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Sandvik Osprey, Margam

Construction and Environment Management Plan (CEMP)



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PRESENTED TO

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1.0 INTRODUCTION

1.1 BACKGROUND

A Construction Environmental Management Plan (CEMP) has been completed to satisfy the request by Natural Resources Wales (NRW) to accompany the Environmental Statement (ES) for the proposed development. NRW have stated that in relation to additional information not directly related to the ES that it is good practice to develop a Construction Environment Management Plan (CEMP) to be included in the ES.

The CEMP incorporates environmental protection measures which need to be considered when planning construction works at the site, particularly since implementing mitigation measures may impact the standard approach by a contractor to specific tasks and by extension the associated cost. This CEMP provides the basis for communicating how construction activity during the development works will be controlled to minimise potential environmental impact.

1.2 AIMS AND OBJECTIVES

The main aim of this CEMP is to manage the construction phase of the redevelopment works in an environmentally acceptable and sustainable way, with consideration given to the risk to nearby environmental receptors such as adjacent watercourses and designated sites.

Site-specific recommendations made in the ES chapters and are incorporated into this CEMP document. In the case of environmental specialisms that have not required a site-specific assessment, we have incorporated several 'good practice' measures, which if implemented at the site, should mitigate the risk of complaints or the requirement for intervention by statutory bodies. The CEMP has been developed to ensure mitigation measures put forward within the environmental reports are fully implemented and to make sure sensitive environmental receptors are adequately protected.

Provided the mitigation measures presented in the CEMP are implemented at the site, the contractor will be in a strong position to demonstrate that they have adopted best practice at the site and protect themselves against complaints and reputational damage.

The CEMP is intended to act as a live document and should be routinely updated to reflect best practice guidance for construction methods, and any additional mitigation measures required following the review of the ES by relevant parties. The appointed Principal Contractor (PC) will be required to adhere to the mitigation and best practice methods outlined in this CEMP. The contractor may need to prepare its own, more detailed, method statements in accordance with the framework set out in this CEMP for specific tasks.

1.3 DESCRIPTION OF PROPOSED DEVELOPMENT

Sandvik Osprey are to develop a new industrial site at Land off J38 M4, Margam, SA13 2NR. The site comprises 6 hectares and is allocated under Policy EC1/2 of the Neath Port Talbot LDP as a Strategic Employment Site.

It is proposed to construct a new metal / alloy powder processing facility (Use Classes B1, B2 and B8), similar to Sandvik Osprey's existing facility in Neath, to operate 24-hours a day, 5 days a week.

1.4 BRIEF

If left uncontrolled, the construction phase of a development could result in significant impacts to the environment and or the local community. Both the client and the appointed Principal Contractor (PC) shall have key responsibilities in ensuring that these environmental risks are adequately controlled and mitigated.

This CEMP sets out a framework for how environmental issues that arise will be handled to ensure compliance with relevant legislation. This CEMP is a live document that will be updated as necessary to reflect the project requirements. The PC, and suitably qualified consultants (e.g. ecologist and arboriculturalist) on this project will

update and revise this plan in line with the proposed construction methodology and programme. If required, any changes proposed by the PC will be reviewed and agreed with NRW prior to site works commencing.

The key areas identified for consideration within this assessment are as follows:

- Ecology;
- Transport;
- Trees;
- Visual Impact;
- Drainage;
- Flooding;
- Contaminated Land;
- Noise and vibration;
- Storage of materials, including parking of plant and equipment;
- Hazardous materials;
- Pollution, Waste and Materials Management; and
- Emergency / Contingency measures.

1.5 ENVIRONMENTAL MANAGEMENT FRAMEWORK

This CEMP has been prepared by Tetra Tech on behalf of the Client (Sandvik Osprey) to inform employees and contractors on-site of the environmental risks associated with the scheme in a systematic way such that the PC can effectively manage the environmental risks.

The CEMP has been prepared in accordance with relevant UK legislation and regulations, environmental guidelines, approved codes of practice and industry standards (where appropriate) and with the general guidance provided in the CIRIA document Environmental Good Practice on Site (CIRIA Report C650, published 2005).

The CEMP recommends specific measures that should be taken to control and manage the environmental impacts that may otherwise occur to the environment at site.

The performance of the PC in implementing the requirements of the CEMP should be monitored through the completion of regular environmental audits during the construction period. The appointed PC will be required to develop and implement an Environmental Management System to take full account of the environmental issues and to manage those accordingly.

2.0 CONSTRUCTION STAGES AND KEY PHASES

2.1 KEY PHASES

It is anticipated the phasing of construction works on site will follow the general sequence detailed below:

- Site preparation / enabling works;
- Site earthworks;
- Site access works;
- Main site drainage (including surface water discharge);
- Construction of foundations;
- Construction of structures; and
- External landscaping.

The above will be updated to reflect the key construction phases of the development (including anticipated timeframes) once this has been programmed.

2.2 PLANT AND EQUIPMENT

It is anticipated the main plant to be utilised for each of the key construction phases will include:

- Site preparation / enabling works – Tracked excavator, dumpers and concrete saws;
- Site earthworks – Tracked excavator and dumpers;
- Site access works – Tracked excavators, dumpers, rollers and vibrating plates;
- Main site drainage infrastructure works – Tracked excavators, dumpers, concrete mixers, concrete saws and vibrating plates;
- Foundations – Piling rigs, tracked excavators, dumpers, concrete mixers, vibrating pokers and concrete saws;
- Structures – Tracked excavators, dumpers, concrete mixers, vibrating pokers, rollers, vibrating plates and concrete saws;
- External landscaping – Tracked excavators and dumpers.

The above will be updated to reflect the key construction phases of the development (including anticipated timeframes) once this has been programmed.

2.3 SITE ACCESS AND TRAFFIC MANAGEMENT

It is anticipated that access to the site will be via the adjacent unadopted road to the north, with the access roads designed in accordance to current roads service standards. Segregated pedestrian and vehicular access will be provided; whilst internal access roads and parking arrangements will ensure sufficient capacity for all incoming site traffic is maintained.

All deliveries to the site, i.e. plant, materials and other equipment, will be offloaded at the designated areas within the site boundary. Speed limits for internal access roads will be stipulated for health and safety purposes, and to reduce risk of off-site emissions (noise and dust).

2.4 HOURS OF OPERATION

Work activities will be restricted to the following normal site working hours:

- Monday to Friday: 0700hrs to 1800hrs
- Saturday: 0800hrs to 1300hrs

It is not anticipated there will be any activity on Sundays or Bank Holidays.

3.0 GENERAL ENVIRONMENTAL MANAGEMENT POLICY

3.1 INTRODUCTION

In addition to the discipline-specific environmental management requirements detailed in Section 4, the Client and PC will be required to implement general environmental management roles, policies and procedures throughout the construction period.

3.2 ENVIRONMENTAL POLICY

The Client and PC will ensure that their Environmental Policy is clearly displayed on site notice boards throughout the construction period.

3.3 ENVIRONMENTAL TEAM STRUCTURE AND RESPONSIBILITIES

The Principal Contractor's Environmental Team shall comprise the following:

- Project Manager – To be completed following appointment of PC;
- Site Manager – To be completed following appointment of PC;
- Site Health, Environment and Safety (SHES) Officer – To be completed following appointment of PC;
- Environmental Manager – To be completed following appointment of PC; and
- Site Personnel (including sub-contractors).

Responsibilities associated with each of the above roles are detailed in the following sections.

If the PC identifies any conflict between the advice given in this CEMP and the contract documents the PC should inform the Client's Project Manager.

All site personnel, including sub-contractors, will also have responsibilities under the CEMP, as detailed in subsequent paragraphs.

3.3.1 Project Manger

The Project Manager shall be responsible for:

- Nominating a Project Environmental Manager;
- Ensuring that the required environmental consents are in place before work starts;
- Reporting incidents and non-conformances to the Client;
- Liaising with Statutory Authorities and the Client as required and ensure records of communication (including verbal communication) are kept;
- Monitoring environmental performance including regular review of Contract Objectives and Targets (including Environmental) and the review of incidents and non-conformances at contract review meetings;
- Approving any PC Construction Method Statements (CMS) and ensuring its implementation throughout the project by all employees and subcontractors;
- Verify that materials management within the scheme is carried out in accordance with the Materials Management Plan and any associated consents;
- Verifying that actions raised during regular environmental audits, are completed by the relevant deadline.

3.3.2 Site Manager

It is the Site Manager's responsibility to:

- Ensure that they are aware of any existing environmental issues on-site prior to site mobilisation;
- Ensure environmental and waste requirements are included on requisitions and in subcontracts and orders;
- Ensure oil, including diesel, is stored on-site according to relevant environmental legislation and in appropriately bunded tanks / drip trays;
- Ensure compliance with the Site Waste Management Plan and any associated consents;
- Report incidents and non-conformances to the PC Project Manager;
- Ensure Statutory Authorities are always appropriately accompanied on site visits;
- Ensure employees and subcontractors receive induction training (including training with respect to environmental issues associated with the project and any specific tasks) and toolbox talks, as appropriate;
- Maintain the maintenance of training records for all site staff.

3.3.3 Site Health, Environment and Safety (SHES) Officer

It is the responsibility of the SHES officer to:

- Ensure that they are aware of any existing environmental issues on-site prior to site mobilisation;
- Ensure that if a suspected environmental issue, incident or non-conformance is identified during the works that it is addressed in accordance with the CEMP. All such instances should also be reported to the Site Manager and recorded and monitored;
- Ensure that any environmental issue, incident or non-conformance identified during the works (including those reported through the PC's safety observation report system or equivalent) is recorded within site records and if required in the Pre-Construction Information, Construction Phase Health and Safety plan and Site Health and Safety file;
- Ensure that controls within the discipline / task-specific Management Plans and the Construction Phase SHES plan are implemented on site.

3.3.4 Environmental Manager

The Environmental Manager shall be responsible for:

- Identifying significant environmental impacts for the project and assisting in setting up contracts and procedures to include the necessary controls;
- Ensuring the identified environmental aspects and hazards are addressed within the construction process and that any design changes consider the impacts to the environment;
- Implementing processes to monitor compliance with the CEMP through regular inspections and audits;
- Periodically reviewing and updating the CEMP (at least once every 6 months);
- Providing up to date environmental information to the Site Manager and SHES Officer to meet the requirements for weekly SHES meetings;
- Reporting incidents and non-conformances to the Site Manager and SHES Officer immediately, and to Statutory Authorities where required;
- Disseminating information, including changes to legislation, to the Project Manager, Site Manager, SHES Officer and other relevant employees;

- Identifying employees who require environmental training, and providing appropriate training where applicable;
- Ensuring all records are retained and readily available;
- Update the Site Waste Management Plan (if applicable) on a regular basis (at least quarterly) and monitor compliance with the Materials Management Plan (if required);
- Providing advice and dealing with queries and correspondence concerning environmental issues;
- Detailing post-construction environmental monitoring and management where required and identify the parties responsible for implementation.

During construction, the PC will appoint an Environmental Manager who would initially be responsible for co-ordinating and managing all of the environmental activities during the construction phase.

The Environmental Manager will be responsible for reviewing the CEMP, CMS, Work Instructions and other specialist procedures.

It will be the Environmental Manager's responsibility to develop and maintain the CEMP during the course of the project.

The Client's site representative may inspect the CEMP at any time.

3.3.5 Site Personnel

All plant operators and labourers will have appropriate Construction Skills Certification Scheme (CSCS) qualifications or appropriate training and supervision in place. The PC will identify Personal Protective Equipment (PPE) requirements for personnel, which shall include as a minimum:

- High visibility clothing;
- Safety footwear; and
- Safety helmets.

All plant operators, earthwork foremen and labour charge-hands will be trained in the use of spill kits. All site personnel shall:

- In the case of an environmental incident, stop work, implement control procedures and report it to the Site Manager;
- Pass any queries or correspondence on environmental issues to the Environmental Representative;
- Work in accordance with Environmental Procedures, Project Environmental Management Plan and associated Method Statements.

3.3.6 Sub-Contractors

All sub-contractors shall:

- In the case of an environmental incident, stop work, implement control procedures and report it to the Site Manager;
- Pass any queries or correspondence on environmental issues to the Environmental Representative;
- Work in accordance with Environmental Procedures, Project Environmental Management Plan and Method Statements;
- Develop and submit Method Statements which are to include Environmental Controls for review by the designated Environmental Team.

3.4 TRAINING

Training will be provided to site personnel throughout the construction period and shall include:

- Induction training, including training with respect to site-specific environmental issues, requirements and expectations;
- Toolbox talks, with the content depending on the type of work being undertaken and the environmental impacts that may result from each activity; and,
- Detailed training for staff with specific environmental responsibilities, including waste management, recycling, spills etc.

3.4.1 Induction Training

All project personnel will be required to pass a Safety, Health, Environment and Security induction before being allowed to work on-site. This will ensure that site personnel are fully aware of key environmental issues associated with the scheme, and the management and control procedures that have been established to prevent or mitigate any potential environmental impacts.

All project personnel will be appropriately briefed about project-specific environmental impacts and mitigation measures at an induction course before they are allowed onto the site.

Some of the topics the briefing should cover are:

- Guidance on the significant and sensitivity of environmental features near the proposed development site;
- The environmental objectives and policies of the Client and the PC;
- The potential environmental effects of construction;
- The identification / management of soil and / or groundwater contamination;
- Responsibilities for environmental monitoring and reporting; and
- Procedures for responding to environmental incidents and emergencies.

3.4.2 Tool-box Talks

All foremen will be briefed on specific Method Statement requirements before work commences. The appointed Environmental Manager will also give a series of toolbox talks to all staff during the course of the project. The programme will be adjusted to suit any site-specific issues that may arise.

Typical tool-box talk topics are listed below:

- Safe handling and refuelling of plant and machinery;
- Surface and ground water pollution prevention, including precautions to prevent sediment-laden run-off from entering watercourses;
- Precautions to prevent / reduce sedimentation of the watercourse during the construction works at the river bank;
- Waste Management, including waste storage and segregation and the potential planning and waste management licensing implications of materials re-use;
- Spill control;
- Air quality & dust; and
- Noise & vibration.

3.5 MONITORING

Monitoring of the environmental effects of construction enables the effectiveness of the implemented environmental protection / mitigation measures to be evaluated. It also allows environmental issues to be identified and responded to at an early stage. Monitoring will also help to identify and implement environmental improvements, which will contribute to the overall environmental performance of the project.

The Client / PC will ensure that a programme of monitoring, both during and after construction, is instigated in order to determine whether or not any observed changes are the result of the completed development (and, therefore, may potentially require additional mitigation measures) or are a result of natural variation. Monitoring requirements are outlined along with the specific site pollution control measures in Section 4 of this document.

Environmental near misses and incidents will be recorded and investigated, and appropriate corrective actions put in place. The PC will operate a policy of self-reporting of environmental incidents and be responsible for ensuring that any non-conformances are recorded and dealt with in accordance with the procedures detailed in the CEMP.

3.6 ENVIRONMENTAL AUDITS

The PC and operational phase manager will undertake a programme of regular environmental inspections and quarterly environmental audits to record performance and identify any corrective actions required.

The client will carry out appropriate environmental inspections and monitoring of the contractor's environmental performance in the form of monthly audits. Formal audits will be against an audit checklist.

Audit results will be reported to the PC; they will play an important part in reviewing and updating the Environmental Management Plan as the project develops.

3.7 COMMUNICATION

At project review meetings and Operational Project Reviews (OPRs), the following shall be reviewed:

- Environmental requirements;
- Objectives and targets (including environmental) to determine if they are being met;
- Environmental incidents and non-conformances to verify that actions are completed by the relevant deadlines and to identify trends and any further actions required; and,
- Audit Project Improvement Notices (PINs) to ensure actions are completed by the deadlines.

The Project Manager, in conjunction with the Environmental Manager, will be responsible for receiving, documenting and responding to any environmental communication from third parties. All verbal communication from third parties will be logged in the Project Communication Log. Environmental risk summaries, bulletins and other relevant information shall be placed on the site notice boards.

4.0 SITE CONTROLS

The site controls specified in this section are designed to:

- Highlight the most significant environment risks related to the site activities;
- Identify site controls related to those risks; and
- Provide a method of recording and documenting site control measures.

Site specific risks and relevant mitigation measures that are most likely to impact on the scheme are considered in more detail within this section. Monitoring, weekly SHES meetings and Environmental Inspections and Audits will record the implementation of mitigation measures and site controls for the majority of environmental risks.

Risk Assessments and Method Statements will be created during the works to manage specific risks as they arise. It is essential that these risks are highlighted to project team and actively managed during construction.

4.1 IDENTIFICATION OF POTENTIAL SITE RISKS

In developing the pollution control recommendations for the site, the following published documents were reviewed as part of this report:

- CIRIA C753, The SUDS Manual, 2015;
- CIRIA Report C532 Control of Water Pollution from Construction Sites: Guidance for Consultants and Contractors;
- CIRIA C648, Control of Water Pollution from Linear Construction Projects: Technical Guidance, 2006;
- CIRIA Handbook C741 Environmental Good Practice on Site, 2015;
- IEMA (2008) Practitioner Series No.11 Waste Management: A Guide for Business in the UK. Institute of Environmental Management and Assessment;
- The Environment Agency's Approach to Groundwater Protection, Version 1.0, March 2017;
- NetRegs (2009) Site Waste – It's Criminal: Simple Guide to Site Waste Management Plans (accessible at http://www.netregs.org.uk/media/1114/swmp_simple_guide.pdf);
- DAERA Standing Advice – WTR – Discharge to the Water environment, Published April 2015 and updated November 2017;
- DAERA Standing Advice – WTR – Pollution Prevention Guidance, Published April 2015 and updated November 2017.

Although Pollution Prevention Guidelines (PPGs) jointly published by the Environment Agency, Natural Resources Wales (NRW) and Scottish Environmental Protection Agency (SEPA) have been withdrawn, where they have not been replaced by revised Guidance for Pollution Prevention (GPP) documents¹, they are still considered a source of information on good practice. Consequently, the following PPGs and GPPs have been reviewed and referenced in this report where applicable:

- GPP 01: Understanding your environmental responsibilities – good environmental practices;
- GPP 02: Above Ground Oil Storage Tanks;
- PPG 03: The use and design of oil separators in surface water drainage systems;
- GPP 04: Treatment and disposal of wastewater where there is no connection to the public foul sewer;

¹ Guidance for Pollution Prevention, [online] accessed 18th May 2020 - <https://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-and-replacement-series/guidance-for-pollution-prevention-gpps-full-list/>

- GPP 05: Works and maintenance in or near water;
- PPG 06: Working at construction and demolition sites;
- PPG 07: Safe Storage – The safe operation of refuelling facilities;
- GGP 08: Storage and disposal of used oils;
- PPG 11: Preventing pollution at industrial sites;
- PPG 18: Managing fire water and major spillages;
- GPP 21: Pollution incident response planning;
- GPP 22: Dealing with Spills;
- GPP 26: Safe storage - Drums and Intermediate Bulk Containers.

4.2 IDENTIFICATION OF POTENTIAL SITE RISKS

The identification of site specific environmental risks will be identified by the ES chapters, and reviewed by consultees as part of the planning process. Following identification and agreement on the principal site environmental risks, this CEMP will be updated to incorporate the control measures required to ensure protection of sensitive local receptors.

A discussion of potential site risks identified to date follows.

4.3 CONTROL OF POLLUTION OF GROUNDWATER AND SURFACE WATERS

In considering the potential for impact to groundwater and surface waters as a result of construction activities at the site, the main potential receptors are as follows:

- Groundwater resource contained within the underlying bedrock aquifer and superficial aquifers (local groundwater abstractions within wider vicinity);
- Surface water features include the drainage ditches to the south of the site, and the Mother Drain to the west;

A summary of the site control measures to be implemented during the construction phase of the development is outlined in the following sections.

4.3.1 Site Excavations

Where practicable, no excavation of existing natural ground beneath the water table will be carried out on site. In the event that excavation depths are concurrent with the water table or subsurface conditions vary to that anticipated, requirements to continue excavation should be reassessed.

4.3.2 Site Welfare

Management of site welfare provisions, such as toilets, site personnel recreation / rest areas will be situated in an appropriate location within the development boundary. Chemical toilets which do not require connection to a drainage / sewer network will be used on site during the construction phase and will be serviced by a hire company. Any other welfare facilities will be provided with appropriate drainage and supply provisions.

4.3.3 Management of Sediment Laden Surface Water

Due to the presence of surface water drains close to the southern boundary, specific control measures to reduce the risk to the watercourses and to manage any off-site surface water flows will be implemented during the construction phase, which will include the following:

- No construction activities shall take place within 10m of surface waters;
- During extended periods of heavy rainfall, undertaking earthworks to expose ground and movement of plant close to designated watercourses should not be carried out;
- All building materials and aggregates, and in particular those which have a potential to add to potential silt/suspended solids in surface water (e.g. sand, loose aggregates, cement, dusty aggregates and blocks) should be stored in an appropriate manner and at least 10 metres from a designated water course and covered where possible;
- No aggregates or building materials should be stored within an identified flood plain;
- The use of silt fences/ bunds along the boundary of the watercourse/ drainage channels on site if required;
- Daily visual inspection of silt fencing should be carried out, with any required repairs made as soon as practicable. The frequency of visual inspections may be increased during period of excessive rainfall;
- Temporary drainage features, other drainage, silt traps etc. must be inspected regularly throughout the construction, operation and decommissioning phases to ensure they are clear and capable of performing their functions.

4.3.4 Management of Surface Water Flows

Inadequate management of silt suspended in surface water run-off will impact on water quality of adjacent watercourses, harm and even kill aquatic life, and potentially cause obstructions to flow. The mitigation measures proposed in this CEMP are intended to address the potential risk by controlling the generation of silt and controlling the flow of surface water so that it does not impact on the identified receptor. The following measures should therefore be implemented at the site.

4.3.4.1 Restricting Site Groundworks During Periods of Heavy Rainfall Where Possible.

During extended periods of heavy rainfall, undertaking earthworks to expose ground and movement of plant close to designated watercourses should not be carried out where possible to minimise ground disruption which can lead to excessive levels of suspended solids (silt) in surface water run-off.

4.3.4.2 Restricting the Removal of Vegetation

Only vegetation removal required for construction works should be completed. Excessive vegetation should not be removed if not deemed necessary to facilitate site works. The removal of vegetation should be completed only if and when necessary to reduce the amount of time that soils are exposed.

4.3.4.3 Restricting Plant Washing to Designated, Controlled Areas.

Washing of plant and equipment should be carried out off-site where possible. Any washing of plant and equipment undertaken on-site should only be carried out within a designated hardstanding area, situated at least 10 metres from any watercourse or surface water drain. Any run-off from such activities should be appropriately collected and disposal managed in accordance with the requirements of the local sewerage undertaker.

4.3.4.4 Storage of Building Materials, Stockpiles and Aggregates in Designated, Controlled Areas

All building materials and aggregates, and in particular those which have a potential to add to potential silt / suspended solids in surface water (e.g. sand, loose aggregates, cement, dusty aggregates and blocks) should be stored in an appropriate manner and at least 10 metres from a designated water course and covered where

possible. No aggregates or building materials should be stored within a flood plain. Stockpiles should be covered or seeded if stockpiles are to remain on site for the duration of works.

4.3.5 Uncured or Wet Concrete Use on Site

The quantities of wet concrete required on site are not currently known. It is recommended that the control measures detailed in this section are implemented across areas of the development in the event that wet concrete is required, in order to provide the optimum level of protection to the hydrogeological and hydrological environment.

The volume of uncured or wet concrete at the site will be minimised by using pre-cast concrete materials where possible. In the event wet concrete is required to be used during the construction of foundations, the PC will be responsible for ensuring that concrete and cement mixing and washing areas will be sited at least 10m from any watercourse or surface drain to minimise the risk of run-off entering a watercourse.

If wet concrete is required, the following practices will also be implemented to ensure that contamination from concrete works to the environment does not occur:

- High Density Poly-ethylene (HDPE) membranes will be used where concrete is to be laid in sensitive areas of the site (i.e. close to watercourse or retained trees), providing a barrier to uncontrolled migration;
- Concrete will be carefully poured to minimise spillage;
- Proper housekeeping practices and appropriate work isolation techniques will be employed to minimise potential for spills;
- Appropriate spill clean-up materials will be readily available and easily accessible;
- Contractors will be aware of the materials required to clean up a concrete spill; and
- Maintaining a safe distance from water courses.

4.3.6 Management of On-Site Chemicals, Substances and Spillages

Minimising spillages and making sure there are suitable storage facilities for chemicals, lubricants and fuels is essential to reduce impact of pollution due to such and, for specific amounts of certain liquids, necessary to comply with associated regulations. The following is therefore recommended to be implemented at the development site during the construction phase:

4.3.6.1 Vehicle and Plant Refuelling and Maintenance

Vehicle refuelling or maintenance will be carried out off site when possible. These activities should only be undertaken within the development boundary when necessary and no other alternative exists. In these instances, refuelling shall not be undertaken adjacent to the watercourse and only be carried out at designated areas which incorporate an appropriate level of control measures which, as a minimum, will incorporate drip trays and an impermeable surface. Vehicles will not be left unattended during refuelling.

4.3.6.2 Appropriate storage of fuels, lubricants and chemicals

All drums of lubricants, additives, cleaning products and other chemicals will be stored in an appropriate, clearly designated area with a hardstanding base and walls to contain any leaks or spills. Provision of secondary containment is also recommended, with the following capacities for such recommended:

- At least 25% of the capacity of storage containers up to 205 litres capacity;
- At least 110% of the capacity of storage containers over 205 litres capacity;

- Any secondary containment provisions should be suitable for the substances stored, including its size and construction.

In the event oils including petrol, diesel, kerosene and lubricating oils are stored on site, and not within a building, the Control of Pollution (Oil Storage) Regulations 2001 may apply and will require secondary containment of at least 110% of the capacity of the tank to be provided.

All storage containers should be suitable for the contents and clearly labelled to allow correct identification of their contents.

When identifying location of storage areas for fuels, chemicals and lubricants, the following should also be considered:

- Situated a minimum of 10m away from watercourses, open drains, gullies, unsurfaced areas or porous surfaces;
- Situated a minimum of 50m from wells, springs or boreholes;
- No storage of materials and substances within a flood plain area;

Daily monitoring of storage arrangements and any secondary containment measures should be carried out, with any repairs carried out, if necessary, as soon as practicable.

4.3.6.3 Specific Management Procedures to Deal with Use of Substances and Spillages

The development of Method Statements specific to the use and storage of fuels, lubricants and chemicals will be carried out to ensure health, safety and environmental protection requirements relating to such are maintained (refer to Section 4.11). Method statements should be reviewed periodically, or when a change in working practices and / or regulatory requirements drives such.

In addition, a pollution spillage response plan should be developed for the site, with staff made aware of such and made readily available if the need arises. The details of a pollution response plan are outlined further in Section 4.10.

4.3.6.4 Restriction of Plant Washing to Designated, Controlled Areas

Washing of plant and equipment should be carried out off-site where possible. Any washing of plant and equipment undertaken on-site should only be carried out within a designated hardstanding area, situated at least 10 metres from any watercourse or surface water drain. Any run-off from such activities should be appropriately collected and disposal managed in accordance with the requirements of the local sewerage undertaker.

4.3.6.5 Provision of Spill Kits

Spill kits suitable for the substances stored and used on site should be retained, ideally as close as possible to the point of storage and use of the substances. Proprietary spill kits are commercially available, but will generally contain absorbent material / granules, a shovel, gloves, and drain covers. Any waste materials arising from use of spill kits should be disposed of in an appropriate manner. All spill kits should be inspected on a weekly basis and resupplied where necessary as soon as practicable.

Use of the spill kits should follow the emergency and pollution response principles outlined in Section 4.10.

4.3.7 Site Drainage

4.3.7.1 Installation of Surface Water Drainage

Surface water drainage across the site will be dealt with via an engineered drainage system that will direct all run-off from various parts of the site to an engineered safe discharge point via attenuation tanks, or infiltration features (dependent on findings of drainage assessment).

Due to the intended purpose of the site, it will have to comply with PPG 3 through the use of an oil interceptor as the carpark will have 50 or more car parking spaces. It is suggested that a Class 1 oil interceptor is installed prior to the attenuation tank and controlled discharge to ensure adequate removal of potential contamination prior to discharge to the watercourse.

4.3.7.2 Connections to Surface Water Drainage

Specific management protocols will be developed and disseminated to all concerned staff personnel to ensure any connections to the surface water drainage is carried out to an appropriate standard and to specifically reduce risk of any misconnections to the respective networks.

4.4 CONTROL OF IMPACTS TO ECOLOGY

An Ecology Notice to Inform EIA Scoping was produced in June 2021 by Solty Brewster, detailing the findings of an ecological desk study and Extended Phase 1 Habitat survey undertaken at the site in May 2021.

The site contains a number of trees which may have the potential for bat roosts, and further surveys were recommended if these were to be removed. However, these trees are proposed to be retained as per the submitted masterplan. No evidence of badger sets or any other protected species were found during the survey. Any ecological considerations are to be implemented within routine environmental audits.

4.4.1.1 Bats

With regard to lighting in proximity to bats, artificial lighting may be required during the construction phase for security purposes. As such, the following should be implemented:

- Do not illuminate boundary vegetation such as hedgerows or treelines;
- Do not use excess lighting;
- Avoid using reflective surface under lighting;
- Hoods should be fitted to direct light below the horizontal plan, at preferably an angle less than 70 degrees;
- Ensure only the target area is illuminated;
- Use flat cut-off lanterns or accessories to shield or direct light; and

Light column height should be considered to balance the requirement and mitigation

4.4.1.2 Appropriate Planting

To maximise the sites' post development utility to local wildlife a number of measures can be taken to attract a wide array of native fauna:

- Use native species where at all possible or species which produce strong scent and abundant supplies of nectar;
- Use mixtures of flowering plants, fruiting and standard trees and shrubs;
- Plant a wide range of flowers which vary in shape, colour, fragrance and flower timing;

- Pale flowers will attract more insects during dusk as they are easily seen in low light; and
- Single flowers produce more nectar than double varieties
- Provide a number of specially designed grass mixtures which provide a compromise between increasing a sites ecological benefit and meeting the requirement for rugged amenity grassland areas;
- Should post development plans include hedgerows and treelines these should be created by use of native and woody species. Hawthorn, Elder, Buckthorn, Rose and Dogwood are all species which can be implemented

4.4.1.3 Insect Hotels and Bat Boxes

Insect hotels, bat and bird boxes are to be installed around the perimeter of the development site. Bat boxes are to be installed at a height of 4 metres and will be installed before site clearance commences. Once installed, boxes will be treated as an active bat roost and therefore cannot be disturbed unless under license from NIEA. Bird boxes will be installed at least 3 metres in height and will not be disturbed during the bird breeding season, as all bird nests are protected under the Wildlife (NI) Order 1985 as amended.

4.4.1.4 Badgers

Although the ecological survey identified no evidence of badger activity, there is the potential for the site to be used as an ecological corridor with potential for commuting and foraging. Subsequently, the following measures are considered appropriate at the site to protect potential badger movement.

All works must be largely restricted to daylight hours, to cause as little disturbance as possible. Lighting, where necessary, should be kept to essential locations only, with the position and direction of lighting being designed to minimise intrusion and disturbance to the stream corridor.

Should any spoil be stockpiled on site for a prolonged period of time, these are to be covered by sheet to deter badgers from creating setts within this material.

Open excavation pits and trenches are to have boards placed into them whilst no work is being conducted on them as this allows mammals which have fallen into such areas a means of escape and prevent unnecessary entrapment and potential death.

Any pipes stored, or installed on site, with a diameter of greater than 200mm will be covered or capped at night to reduce the risk of badgers becoming trapped inside

4.4.1.5 Reptiles

The habitats located across the majority of the site are considered to have a low potential to support common reptiles. However, smaller sections of semi-improved grassland, marshy grassland and woodland/hedgerow margins, in particular those located towards the northern extent of the proposed site, were considered of greater suitability and were considered likely to support a small/individual population of common reptiles.

In the absence of mitigation measures, impacts to common reptiles could include potential mortality, injury or disturbance during the construction phase of the proposed development and potential habitat loss fragmentation and disturbance. However, the proposed layout plan indicates that the areas of the site considered most suitable to support reptiles are unlikely to be impacted by the scheme layout. Provided this remains unchanged no further targeted survey work is recommended. Instead, appropriate mitigation measures include a sensitive approach to vegetation clearance at the site. This would include cutting of fringe grassland and boundary vegetation via a two-stage directional process to minimise risks to reptiles (and amphibians) that may be present.

4.4.1.6 Birds

Removal of vegetation on site must be undertaken outside the breeding season which extends from March to August inclusive. Should these operations be required during this period, it is recommended that a qualified ecologist is appointed to survey the trees / hedgerows / shrub prior to removal for evidence of use by breeding birds. Should any breeding birds be identified, the area will need to remain until all dependent young have fledged and the nest is no longer in use.

4.4.1.7 Otters

The ecological survey identified no evidence of otter activity. Subsequently no mitigation measures specific to the protection of otters is required.

4.5 CONTROL OF VISUAL IMPACT

To control and limit visual impact of the development in areas which may be visually prominent numerous landscaping strategies have been implemented including tree, shrub and herbaceous planting of a variety of sizes and species. A 12 month maintenance period will be covered by the landscape contractor to allow for the landscape to establish. Periodic review will be implemented to ensure the landscape maintenance is meeting the desired objectives for the site. The landscape will be controlled through the following activities:

- Weeding of unwanted plant material;
- Litter removal;
- Watering as necessary;
- Fertilising of plants for continual stable growth
- Pruning of dead and diseased wood or thinning of overcrowded shrub and woodland plantings;
- Supports;
- Plant replacement as necessary;
- Grass cutting as necessary.

4.6 CONTROL OF NOISE, VIBRATION AND AIR QUALITY

It is anticipated disturbance / nuisance factors associated with the proposed development activities (including dust, noise, visual impact and light impact) will be within the normal range of construction / operational activities and future noises are already present within the existing ambient noise climate.

Construction traffic on any proposed haul route will have a minor to negligible impact on noise sensitive receptors when considered in context of the volume of traffic expected and transient nature of this increase. Disturbance issues related to health and safety will be dealt with primarily in the Construction Phase Health and Safety Plan, the Construction Management Plan and site-specific risk assessments and method statements.

All plant equipment to be utilised during construction phase will be located, operated and maintained to prevent transmission of unnecessary noise / vibration / dust / odours / fumes to nearby premises. A summary of site control measures is provided below.

4.6.1 Noise and Vibration

The objectives are, as far as reasonably practicable, to control and limit noise and vibration levels so that affected properties and other sensitive receptors are protected from excessive noise and vibration levels associated with construction activities.

Best Practicable Means (BPM) as defined by the Environmental Protection Act 1990 will be applied to all activities. Any conditions outlined in the planning approval for the development specifically relating to the control of noise and vibration will be adhered to by site personnel.

With regards to general construction activities, it is assumed that the contractor will follow BPM to reduce the noise effect on the local community, including the following:

4.6.1.1 Source Noise and Vibration Control

Wherever possible noise will be controlled at source using the following guidelines:

- Minimise drop height of materials;
- Vehicles and mechanical plant employed for any activity associated with the construction works and operational phase will, where reasonably practicable, be fitted with effective exhaust silencers and will be maintained in good working order and operated in a manner such that noise emissions are controlled and limited as far as reasonably practicable;
- Each item of plant used on site during construction and operational phases will comply with the noise limits quoted in the relevant European Commission Directive 2000/14/EC/United Kingdom Statutory Instrument (SI) 2001/1701;
- The use of barriers to absorb and/or deflect noise away from noise sensitive areas will be employed where required and reasonably practicable; and,
- As far as reasonably practicable, sources of significant noise will be enclosed or screened. The extent to which this can be done depends on the nature of the machine or process to be enclosed and their ventilation requirements. For maximum benefit, screens will be close to the source of noise.

4.6.1.2 Working Methods

The following work practices will be employed to minimise risk of impact due to noise and vibration:

- Work activities will be restricted to the permitted site working hours. It is not anticipated there will be any activity on Sundays or Bank Holidays. Deliveries to and removal of plant, equipment, machinery and waste from site will take place within these permitted hours.
- Machines and vehicles in intermittent use will be shut down or throttled down to a minimum during periods between work;
- Start-up plant and vehicles sequentially rather than all together;
- There will be a 15mph speed limit within site boundaries;
- Careful selection of quiet plant and machinery to undertake the required work where available;
- All major compressors should be sound reduced models fitted with properly lined and sealed acoustic covers which should be kept closed whenever the machines are in use;
- Any ancillary pneumatic percussive tools should be fitted with mufflers or silencers of the type recommended by the manufacturers;
- Machines in intermittent use should be shut down in the intervening periods between work;
- Ancillary plant such as generators, compressors and pumps should be placed behind physical barriers and the direction of noise emissions from plant including exhausts or engines should be placed away

from sensitive locations, in order to cause minimum noise disturbance. Where possible, in potentially sensitive areas, acoustic barriers or enclosures should be utilised around noisy plant and equipment;

- Handling of all materials should take place in a manner which minimises noise emissions;
- Audible warning systems should be switched to the minimum setting required by the Health & Safety Executive;
- The recommendations set out in Annex B of Part 1 of BS 5228 and Sections 7.3 and 9.2 of Part 4 of BS 5228 with regard to noise and vibration options will be adopted unless agreed in advance with the relevant local authority.

4.6.1.3 Maintenance

Regular and effective maintenance by trained personnel is essential and will do much to reduce noise from plant and machinery. Increases in plant noise are often indicative of future mechanical failure.

4.6.1.4 Training

Operatives will be trained to employ appropriate techniques to keep site noise to a minimum and will be effectively supervised to ensure that best working practice in respect of noise reduction is followed. All employees will be advised regularly of the following, as part of their training:

- a) The proper use and maintenance of tools and equipment;
- b) The positioning of machinery on site to reduce the emission of noise to the neighbourhood and to site personnel;
- c) The avoidance of unnecessary noise when carrying out manual operations and when operating plant and equipment; and
- d) The protection of persons against noise and vibration.

Special attention will be given to the use and maintenance of sound-reduction equipment fitted to power tools and machines.

4.6.2 Management of Dust and Airborne Pollutants

Dust control procedures will be implemented to avoid as far as is reasonably practicable the emission of dust and other particulates that would adversely affect the air quality to ensure there is no significant deterioration of current air quality as a result of the works. The following procedures are recommended as best practice for the site works.

Dust monitoring will typically be completed through visual inspections of the site and site activities, and particularly at site boundaries or near to local receptors. Such inspections will be recorded and will be available to view upon request.

The emission of dust and other particulates during the construction phase will be controlled by implementing the following measures:

- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as possible;
- Keep site fencing, barriers and scaffolding clean using wet methods;
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used. If being re-used on-site cover the materials;
- Ensure all vehicles switch off engines when stationary – no idling vehicles;
- Avoid the use of diesel or petrol-powered generators and use mains electricity or battery power where practicable;

- Imposition of a maximum speed limit of 15 mph on surfaced and 10 mph on un-surfaced haul roads and work areas (signposts will be erected outlining such);
- Minimisation of drop heights from conveyors, loading shovels and other loading or handling equipment;
- Un-surfaced haul routes will be subject to dust suppression during dry periods;
- Deliveries to and removal of plant, equipment, machinery and waste from site will take place within permitted working hours;
- Inspection of haul routes for integrity and instigate necessary repairs;
- Earthworks undertaken during dry weather will be subject to dust suppression, e.g. dampening;
- Access / approach roads will be inspected and where soil or earth has been deposited on these roads a road sweeper will be deployed to sweep the roads;
- All vehicles carrying loads presenting risk of dust will be appropriately sheeted;
- If used on site, bulk cement and other fine powder materials will be delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery;
- Large quantities of cement, grouts and other similar materials will be mixed in designated areas which will be enclosed or shielded;
- Materials with the potential to produce dust will be stored away from sensitive receptors where reasonably practicable;
- Sand and other aggregates will be stored in bunded areas and will not be allowed to dry out;
- All dust control equipment will be maintained in good condition and a record of maintenance activities will be kept;
- Dust covers and dampening down methods will be used to suppress dust from stock piles;
- Wheel wash facilities will be provided at the site entrance/egress point if deemed necessary. No detergents should be used in the wheel wash. It is recommended that water from the wheel wash be recycled and a silt trap fitted to prevent suspended solids entering a soakaway/water environment. The silt trap should be properly maintained and cleaned to ensure it functions effectively.

4.6.3 Emissions Monitoring

Daily visual and aural monitoring of dust and noise emissions from the site will be carried out by specified site personnel. The qualitative observations will be recorded in an appropriate format and will include, as a minimum, date; time; observations; weather conditions; and any remedial action taken if required.

4.6.4 Complaints Management

Good relations can be developed by keeping people informed of progress and by treating complaints fairly and expeditiously. All complaints will be recorded, identifying cause(s) and appropriate measures to reduce emissions in a timely manner, and record measures taken. The complaints log will be made available to the local authority when requested.

Records of any exceptional incidents that cause high dust / air / noise / vibration emissions, either on or off site will be kept in the log book along with the action taken to resolve the situation.

Access to the site will be facilitated at all reasonable times for inspection and/or noise measurements by the local authority environmental health personnel in response to complaints received, following appropriate site-specific induction and / or health and safety training.

4.7 CONTROL OF FLOODING

A flood consequence assessment was produced for the site by JBA Consulting in October 2021. The findings of the FCA are summarised below.

The proposed development site falls within Flood Zone 2 and Flood Zone 3 of NRW's Flood Map for Planning-Sea, Rivers and Surface Water and Small Watercourses. No built development is proposed within the Rivers or Surface Water and Small Watercourses Flood Zones 2 or 3. Part of the car park is proposed within Flood Zones 2 and 3 of the Flood Map for Planning for the Sea. In Flood Zones 2 and 3, development can take place subject to the application of the Justification Tests, and the acceptability of flood consequences.

A small part of the site is shown to be at risk of flooding from fluvial and surface water and small watercourses flood risk sources according to the National Resources Wales Flood Risk Assessment Wales Maps.

Flood risk from groundwater, sewers and reservoirs is considered to be low.

Detailed assessment of tidal flood risk shows that the proposed development site and its access roads are predicted to be flood free during the 2100 0.5% AEP and 0.1% AEP flood events.

The proposed development satisfies all requirements of TAN15 and complies with the development and flood risk aims of Planning Policy Wales. The NRW FRAW Surface Water and Small Watercourses map shows that the majority of the site is at very low risk of flooding from surface water and small watercourses. This means that the majority of the site has less than a 1 in 1,000 (0.1% AEP) chance of flooding from this source.

No specific flood mitigation measures are required for development of the site, and flooding is not anticipated to be a risk during construction.

4.8 CONTROL OF IMPACTS TO TREES

An Arboricultural Report was produced for the site by Arboricultural Technician Services Ltd in November 2021.

A number of lower quality trees are identified to be removed to facilitate the construction of the proposed development design. However, the proposed development design has aimed to retain a high proportion of the higher value trees (A + B Category) that form part of the site.

A tree protection plan has been formulated for the site, detailing the control procedures to protect retained trees. The construction of the proposed development whilst complying to the tree protection scheme will ensure that no significant long term adverse Arboricultural impact occurs onto the health of any retained trees on or adjacent to this site or to the long term amenity of the area.

Adverse impacts to trees during the construction phase will be controlled by implementing the measures detailed in the Arboricultural Report.

4.8.1.1 Protective Fencing

Protective fencing shall be erected to form a Construction Exclusion Zone (CEZ) and will be erected before any site works. As per BS5837, this is an area based on the root protection area from which access is prohibited for the duration of a project. It is defined as a square of length and breadth equal to the diameter of the Root Protection Area (RPA).

This barrier will comprise 2 metre tall welded mesh panels on rubber or concrete feet, providing an adequate level of protection from cars, vans, pedestrians and manually operated plant. The fence panels should be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The distance between the fence couplers should be at least 1 m and should be uniform throughout the fence. The panels should be supported on the inner side by stabilizer struts, which should normally be attached to a base plate secured with ground pins. Onto this, weld mesh panels will be fixed securely with wire or scaffold clamps.

Ground protection within an RPA can take the form of scaffold boards or trakway, allowing the provision of working space and allow pedestrian movements.

Removal of existing surface, built forms or other excavations within the CEZ of retained trees, must be done by hand to avoid any surface root damage and shall be supervised on-site by the retained arboricultural consultant.

If the area of the zone of protection around the retained trees is to be left following the removal of the existing hard surface, before a new hard surface is laid, or the area receives soft landscaping treatment, then ground/tree protection must be correctly re-established immediately after the hard surface removal work has been completed. If there is a delay, then a temporary surface must be implemented, or Hessian sacking placed over any exposed roots.

4.8.1.2 Damage to Trees

Care shall be taken to ensure that wide or tall loads or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. As such, any transit or traverse of plant in close proximity to trees should be conducted under the supervision of a banksman to ensure adequate clearance from trees is maintained at all times

Should any damage occur to trees noted for retention, the damage should be reported to the site supervisor immediately who will report to the consultant arboriculturalist to enable remedial measures to be implemented. If protective fencing is damaged, therefore impairing its function, all work shall cease in the vicinity until the fence has been returned to standard.

Where root damage is unavoidable, it is appropriate to reduce a tree by pruning.

4.8.1.3 Removal of Protective Fencing

When the development phase is complete, all drainage and service runs are in place, all site machinery removed and landscaping for the principal area has been implemented, the protective fencing will be dismantled. Hoarding, scaffolding and other fencing materials will need to be removed from site immediately.

4.9 DISPOSAL OF SURPLUS MATERIALS AND WASTES

The construction project will produce waste and surplus materials which will be managed appropriately as per the details in the following section. Management of waste produced by the project in general and by the construction phase in particular will follow the waste minimisation hierarchy:

- **Reduce** waste at source, e.g. delivery in bulk rather than bags;
- **Reuse**, e.g. re-use bags on-site for other purposes / materials;
- **Recycle**, e.g. recycle delivery bags to an off-site or off-project destination, for re-use by others; and,
- **Recover**, e.g. recover some value / energy from materials in an energy-to-waste recovery plant rather than disposing to landfill.

The site will have segregated skips for the collection of segregated wastes such as wood, paper, glass, plastics and general waste.

Domestic refuse will be stored in an appropriate location, protected from wind, rain and animals. Facilities will be provided to segregate waste into appropriate waste streams and minimise volumes of stored material (e.g. folding and/or use of balers for cardboard waste). All waste will be transported from site at an appropriate frequency by a registered waste carrier to prevent overfilling of waste containment facilities and will be reused / recycled where practical. Material won will be reused as part of landscaping/bund construction, under a CL:AIRE DoWCoP MMP (Materials Management Plan).

An appropriately licensed waste disposal contractor will be engaged to regularly uplift waste and recyclable waste materials.

4.10 ENVIRONMENTAL EMERGENCY RESPONSE

A set of standardised emergency response procedures will govern the management of environmental incidents. Construction contractors and operational personnel will be required to adhere to and implement these procedures and ensure that site operatives are familiar with the emergency arrangements.

The emergency procedure will contain emergency phone numbers and the method of notifying local authorities and statutory authorities. Contact numbers for key personnel will also be included.

4.10.1 Pollution Incident Response

A site drainage plan will be kept on site, showing the location of surface water drains. Spill kits will be kept and maintained. The precise contents and capacity of the spill kits will depend on the inventory of products that will be stored and handled on the site; however, they are likely to contain:

- Oil-absorbent granules;
- String;
- Floating “booms” or “sausages”;
- Gloves;
- Absorbent mats;
- Knives;
- Drain covers; and
- Shovels.

A number of specialist spill contractors will be identified that can be called upon should this be required to manage a major spill.

In the event a spill occurs the following actions will be taken:

- The Natural Resources Wales (NRW) incident hotline – 0300 065 3000 – shall be contacted within 30 minutes, unless it is not safe to do so;
- When a spill occurs the Site Manager will be informed immediately;
- In dealing with the spillage the personal safety of the site-workers and the general public will not be compromised;
- Where required to stop or contain the spillage, work will be halted;
- The cause of the spillage will be stopped;
- The spill will be contained. Particularly pathways to any drains and water courses will be blocked as soon as possible;
- The spilled materials will be removed and disposed of in accordance with the waste regulations.

In the event of major or complicated spills, the following additional actions will be taken;

- The site manager will assess the incident and if appropriate request a specialist spill contractor to attend the site.

4.10.2 Staff Training

Details of trained staff to be contacted in the event of an incident, including location, responsibilities, key-holder information and 24-hour cover, are to be provided as part of the site induction for site workers and for all visiting delivery drivers.

4.10.3 Contact List

The PC shall prepare a contact list and notification procedure for alerting the emergency services, relevant environmental regulators, the Health and Safety Executive (HSE) and specialist clean-up contractors; and,

This contact list shall be issued to all site workers as part of their induction and to all visiting delivery drivers.

4.11 CONSTRUCTION & ENVIRONMENT METHOD STATEMENTS

Method statements will be completed by or on behalf of the PC by trained engineers or other appropriately experienced personnel, in consultation with on-site environmental staff, and, where necessary, environmental specialists. Their production will include review of the environmental risks and commitments, as identified in this CEMP, so that appropriate control measures are developed and included within the construction process.

As a minimum, it is expected that method statements will be produced for the following key construction activities and site procedures:

- Ground excavation works;
- Construction of below-ground structures;
- Laying and installation of surface water collection and transmission infrastructure (including jointing and testing of integrity);
- Connections to surface water collection and transmission infrastructure;
- Use of concrete and tarmac;
- Site landscaping;
- Storage of materials, chemicals and other substances;
- Dealing with spills and leakages;
- Pollution incident response.

Method statements will be reviewed by the Environmental Manager, the Main or Sub Contractors appointed environmental manager and, where necessary, by an appropriate environmental specialist. Where necessary, method statements will be submitted to authorities as appropriate.

5.0 CONCLUSION

This CEMP provides a framework for the protection of environmental receptors during the development and operational phases, whilst simultaneously promoting good environmental practices, benefiting the local and wider community.

It is intended that this document will be reviewed and updated regularly during the construction and operational phases, to align with the specific to the construction and operational techniques and methodologies to be adopted.