Volume to be Exported Off-site**	**Control(s) Allowing Reuse**
Aggregates	tbc			Choose an item.
				Choose an item.

5.6.5 Soils

The environmental control measures defined below apply to all personnel including WCL staff, subcontractors, suppliers and third parties, and all activities and operations associated with the project. These environmental control measures are in addition to the project specific control measures defined with the Environmental Risk Register (E02).

Risk	Environmental Control Measure(s)	Project Applicable (Yes / No)
Import of Soils	• Obtain documentation from the supplier, irrespective of whether the topsoil is premium, general purpose or economy grade, to verify that the topsoil satisfies the requirements of BS 3882 and other test certificates to demonstrate the soil is fit for purpose for the specified end use criteria • Obtain a U1 Environmental Permit Exemption for the use of less than 1,000 tonnes (over a 3-year period) of waste soils • Develop (via the Geotechnical Services Manager) or obtain a Materials Management Plan (compliant with the CL:AIRE Code of Practice) or an Environmental Permit for the import and use of more than 1,000 tonnes (over a 3-year period) of waste soils.	Y
Export of Soils	• Ensure that a Materials Management Plan (compliant with the CL:AIRE Code of Practice) is developed (via the Geotechnical Services Manager) or an Environmental Permit is obtained for the export and use of more than 1,000 tonnes (over a 3-year period) of waste soils; this could be developed by WCL or the receiving site – discuss with the Senior Environmental Manager / Environmental Advisor • Ensure all other waste Duty of Care legal requirements are complied with in relation to the transport and disposal of waste soils.	Y

The following opportunities for materials reuse have been identified during Pre-Construction. These include the generation of materials on site and / or the import of processed materials from donor sites, as well as use of purchased recycled materials that are imported. *Note: If none of the below apply, please insert "NA".*

SITE WON MATERIALS				
Material Prediction	**Volume to be Generated**	**Volume to be Reused On-site**	**Volume to be Exported Off-site**	**Control(s) Allowing Reuse**
Topsoil	tbc			Choose an item.
Subsoil	tbc			Choose an item.
Made Ground	tbc			Choose an item.

IMPORTED MATERIALS				
Material Prediction	**Volume to be Generated**	**Volume to be Reused On-site**	**Volume to be Exported Off-site**	**Control(s) Allowing Reuse**
Topsoil	tbc			Choose an item.
Subsoil	tbc			Choose an item.
Made Ground	tbc			Choose an item.

5.7 Cultural Heritage Management

The environmental control measures defined below apply to all personnel including WCL staff, subcontractors, suppliers and third parties, and all activities and operations associated with the project. These environmental control measures are in addition to the project specific control measures defined with the Environmental Risk Register (E02).

Risk	Environmental Control Measure(s)	Project Applicable (Yes / No)
Earthworks	• Consult with the local planning authority and / or Historic England (HE) / Cadw (Welsh Historic Monuments), where relevant, before works commence in areas of known or suspected cultural heritage assets e.g., archaeology, listed buildings • Develop and submit a method statement to HE / Cadw for works that may impact known or suspected cultural heritage assets • Install effective segregation around known or suspected cultural heritage assets from construction activities • Erect signage to notify project personnel of the presence of known or suspected cultural heritage assets • Ensure an archaeological Watching Brief monitors construction activities (e.g., topsoil stripping, excavations) in areas of known or suspected cultural heritage assets • Use toothless buckets, when a Watching Brief is present, to remove topsoil in areas of known or suspected cultural heritage assets • Suspend all construction related works, in the immediate vicinity, if a suspected cultural heritage asset is identified • Report the identification of any cultural heritage asset to the local planning authority • Report and record any damage cultural heritage assets • Provide information (e.g., site induction / toolbox talks) to site personnel.	Y
Works on or near Cultural Heritage Assets	• Consult with the local planning authority prior to any demolition works within a conservation area • Obtain Listed Buildings Consent from the local planning authority for any works to a Listed Building • Ensure construction designs are sensitive to the presence of known cultural heritage assets • Conduct structural surveys before construction activities commence to ensure any vibration impacts do not damage known cultural assets • Report and record any damage cultural heritage assets • Provide information (e.g., site induction / toolbox talks) to site personnel.	Y

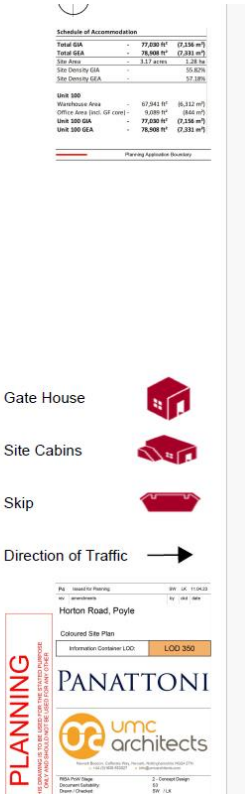
5.8 Traffic Management

The environmental control measures defined below apply to all personnel including WCL staff, subcontractors, suppliers and third parties, and all activities and operations associated with the project. These environmental control measures are in addition to the project specific control measures defined with the Environmental Risk Register (E02).

Risk	Environmental Control Measure(s)	Project Applicable (Yes / No)
Use of public, temporary & permanent haul roads	• Develop and implement a Traffic Management Plan • Identify local receptors that may be adversely impacted by traffic related nuisance complaints (e.g., noise, congestion and visual) • Establish and maintain contact with local residents and other potentially affected parties prior to the commencement of, and during, construction works in order to avoid any potential traffic nuisance related complaints • Ensure all construction related traffic uses agreed access points, as defined within the Traffic Management Plan • Ensure subcontractor HGVs are in good working order and hold a valid MOT certificate • Ensure all vehicles carrying loose material are covered • Obtain permission from the owner of street furniture (e.g., local authority or Local Highway Authority) prior to attaching directional signage • Site deliveries will be onto a stone capping layer or hard surfacing to reduce the risks of mud and / or debris being deposited on the Public Highway. Site access and surrounding roads will be monitored at all times and if necessary, road sweeping plant be used • Use wheel wash facilities / road sweepers, where appropriate, to keep public roads clear of dust and mud • Ensure all material suppliers adhere to agreed working hours in relation to material deliveries.	Y

The figure below shows our traffic management plan for the job. Where applicable we will refer to the reports undertaken by Mode for the travel plan and the transport plan produced in April 2023.

*NB
- All deliveries to utilise main route off M25
- A ll deliveries to avoid peak hours 08:00-09:00 and 17:00-18:00
-Full time road sweeper to service site during working hours.



We will ensure that construction gates to be setback to ensure HGVs do not block Horton Road whilst waiting for gates to open.

We will comply with the non-mobile machinery Euro VI emissions standard.

6. PROJECT ENVIRONMENTAL OBJECTIVES / TARGETS AND KPIs

The Project Manager, or their nominated representative, and the HSEQ Manager will review progress in achieving the objectives defined below on a monthly basis during the '4-week planning meeting' (S01). The Project Manager will also ensure the following information is recorded:

- Waste generated
- Electricity consumed
- Fuel consumed
- Water consumed.

Meter readings (e.g., electricity, water) must be entered monthly and waste information recorded on InfoTracker each month. Reported data is to be reviewed on a monthly basis and any data outliers are to be validated to ensure readings are correct and data provided correct; discuss variance to targets with the Environmental Advisor to note reasons or review options for improvement.

	OBJECTIVE	TARGET	RESPONSIBILITY	COMPLETION DATE
1	Design to use all materials on site	**tbc**		
2	> 90% waste diversion from landfill	**tbc**		

7. ROLES AND RESPONSBILITIES

Key project roles and responsibilities are provided in Appendix 3. The designated WCL staff that will be involved with the construction works throughout the project are identified below.

ROLE	DESIGNATED PERSON	CONTACT NUMBER
Construction Director	James Mandley	01604 678960
Operations Manager	Jonathan Neill	01604 678960
Project Manager	tbc	01604 678960
Site Manager / Agent	tbc	01604 678960
Head of HSEQ	Martin Law	01604 678960
Senior Environmental Manager	Amit Patel	01604 678960
Environmental Advisor	Laila Yasar	01604 678960
HSEQ Manager	Trevor Swailes	01604 678960

8. SUBCONTRACTOR MANAGEMENT

The project will engage various subcontractors to carry out project construction related activities. These subcontractors are responsible for performing all work in conformance with:

- Relevant environmental legislation and other environmental requirements e.g., Pollution Prevention Guidelines
- The requirements of this CEMP and WCL Working Instructions
- Contractual environmental requirements e.g., WCL Subcontractor Minimum Standards (G100).

Subcontractors are required to develop suitable, adequate and effective method statements that explicitly define the measures to be taken to manage significant environmental risks associated with their scope of works. No works should be permitted to commence until such method statements have been developed and approved by site management and, where necessary, the Environmental Advisor / HSEQ Manager. Additionally, subcontractors are required to provide sufficient and competent resources to monitor conformance with their own defined method statements.

The HSEQ Manager will conduct monthly General Inspections (GIs), that will assess subcontractor conformance to approved method statements, relevant environmental legislation and WCL Working Instructions.

9. COMMUNICATION & LIAISON

The communication of project related environmental information to key stakeholders is a vital element in maximising project environmental performance. Hence, the Project Manager, with the assistance of the HSEQ Manager, will ensure proactive communication of pertinent environmental information, as detailed below.

9.1 Communication with Client Representatives

TBC

9.2 Communication with Suppliers and Subcontractors

Suppliers and subcontractors will be made aware of the specific environmental requirements for working on site and for identifying and dealing with specific environmental issues associated with their work packages through:

- Issuance of the WCL Subcontractor Minimum Standards (G100)
- Attendance at the Health, Safety and Environment Planning Meeting (S01)
- Attendance on WCL and project specific induction processes.

Additionally, this CEMP and other relevant environmental management documentation (e.g., Spill Response Plan and Environmental Risk Register) will be made available on-site notice boards.

9.3 Communication with the public

The Project Manager, or their nominated representative, will liaise with the local community throughout the duration of the project on an as needed basis. However, all potentially affected parties that may be subject to disruption and / or disturbance as a result of project activities will be consulted and / or notified either via verbal face to face communications or letter drops. Additionally, site specific activities will be planned to minimise disturbance and disruption to local communities, schools, colleges, and local businesses. Furthermore, specific local community events (e.g., presentations, open days, site tours) will be held, as required, to foster a strong and open relationship with the members of the local community.

9.4 Communication with external parties

Proactive environmental communications will be conducted, as required, with the following:

- Environment Agency (EA) / Natural Resources Wales (NRW)
- Environmental Health Officer (EHO) from Slough Borough Council
- Thames Water

The purpose of maintaining a proactive and open dialogue with external parties (including regulators) is to ensure compliance with statutory and project environmental requirements is maintained.

If the project receives a reactive environmentally related communication (e.g., telephone call / email / site visit) from an enforcement authority (e.g., Environment Agency or Local Authority), the HSEQ Manager will record the communication on the Notification of Authority Enforcement Contact form (S30b) along with corresponding actions. Actions required following the visit will be closed out, as soon as practicable. In the event of any communications from regulatory bodies regarding possible enforcement action, the Senior Environmental Manager / Environmental Advisor should be contacted immediately, who can offer support and guidance, as needed.

9.5 Considerate Constructors Scheme (CCS)

The Project will be registered with CCS. All works will be carried out with positive consideration towards our neighbours and the environment. Works that are likely to cause an impact to our neighbours will be advertised

through a mechanism to be agreed with the local authority. This mechanism may be door to door leafleting of nearby properties, advertising in a local paper, posters in prominent locations and will address issues relating to programme, activities and likely effects, duration and points of contact.

10. MANAGING COMPLAINTS & COMPLIMENTS

The Project Manager / HSEQ Manager will ensure that all environmentally related complaints are recorded within InfoTracker. Thereafter, each substantiated complaint will be managed in accordance with the WCL Environmental Incident Reporting & Investigation Working Instruction (WI 02) that requires each complainant to be contacted within two (2) working days of the complaint being received and the complaint being thoroughly investigated and closed out in a timescale agreed with the complainant. The HSEQ Manager will also ensure that environmentally related complaints are effectively closed out within InfoTracker.

11. ENVIRONMENTAL INCIDENTS & EMERGENCY RESPONSE

All environmental incidents should be reported to the Project Manager (who should report to Clients, when required) who should ensure WCL management are contacted, as defined below, and relevant enforcement authorities. The Project Manager / HSEQ Manager should ensure that all environmental incidents should be recorded within InfoTracker.

WCL ENVIRONMENTAL INCIDENT CATEGORISATION	LEVEL 4	LEVEL 3	LEVEL 2	LEVEL 1
	Substantiated incident with no impact on the environment, people / property and / or reputation (WCL OBSERVATION)	Minor impact on the environment, people / property and / or reputation	Significant impact on the environment, people / property and / or reputation	Major impact on the environment, people / property and / or reputation
	Example incidents *(Categorisation to be confirmed with the Winvic Construction Limited (WCL) Environmental Team)*			
NOTIFICATION	• All WCL staff via InfoTracker	• HSEQ Manager • Operations Manager • Environmental Advisor • Senior HSEQ Manager • Sector Head of HSEQ • Construction Director	• HSEQ Manager • Operations Manager • Senior Environmental Manager • Senior HSEQ Manager • Sector Head of HSEQ • Construction Director	• Operations Manager • Head of Environment • Senior Environmental Manager • HSEQ Director • Sector Head of HSEQ • Construction Director

For Level 1 and Level 2 incidents, the Project Manager should contact the Senior Environmental Manager by telephone who will then further escalate the WCL response, if required.

Guidance on environmental incident categorisation is detailed within the WCL Environmental Incident Reporting & Investigation Working Instruction (WI 02; Appendix 1); however, the Senior Environmental Manager / Environmental Advisor will be consulted to agree final environmental incident categorisation.

The Project Manager / HSEQ Manager will ensure that the dedicated HSEQ telephone number is used in the event of an environmental incident occurring outside of normal working hours i.e., the 'HSEQ Team – Out of Hours On-Call Number' is called in the event of out of hour's environmental incidents, which should be used between the following hours:

- **Midweek** – after 1700hrs in the evening to 0700hrs the next day
- **Weekends** – after 1700hrs Friday to 0700hrs Monday
- **During normal working hours** – 0700hrs to 1700hrs Monday to Friday *(ensure contact is made with the HSEQ Manager direct in the first instance)*.

The Project Manager will, when necessary, report environmental incidents to:	
WCL Management (Out of Hours On-Call Number)	**0330 320 2185**
Environment Agency / Natural Resources Wales 24-hour Emergency Hotline	**0800 80 70 60**

The On-Call Manager will provide advice and guidance in relation to the environmental incident as well as assistance

in completing InfoTracker. If project personnel identify a suspected cultural heritage asset (e.g., archaeological artefact) all construction related works in the immediate vicinity should be stopped. Thereafter, the find should be reported to the Project Manager and the Environmental Advisor who should take all necessary and appropriate action(s), as defined in WCL Working Instruction (WI 05, Cultural Heritage Management).

Furthermore, if project personnel identify suspected rare or invasive plant species and / or rare fauna (e.g., Great Crested Newts, Water Voles, Bats, Barn Owls, Badgers and breeding birds) all construction related works in the immediate vicinity should be stopped. Thereafter, the find should be reported to the Project Manager and the Environmental Advisor who should take all necessary and appropriate action(s), as defined in WCL Working Instruction (WI 04, Ecological Management).

The WCL Working Instruction entitled Environmental Emergency Preparedness & Response (WI 03) describes the actions required to plan for the effective management of potential environmental emergency incidents so as to minimise any potential detrimental environmental impacts. As a result of implementing this Working Instruction, a Spill Response Plan (SRP) (E11) has been developed and made available to all site personnel.

Additionally, the Project Manager will ensure that this SRP is tested at least once and that site personnel are adequately trained in its requirements. The Project Manager should ensure that environmental emergency equipment (e.g., spill kits) appropriate to the significance of the spill risk and the sensitivity of the surrounding environment, are appropriately located and maintained on site.

In the event of a major hazardous material spill incident (i.e., incidents which cannot be dealt with using equipment available on site or spills / pollution which have, or are likely to, enter(ed) a watercourse / drain) site personnel should call the following 24-hour national spill response hotline:

AMBIPAR RESPONSE	
Response Time: **Within 4 – 6 hours**	**01202 653558**
Information to be provided when an emergency response call is made:	• Name of person reporting the incident • Quote Winvic Construction Limited • Telephone Number of person reporting the incident • Purchase Order Number • Incident details i.e., what has been spilled / location of spill / site contact details.

12. ENVIRONMENTAL TRAINING

Courses are run by WCL covering various environmental issues, as defined in the WCL Training Matrix. For site personnel, the site induction will be used to promote overall environmental awareness as well as employee and subcontractor environment management responsibilities. The site induction will be further enhanced through the delivery of a series of toolbox talks that should be delivered to relevant site personnel on an ongoing basis.

The environmental toolbox talks that should be delivered on this project are:

WCL ENVIRONMENTAL TOOLBOX TALKS	
TBTENV02	Tree Protection
TBTENV20	Spill Control
TBTENV21	Petrol, Diesel and Oils
TBTENV22	Re-Useable Soil Resources on-site
TBTENV23	Soil Planning and Management

TBTENV24	Stripping Topsoil
TBTENV25	Stripping Sub-soil
TBTENV26	Stockpiling Soil
TBTENV27	Spreading Soil
TBTENV28	Sourcing Topsoil
TBTENV29	Manufacturing Topsoil
TBTENV30	Soil Aftercare
TBTENV31	Use of Surplus Soil
TBTENV32	Working with Previously Developed Land
TBTENV34	Dust and Air Quality
TBTENV35	Noise and Vibration
TBTENV36	Be a Good Neighbour
TBTENV37	Materials Management and Housekeeping
TBTENV38	Energy Conservation – Construction Site Good Practice
TBTENV39	Timber Procurement
TBTENV40	Waste Management
TBTENV41	Storage of Waste
TBTENV42	Waste Segregation
TBTENV43	Water Pollution Prevention
TBTENV44	Water Pollution - Silt
TBTENV45	Water Pollution – Cement and Concrete
TBTENV46	Pumping and Overpumping
TBTENV47	Washing Down Plant and Machinery
TBTENV48	Bentonite
TBTENV49	Climate Change
TBTENV50	Construction Carbon Reduction
TBTENV51	Road Sweepers

The delivery of these environmental toolbox talks will be planned during the '4-week planning meeting' (S01) that is held between the Project Manager and the HSEQ Manager. Evidence of delivery of any relevant training and / or TBTs will be recorded on the Training Attendance Register (S43).

13. ENVIRONMENTAL AUDITS & INSPECTIONS

Continuous monitoring of environmental performance will take place via monthly General Inspections (GIs), which establishes subcontractors' compliance to the requirements of the WCL EMS, this CEMP, method statements and the Client and statutory obligations.

GIs will be conducted by the HSEQ Manager with any findings recorded within InfoTracker. Thereafter, appropriate corrective and remedial action(s) will be taken in a timely manner. Environmental information from GIs is collated by the HSEQ Department and analysed for any arising trends. From this analysis, preventative action is taken to prevent recurrence e.g., re-briefings, toolbox talks. Project environmental audits will be conducted by the Senior Environmental Manager / Environmental Advisor to ISO14001 standards, to ensure compliance with the WCL EMS. HSEQ Managers will also include environmental observations and corrective actions as part of their site visit reports.

14. PROJECT CLOSE OUT

The Project Manager must ensure the following are completed upon conclusion of site-based project activities.

ITEM	ACTIONS	YES; NO; N/A
DoWCoP / MMP / Verification Report	Has all documentation / records been completed for the reuse of excavated material?	
	Has the required information been returned to the appropriate consultants? Has CL:AIRE been notified?	
U1 Exemption	Have record logs been completed for the reuse of excavated material (demonstrating <1,000t used)?	
	Are all waste transfer notes retained?	
Aggregates Quality Protocol	Has appropriate information been provided demonstrating compliance with the Aggregates Quality Protocol?	
Environmental permits, consents, licences and / or approvals	Have all environmental regulatory permissions (e.g., discharge permits / abstraction licences / waste permits) been surrendered to the appropriate regulatory body?	
BIG Challenge	If relevant, has the WCL Environmental Advisor been contacted to develop a project BIG Challenge case study to highlight biodiversity enhancement initiatives undertaken?	
Project Case Study	If relevant, has the Marketing & BD Department been contacted produce a HS&E / Sustainability Case Study to highlight HS&E / Sustainability achievements made during project delivery?	
Awards	If relevant, has the WCL Environmental Advisor been contacted to develop a submission for an environmental award (e.g., Green Apple Award) to recognise significant environmental achievements?	
Environmental Performance (KPIs)	Have all WTNs / HWCNs been added to InfoTracker?	
	Has the Waste Management Service Provider diversion from landfill figures provided / accurate? Has the final project C/D/E performance data been received from each provider?	
	Has all diesel / water usage been recorded?	
	Has the final electric meter reading(s) been entered onto InfoTracker?	
Incidents & Communication	Have all environmental incidents, Enforcement Authority visits been recorded and closed out?	
	No. of L1 incidents ??	
	No. of L2 incidents ??	
	No. of L3 incidents ??	
	No. of L4 observations ??	
	No. of environmentally related complaints ??	

APPENDIX 1: WCL ISO 14001 CERTIFICATION

British Assessment Bureau

Certification is conditional on maintaining the required performance standards throughout the certified period of registration
The British Assessment Bureau, 30 Tower View, Kings Hill, Kent, ME19 4UY

The management system of Certificate Number 2032456

Winvic Construction Limited

Brampton House, 19 Tenter Road, Moulton Park, Northampton, NN3 6PZ

has been assessed and certified as meeting the requirements of

ISO 14001:2015

for the following activities

The design and project management of construction projects for the private sector and commercial clients throughout the United Kingdom. For the purpose of SSIP this Organisation has been assessed against a Principal Contractor and Principal Designer; CDM role.

Further clarifications regarding the scope of this certificate and the applicability of requirements may be obtained by consulting the certifier.

UKAS MANAGEMENT SYSTEMS
8289

Valid from
Initial Certification: 17 September 2009
Latest Issue: 06 July 2021
Expiry Date: 17 September 2024
subject to annual assessments

Authorised by

Mike Tims
Chief Executive Officer

www.british-assessment.co.uk

Certificate issued by Amtivo Group Limited, trading as British Assessment Bureau

To confirm the 'Live Status' of this certificate please use the 'Certificate Verification' tool located at www.british-assessment.co.uk

APPENDIX 2: PROJECT ENVIRONMENTAL RISK REGISTER

winvic E02

Environmental Management **Environmental Risk Register**

Project Name:		Prepared By:		Date Prepared:	
Project Number:		Position:		Date Last Reviewed:	
Regional Environmental Manager:					

Ref	Description (Select Activities)	Nuisance: Noise	Nuisance: Odour	Nuisance: Dust	Nuisance: Traffic	Nuisance: Visual Impact	Nuisance: Vibration / Light	Discharges & Emissions: Surface Water	Discharges & Emissions: Ground Water	Discharges & Emissions: Solid Waste(s)	Discharges & Emissions: Liquid Waste(s)	Land & Resources: Cultural Heritage	Land & Resources: Land Use Management	Land & Resources: Materials, Energy & Water Conservation	Land & Resources: Ecological Management	General: Environmental Incident	General: Other	General: Environmental Legal Permissions
	Construction Activity	View Notes	View Notes	View Notes	View Notes	View Notes	View Notes	View Notes	View Notes	View Notes	View Notes	View Notes	View Notes	View Notes	View Notes	View Notes		View Notes
1	Abstraction of Water																	
2	Boring and Bored Tunnelling																	
3	Brick / Blockwork																	
4	Building Refurbishment																	
5	Concrete Batching																	
6	Concrete Pours & Washout																	
7	Crushing, Screening & Material Reuse																	
8	Demolition Works																	
9	Dewatering / Overpumping																	
10	Dredging																	
11	Earthworks																	
12	Erection of Site Fencing																	
13	Excavation																	
14	Exposed Structural Element Repair																	
15	Grouting																	
16	Internal & External Fit-out																	
17	M&E Work																	
18	Microtunnelling																	
19	Office Maintenance																	
20	Permanent Office Set-Up & Operation																	
21	Piling																	
22	Pipeline Testing & Commissioning																	
23	Planning Conditions																	
24	Plant & Vehicle Maintenance																	
25	Procurement of Materials & Services																	
26	Roadworks																	
27	Site Access / Egress																	
28	Site Clearance																	
29	Site Drainage																	
30	Site Office Set-Up & Operation																	
31	Steelwork Erection																	
32	Storage / Use of Hazardous Materials																	
33	Temporary Works																	
34	Transportation - materials / wastes																	
35	Use of Plant & Vehicles																	
36	Vegetation Clearance																	
37	Washdown Activities																	
38	Working in Tidal Waters																	
39	Working in, near or over Water																	
40	Working with Groundwater																	
41	User Defined Risk 1 - double click																	
42	User Defined Risk 2 - double click																	
43	User Defined Risk 3 - double click																	

APPENDIX 3: PROJECT ROLES & RESPONSBILITIES

NAME / POSITION	KEY ENVIRONMENTAL RESPONSIBILITIES	MOBILE NUMBER
tbc Project Manager	• Overall management of the environmental component of the project. • Secure environmental permits in collaboration with the Senior Environmental Manager / Environmental Advisor • Support and check that environmental plans, associated guidance, and processes are being followed with support from the Environmental Advisor. • Highlight new areas of work that may present environmental risk and ensure these are proactively managed.	Enter telephone number
tbc Site Manager/ Agent	• Highlight new areas of work that may present environmental risk. • Lead on developing new ways of working to avoid, reduce and mitigate pollution, obtain support from the HSEQ Manager / Environmental Advisor. • Communicate and where necessary supervise the delivery of the agreed work and any additional actions. • Act in the event of pollution incidents. • Delivery of environmental training (induction and toolbox talks) for site personnel and subcontractors.	Enter telephone number
Laila Yasar Environmental Advisor	• Support day to day activities to ensure significant environmental effects are avoided. • Review and update the site Construction Environmental Management Plan, where necessary. • To act as the main point of contact between the regulatory authorities (EA / NRW / local authority) and the project on environmental issues. • Liaison with the acoustic, air, lighting and ecological consultant(s) to the project. • To act as the main point of contact between neighbours and the project. • Ensure best practice is promoted at all times. • Assisting with the implementation of emergency response procedures after environmental incidents. • Assisting in the management of the monitoring programme, including dust, noise, smoke, light and land contamination.	07761341964
Amit Patel Senior Environmental Manager	• Provide support to evaluate environmental risk and advise on developing new ways of working to avoid, reduce and mitigate pollution. • Monitor, review and update environmental plans; include site-specific protection measures, discuss any actions with Environmental Advisor and HSEQ manager; agree responsible persons and timeframe for delivering on actions. • Support the development of new guidance and processes in line with the ISO14001 EMS. • Provide advice in the event of pollution incidents. • Provide environmental training to all staff.	07519348045
tbc HSEQ Manager	• Lead on proposals to address strategic environmental risk and present these to the business. • Chair '4 weekly' meetings on site to evaluate environmental monitoring, incidents, non-conformances, complaints and change or variation in the working method. • Ensure the project Environmental Risk Register is formally reviewed monthly during '4 .weekly' meetings • Support development and sign off method statements for high-risk activities. • Environmental incident monitoring and reporting.	Enter telephone number

NAME / POSITION	KEY ENVIRONMENTAL RESPONSIBILITIES	MOBILE NUMBER
Earthwork, Groundwork and Water Management Support	• Follow processes communicated with respect to environmental protection and specific methods of work. • Implement environmental plans and any site-specific measures. • Report to senior engineer any pollution and near miss incidents. • Act in the event of pollution incidents.	Enter telephone number
Spill Responder(s)	• Ensure spill response equipment is available and well maintained • Respond to any spill incident that occurs if it is safe to do so • Ensure incident details are entered within InfoTracker following any spill incident.	Enter telephone numbers
Site Staff	• Follow processes communicated with respect to environmental protection and specific methods of work. • Report to their immediate supervisor any pollution and near miss incidents observed. • Act in the event of pollution incidents.	N/A