

ENVIRONMENTAL MANAGEMENT PLAN



ENVIRONMENTAL MANAGEMENT PLAN

Project Title: WINEP P Removal Harome STW Single Point Dosing (SPD) Programme

Client Name: Yorkshire Water

CONTRACT NAME		Prepared by	
Revision	Reason for Revision	Initials	Date
001	Initial Release for Review	CM	13.09.21
002	Phase 2 of Development Works	CM	11.10.23
003	Drawings and controls update	CM	12.12.23
004	Impact on ecology & signage plan	CM	29.01.24



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10 INTRODUCTION AND SCOPE

This plan describes the Environmental Management System (EMS) that will be established to control the activities to be undertaken during 'the Project'. The plan defines and documents the company's objectives, policy and commitment to environmental control. The plan is made available to site management and other personnel to direct, guide and assist in their activities.

This Environmental Management Plan (EMP) identifies the project management structure roles and responsibilities with regards to managing and reporting environmental aspects and impacts of the construction phase. An environmental risk assessment will be undertaken which identifies impacts and aspects of the project scope and planned construction activity which could have an environmental impact.

The contents of this environmental plan are based primarily on the applicable requirements of the following specifications:

BS EN ISO 14001: 2004 Environmental Management Systems.

All personnel working on the project are responsible for the environmental control of their own work and shall perform their duties in accordance with the requirements of this environmental plan and in compliance with the procedures referenced therein. No deviations are permitted without the written authority of the Project Director.

Compliance with the project environmental management system and the supporting procedures is mandatory and shall be adhered to by all personnel employed on the project to achieve a common approach to environmental control.

The SHEQ Adviser has overall authority for ensuring that the contents of this project environmental management plan are satisfactorily implemented on the project. Any problems or disputes arising from such should be brought to the attention of the Project Manager and the Project SHQE Manager.

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1.1 Project Description

Scope of Works

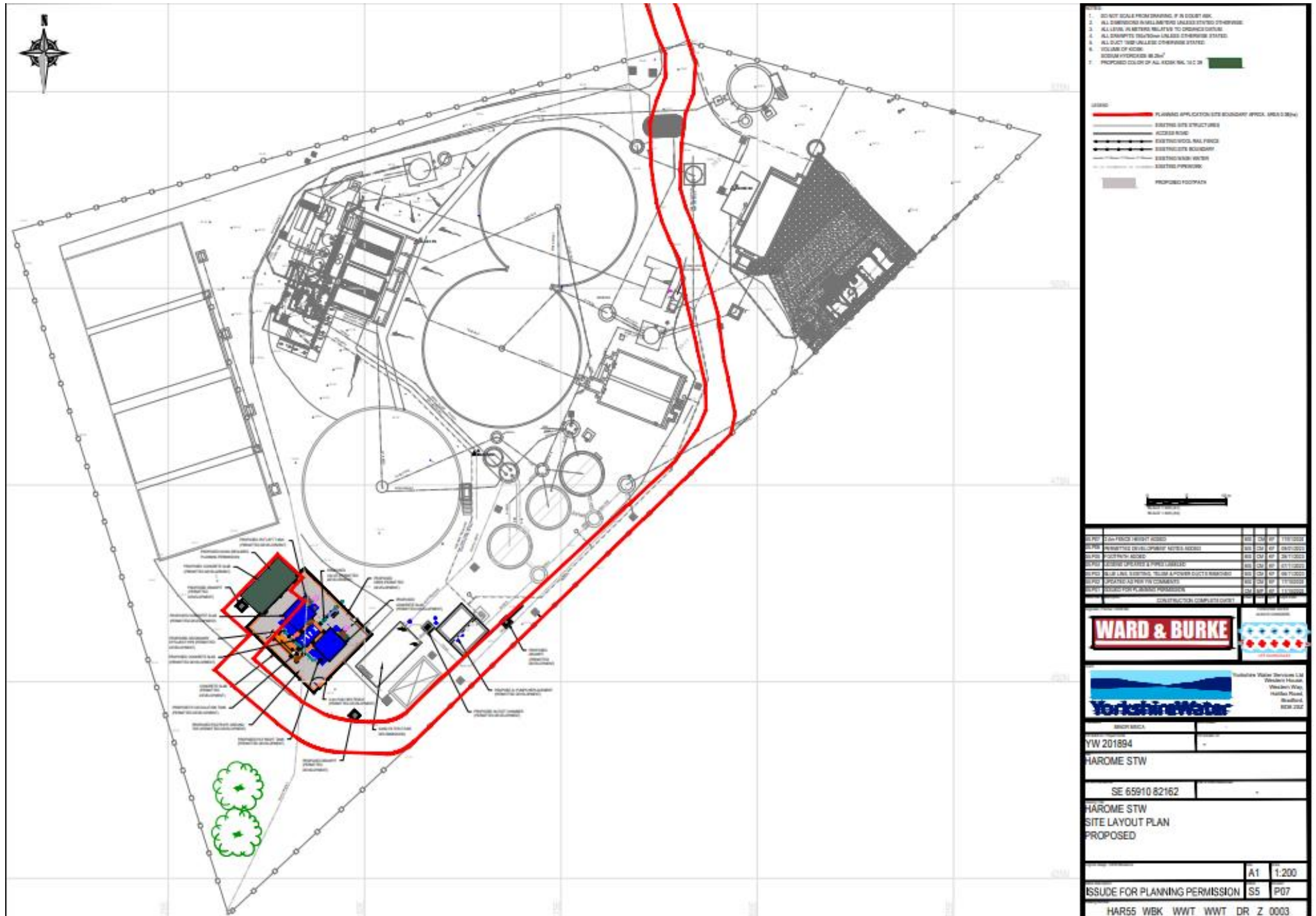
Yorkshire Water are required by Water Industry National Environment Programme to implement phosphorus removal improvements across their treatment work sites. Harome STW has been identified as a site requiring further chemical treatment to reduce the Phosphorous in the final effluent to 0.25mg/l without exceeding Iron concentrations of 4 mg/l

The proposed scope includes:

- Install new MCC kiosk – which is the only element which requires planning permission and the rest of the works as included below are only permitted developments works as follows:
 - Construct Tertiary Solids Removal Plant
 - Construct Structural slab for TSR
 - Lay 150mm rising main from Tertiary Feed Pstn to Floc tank
 - Lay 250mm pipe from PCF to existing outlet chamber adjacent to Sand filters
 - Lay Backwash line to connect with existing backwash line which gravitates to existing Humus liquor return P Stn.
 - Lay ducting from Main MCC to new MCC, includes 2nr draw pits
 - Lay ducting to various locations on TSR, as per design
 - Construct footpath around TSR and MCC Kiosk
 - Construct Access Road to TSR
 - Supply and install access stairs and platform to TSR
 - Supply and install Flooring to MCC kiosk
 - Supply and install GRP MCC kiosk
 - Supply grating for existing outlet chamber
 - Supply security fencing around TSR
 - Supply and install 150mm static mixer
 - Install 150mm flowmeter on TSR Feed line
 - Connect all associated pipework
- Supply a MCC panel to accommodate:
 - 2nr VSD drives for existing feed pumps
 - 2nr VSD drives for Floc mixers
 - New ICA section
 - Feeder to new TSR MCC
 - Feeder for site lighting
 - Feeder for trace heating (c/w 100v Transformer)
 - 2nr spare feeder sections
- Supply of TSR Control panel c/w bus shelter
- Upgrade of existing AB PLC to Mitsubishi
- Wiring of 2nr POA's
- Wiring of TSR
- All associated field cabling
- Site Light for TSR area and MCC kiosk
- Connect and test new pump skid
- Communicate with existing return liquor PStn to prevent backwash if the PStn level is high
- Communicate with the Flowmeter and dosing kiosk so that the dosing is proportional to the site flows
- Test and commission as per current guidance
- All process proving to be completed to the current guidance
- 14 day process proving required verification on ALS (accredited lab)

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Figure 1: Proposed Site Layout and Dosing Kiosk



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Figure 3: Satellite view of site with vehicle route

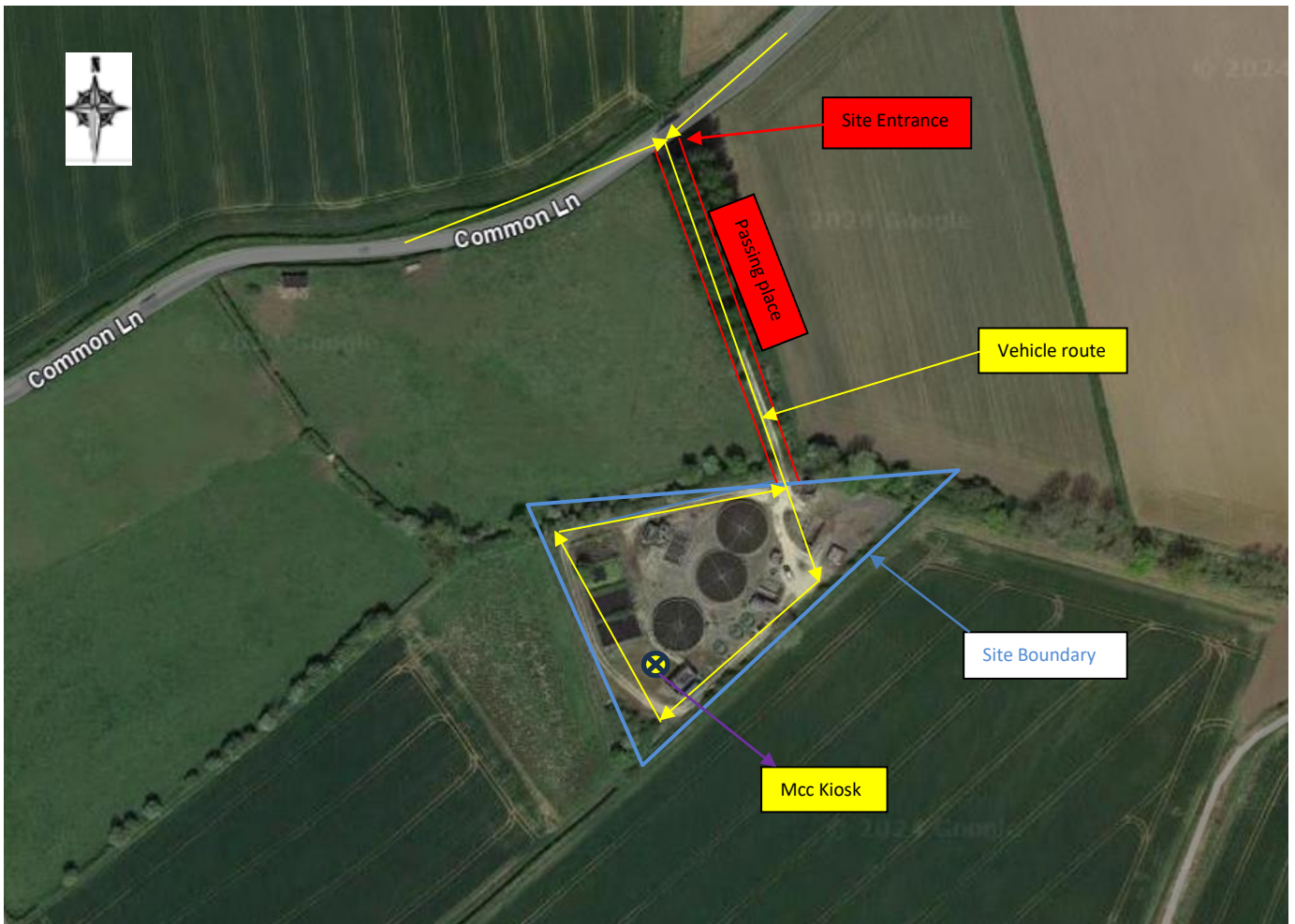


Figure 3 - Satellite view of Site:

- Site Entrance
- Unnamed Rd
- Planned work location
- Site Boundary; land owned by YW

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12 Project Address:

Main compound:

Harome STW

Off Common Lane

Harome

North Yorkshire, YO62 7RY

What 3 Words: ///noon.putts.kennels

13 Location Description

The site is accessed via the B17257, off Common Lane. The site is located at Ordnance Survey grid reference SE 65873 82126. The access track is a single a narrow bridge which is 3m wide and 3m in length, over a stream. There is no known weight limit for this bridge. The bridge is regularly used by 26 tonne vehicles, therefore it is suggested this weight is not exceeded. The width of the un-named single access track off Common Lane to the site is 5 meters. The width of the mouth of the track onto Common Lane widens to 10 meters. Overall, the visibility arrangements at the junction of the track with Common Lane is indeed suitable for the Kiosk delivery vehicle to turn in and out without going over the highway verge as a dosing kiosk was installed in 2022 which was larger than this present kiosk. Site is bound to the north by a tributary of the River Rye and to the south by a drainage channel. Surrounding land is used for agricultural purposes. Site is protected by a 2.2m chain-link fence with cranked barbed top and a manual entry gate. The kiosk will be installed on the South West of the WWTW.

An Ecological Impact Assessment was carried out in November 2023, the new kiosk installation is anticipated to have minimal impact from noise, dust, lighting, and will not have visual or traffic impacts. As the unit is located within the works and a good distance from any neighboring properties with works planned during daytime hours there will be little to no noise impact. All Works will adhere to the GPPs and CIRIA C762 Environmental good practice. The works are to be undertaken outside of the reptile active season, therefore no mitigation for reptiles would be required. If works are undertaken within the reptile active season, a visual pre-works check for reptiles will be undertaken ahead of the construction works. Any reptiles present (considered very unlikely) are likely to move away of their own accord, however, if reptiles are present and do not move from the work area an ecologist will be contacted for advice. If the storage of materials is to be necessary within the active reptile season (considered to be April through to October), materials will be stored on top of pallets, to prevent the unintentional creation of reptile refugia.

ROLES & RESPONSIBILITIES

This section describes the environmental roles and responsibilities of key members of the project team.

2.1 Project Director – David Hernon

- To lead by example and champion all areas of environmental management
- Ensure that appropriate resources are in place to effectively implement the EMP and deliver all legal requirements.
- Ensure that all legal requirements are identified and met

2.2 Contract Manager / Site Manager – Habib Rahman

- To lead by example and champion all areas of environmental management
- Ensure that appropriate resources are in place to effectively implement the EMP and deliver all legal requirements
- Ensure that all environmental legal requirements are identified and met
- Ensure all employees and contractors carry out their duties and responsibilities as defined in this EMP
- Undertake (or nominate others to undertake) environmental inspections
- Monitor environmental performance of the project against statutory requirements, objectives and targets
- Ensure that all legal requirements are identified and met
- Identify necessary levels of environmental competence in staff and ensure necessary training is delivered to personnel
- Manage investigation and resolution of complaints in accordance with the relevant procedure
- Ensure correct procedures are followed in case of an environmental incident.
- Report any environmental incident to the project SHEQ advisor as soon as possible

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2.3 Supervisors – Johnny O’Hara

- Assist the project manager in implementing the requirements set out in the EMP
- Fully support any investigation following an environmental incident
- Conduct and document weekly environmental inspections
- Ensure that environmental oriented briefings and Tool Box Talks are being delivered to the site workforce
- Implement and maintain environmental controls on site
- Ensure action is taken on any spills/incidents that occur on site
- Report any environmental incidents immediately to the project SHQE or Environmental Advisor
- Report any activity that has potential to have an environmental effect immediately to the project Site Manager.

2.4 SHEQ Manager – Azeez Soaga

- Provide overall advice and co-ordination of all activities relating to environmental matters
- Provide company environmental support where required
- Carryout company environmental audit on the project.

2.5 Project SHEQ Advisor – Cedric Marie

- Advise the Site Manager on legal requirements
- Provide advice and assistance to site personnel on environmental matters
- Undertake environmental management system inspection as set out in sections
- Implement the use of an accurate Site Waste Management Plan (WMP) and ensure its applicability to the site operations
- Review the EMP throughout the construction process to ensure it remains relevant and effective in identifying and managing environmental risks
- Ensure the accurate reporting of resource usage, e.g. energy and water
- Ensure that all documentation referencing environmental procedures and policy are relevant and up to date and included within the EMP
- Manage all necessary documentation to demonstrate compliance with appropriate legislation for the required period
- Undertake and document noise monitoring
- Provide environmental training to the project team and workforce if and when required.
- Co-ordinate and report any environmental incident to the appropriate stakeholders as soon as possible.

2.6 Waste Duty Holder – Habib Rahman/Cedric Marie

Waste Management will be carried out in accordance with the project specific procedure. A Minimum of two Waste Duty Holders shall be trained and appointed for the duration of the project. Their responsibilities include:

- Correct handling of all waste management documentation
- Where appropriate, ensure sub-contractors method statements include waste disposal methods
- Make him/her aware of legislation, codes of practice, guidance notes and good environmental working practice relevant to his work. Take advice from the Environmental Advisor in these circumstances
- Carry out audits on subcontractors waste management practices
- Ensure waste on site is stored and handled correctly
- Ensure waste is segregated and skips labelled correctly
- Carry out checks on waste carriers and disposal sites
- Source to Destination checks on waste
- Retain Waste Transfer Notes (WTN) and Hazardous Waste Consignment Notes (HWCN) in waste file for requisite period post-construction
- Ensure completion of the project waste register.

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2.7 Employees

- Comply with directions and requirements given in the site induction
- Proactively approach environmental issues whilst on site
- Report any environmental incidents/near misses immediately to the supervisor or SHQE Advisor
- Carry out all activities in line with the environmental procedures and requirements detailed in the EMP.

2.8 Contractors

- Comply with directions and requirements given in the site induction
- Follow control procedures as instructed
- Carry out all activities in line within environmental procedures and requirements detailed in the EMP
- Report any environmental incidents/near misses immediately to the Project Manager or SHQE Advisor.

3.0 PROJECT ENVIRONMENTAL SYSTEM

3.1 Project Environmental Management System Documentation

This section describes the Environmental Management System (EMS) complying with BS EN ISO 14001, that will be established to control the activities to be undertaken during the project. It defines and documents the projects objectives, policy and commitment to environmental control.

Compliance with the project environmental management system shall be monitored and audited by appropriate personnel throughout the duration of the works. Any system non-compliances shall be documented and appropriate corrective actions issued and implemented. The environmental management system documentation for the project will be established as follows:

SHEQ Policy

WBCL issues individual Safety, Health, Environmental & Quality (SHEQ) Policy on an annual basis. This document demonstrates high level commitment to managing environmental responsibilities and must be displayed on all site office walls and communicated to all project personnel during the SHQE Induction.

Control Procedures and Guidance Notes

Control procedures and guidance notes describe in detail the environmental management activities to be executed in order to satisfy environmental requirements for all projects.

Project Environmental Plan

This project environmental plan is the specific document of the project Environmental Management System, and is based on the requirements of BS EN ISO 14001: 2004. The environmental plan is the document setting out the policies, practices and procedures for the project. The objective is to employ a system of control so that the client will derive confidence that the project is being undertaken in a way that will protect the environment.

3.2 Environmental Planning

On contract award the project documentation will be reviewed to determine the environmental requirements. A project environmental review will be undertaken to evaluate, and facilitate control of the environmental effects of the project in accordance with Environmental Management and Monitoring.

The review will as a minimum include the following:

- Preparation of environmental plans including an Environmental Aspects and Impacts Register
- Identification of any environmental requirements not covered in the existing environmental control procedures and the preparation of Project specific environmental control procedures if required.
- Applying an environmental sustainable practices into carrying out construction works

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- Identification and acquisition of any equipment, resources and skills that may be needed to achieve the required standard of environmental control and sustainability.

3.3 Legal Compliance

The project shall develop and maintain a legal compliance register which shall identify all the legislation that may be applicable for any of the activities carried out across the business.

3.4 Document Control

Document control procedures ensure that all correspondence, drawings and technical data received are recorded, distributed, filed and archived in an efficient and controlled manner. Control activities exercised on the documentation shall include the following:

- Review of documents and drawings prior to release to ensure that requirements are clearly stated and that they are authorised for issue.
- Identification of documents to be controlled.
- Review and approval of changes to documents and drawings.
- Control of documents, including approved changes to preclude inadvertent use of obsolete or superseded documents.

Standard methods shall be defined for adding and identifying revisions. Where practicable, the nature of the change shall be identified in the document or the appropriate attachments. All documents shall be re-issued after a number of changes have been made.

3.5 Training, Awareness and Competence

a) Project Inductions

The Project SHQE Manager/Adviser will identify and arrange environmental induction sessions as necessary for Project personnel. During the project induction the requirements of this environmental plan will be explained and discussed as well as any changes to the normal method of working which have been identified for the project. Ongoing induction requirements will also be identified during facilitation audits. The induction will include information relating to the environmental aspects identified on the project such as;

- Potential archaeological finds
- Area of Outstanding Natural Beauty
- Waste management and segregation
- Spill response
- Refuelling
- Noise
- Environmental sustainable practices
- Plant, equipment requirements
- Biodiversity – Birds, Badgers, Bats etc.
- Invasive plant species
- Tree and hedgerow protection
- Water borehole protection.

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b) Environmental Training

The Project will ensure that in accordance with the SHEQ Training Matrix all environmental training requirements are identified and a training programme developed.

a) Tool Box Talks

Regular environmental toolbox talks (team briefings) will be carried out on site by relevant project personnel. Subjects covered will include but not limited to:

- Waste Segregation and Management
- Handling of Materials
- Refuelling
- Sustainability
- Noise
- Spill Prevention
- Emergency Response
- Housekeeping
- Flora/Fauna
- Aqueous Discharges

b) Spill Response Preparedness

The project will ensure a spill response exercise and spill response training is completed and records maintained (and retrievable) on a six monthly basis. This exercise will comprise of a desk top study or a mock spillage event. Learning outcomes from the exercise should be documented and actions raised if required. All personnel will be made aware of the spill response procedure and reporting requirements through the induction process, toolbox talk briefings.

c) Training Records

Records of all training carried out on the project (including Induction) will be retained and made available for viewing during environmental audits if required.

d) SEAT Training

Site managers and Supervisors will attend the one day CITB SEAT (Site Environmental Awareness Training). This course is aimed at staff with management or supervisory responsibilities on a construction site, including site managers, site supervisors, site foreman, site agents and those with design or purchasing responsibilities. The SEATS training course will provide employees with an introduction to environmental issues on construction sites and has been designed to provide the basic environmental knowledge.

e) Sub Contractor Competency and Vendor Approval

All Sub Contractors employed by the project must be on the Approved Vendors Register. As part of the approval process the competency of subcontractors is evaluated. If required specific evidence of personnel competency will be retained by the Project (e.g. air conditioning service providers, etc).

3.6 Communication

Environmental SHEQ Alerts and bulletins are distributed by the SHEQ Department as required to key staff including site management to keep them informed of environmental issues such as learning events from incidents/ accidents or new legislation. Poster campaigns will be launched from time to time to raise awareness and keep staff informed of environmental issues within the company.

All project personnel are encouraged to make suggestions for environmental improvement and report environmental problems. In this instance WBCL have various procedures that can be used including open door policy, hazard reporting, daily briefing and consultation and formal environmental incident reporting form. The project's environmental issues arising from site environmental reports, corrective action notices or audits are discussed at site meetings and actions apportioned accordingly.

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3.7 Monitoring and Audits

3.7.1 In-Process Monitoring

Where required on the Project, environmental monitoring will be carried out in accordance with the relevant SHEQ Procedures and Guidance Notes. The Project SHEQ Team will ensure that all relevant documentation is correctly completed and retained by the project

3.7.2 Environmental Audits

Project Environmental Inspections

Environmental inspections of the project will be scheduled as part of the environmental Control Plan and carried out on a monthly basis and the results recorded on checklist provided.

Compliance Environmental Audits

A planned programme of compliance audits shall be scheduled to verify the effectiveness project's environmental management system. Audits will be undertaken in accordance with company policy. The purpose of these audits includes:

- i) Ensuring that the environmental management plan is being adhered to and that the relevant documentation is being completed.
- ii) Ensuring that progress towards environmental objectives and targets is being monitored.
- iii) Ensuring that legislation and/or other requirements are being complied with.

The audit report shall make recommendations for improvement and identify the appropriate personnel and timescales for completing these actions. The contents of the report shall, if necessary, be discussed at site meetings. If a complete failure or absence of a required EMS element is discovered during the audit, a major non conformance will be raised. The project will have seven (7) days from the date of issue of the audit report to recover the situation and put measures in place to prevent its re-occurrence. If an area of weakness is identified when an element of the system is not being carried out correctly then a non-conformance will be raised and the project will be given one month from the date of issue of the report to rectify the situation. WBCL representatives shall be afforded full access to accompany auditors during the audit, and a copy of the audit report shall be made available for their review. If deemed necessary an investigation shall be instigated and corrective action taken. The effectiveness of any resultant actions carried out will be assessed by the project at an appropriate time scale.

3.8 SHQE Objectives

WBCL annual SHEQ Objectives and targets shall be adopted and must be displayed on site notice boards and personnel on site made aware of their contents. Projects shall also comply with any client objectives and targets set.

3.9 Project Sustainability Matrix

A project specific sustainability matrix will be produced by the project on an annual basis. The sustainability matrix requires objectives and targets to be set with four different branches of sustainability: Our Environment, Our Workplace, Our Health and Safety and Our Community. The project will appoint a sustainability champion for the duration of the project. It is their responsibility to ensure the matrix is produced and managed however personnel from across the project should be assigned actions and included in the creation of the matrix. Progress towards the objectives and targets contained within the matrix should be forward to the Environment Adviser on a quarterly basis. Personnel should be fully conversant with the objectives and targets contained within the matrix. Progress towards meeting the objectives and targets will be discussed during site meetings on a regular basis.

In order to continue to do business we need to make sure that materials, people and finances we need are available. We need to also ensure that our approach to construction doesn't damage the environment or negatively affect the society. It is an expectation that we are responsible, ethical and to minimise our activity impacts on the environment and society. These expectations are from our clients, shareholders and general public. To achieve this, Ward and Burke Construction will;

- Reuse excavated materials onsite to minimize waste and save money

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- Protect plants and animals in or adjacent to the site
- Regular public liaison (e.g.notice boards, letter drops, operations team meetings) to keep everyone updated with project programme
- Use of local labour and suppliers to enhance local economy and minimise environmental impacts of transportation
- Train and upskill of our people
- Reduce energy and water use, by calculating use rates and coming up with ideas to reduce their uses
- Advise clients on the outcome of other environmental benefits from site investigations. This may include protecting the areas of natural reserves etc.
- Consulting with environmental agency on the solution to protecting streams and local habitat and apply for relevant consents
- Where necessary we would complete the habitat regulations assessment

3.10 Incident Reporting

All environmental incidents will be reported as per the WBCL and YW environmental incident reporting procedure. All environmental incidents are to be reported to matt.barker@yorkshirewater.co.uk.

Spillages/Pollutions

Spillages of considerable volume or substances other than hydrocarbons or silted water should be communicated to the SHEQ Advisor via telephone or email as soon as possible. Any environmental pollution in rivers or streams must be immediately reported the SHEQ Manager, Project Director and Project Manager.

3.11 Environmental Nuisance Complaints Recording

All complaints that are received on an environmental nature will be recorded Environmental Complaints Register. This register will be maintained within the environmental file on site and made available during environmental audits if required.

3.12 Communication with Other Bodies

In the event that contact with a regulatory body is required, this shall be done through the site team and they will inform the SHEQ Advisor/Manager as soon as reasonably practicable.

3.13 Refuelling Machines and Equipment

Refuelling will be carried out in accordance with approved project procedures, guidance can be provided by the SHQE team.

3.14 Noise Monitoring Duty Holders

Suitably trained personnel will carry out noise monitoring to confirm compliance with Local Authority Planning Conditions or Client requirements. Monitoring will be planned to take account of site activities that are likely to generate high noise levels, (e.g. breaking concrete) and be measured local to the activity as well as at recognised locations in the Planning Conditions or Client requirements.

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4.0 PROJECT ENVIRONMENTAL CONTROLS

The following activities will be carried out on the project which have the potential to impact the environment, however mitigation measures identified in the Ecological Impact Assessment will be applied. Therefore, the project will have minimal impact from noise, dust, lighting, and will not have visual or traffic impacts. As the unit is located within the works and a good distance from any neighboring properties with works planned during daytime hours there will be little to no noise impact. All Works will adhere to the GPPs and CIRIA C762 Environmental good practice. The works are to be undertaken outside of the reptile active season, therefore no mitigation for reptiles would be required. If works are undertaken within the reptile active season, a visual pre-works check for reptiles will be undertaken ahead of the construction works. Any reptiles present (considered very unlikely) are likely to move away of their own accord, however, if reptiles are present and do not move from the work area an ecologist will be contacted for advice. If the storage of materials is to be necessary within the active reptile season (considered to be April through to October), materials will be stored on top of pallets, to prevent the unintentional creation of reptile refugia.

- a) Waste Management
- b) Handling and Storage of Materials
- c) Spill Response and Emergency Preparedness
- d) Nuisance
- e) Aqueous Discharges
- f) Flora/Fauna
- g) Energy Consumption and Minimisation
- h) Traffic Management

4.1 Waste Management

The project shall ensure that all legal requirements for waste will be complied with. WBCL will manage waste generated from our operations and collate all relevant waste disposal documentation. The Project Manager and SHEQ advisor will monitor the segregation of the waste on site and carry out the relevant checks on waste carriers, waste disposal destinations and ensure the correct completion of all waste documentation. All waste generated will be placed within the appropriate skips/containers for disposal. Waste segregation will be practised via separate suitable containers, lidded where appropriate and labelled. All waste containers will be stored on an impervious surface and within the designated area as shown on the Site Layout Plan. This designated area will be located away from environmentally sensitive areas on site such as drains and watercourses. The area around the skips will be kept tidy and full skips will be removed from site within specified period within the Environmental Control Plan. The following waste streams will be segregated on site:

- General (including office and canteen waste)
- Wood
- Metal
- Paper and Cardboard
- Spoil
- Redundant cabling
- Plastic
- Sewage
- Concrete

All hazardous waste produced on site will be double-bagged and labelled with the contents placed within a suitable labelled and lockable container for storage. All hazardous/special waste will be removed from the site by appropriate waste contractors or the responsible subcontractor and be disposed as per relevant waste legislation. The Waste Duty Holders will ensure that all documentation is completed prior to disposal. The following hazardous/special wastes will be created on site:

- Batteries
- Paint tins (containing liquid paint or non water based paint)
- Aerosols
- Oily rags
- Used spill response materials

A waste consignment note will be produced and recorded for all hazardous waste. A waste transfer note will be produced and recorded for all non hazardous waste. These documents will be produced by the waste removal contractor. Waste license will be checked prior to use of any contractor.

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4.2 Handling and Storage of Materials

Any chemicals etc, that are used during the project, must be evaluated for environmental risk and potential threat to the environment and sets out the requirements for emergency procedures to be in place to respond to and mitigate the effects of any incidents.

Designated areas have been established for the storage of all materials, plant and equipment. Designated areas are clearly identified and documented on the Site Layout Plan. Materials must be stored in accordance with the manufacturer's instructions and protected from accidental damage. A high level of housekeeping will be maintained. Storage containers will be clearly labelled with their contents and a basic inventory produced. All storage locations, machinery, equipment, fuel stores, chemicals and temporary buildings will be located to limit adverse environmental effects and all sensitive areas (e.g. drains, watercourse etc) close by will be protected.

Diesel and oil will be delivered to site and stored in compliance with local regulations and the relevant SHQE procedure/guidance note. Larger quantities will only be stored in a double skinned container and not a single skin tank with a separate bund. If smaller quantities of diesel or oil are required to be stored on site, they will be stored in approved labelled containers and securely located within a bunded area or drip tray. Bunded areas should be capable of holding 110% of the stored container or, if multiple containers, 25% of the largest container. Fuel storage areas will be located away from watercourses and drains (a minimum of 10 metres). Bunded areas will also be stored on impervious surfaces and all hoses, valves and triggers will always be stored within the bund. Bunded areas must be located so as to prevent protection from accidental damage (particularly from vehicles) or acts of vandalism. Great care must be taken when refuelling mobile plant and equipment so as to prevent spillages. Refuelling will only take place in a designated area with a fire extinguisher and a spill kit in the immediate vicinity. Only a trained and authorised person will undertake refuelling.

Wherever possible new equipment (e.g. transformers) should be delivered already filled with oil; if the Project needs to remove oil from old equipment then this will be done so in a controlled manner. All mobile plant (unless it has an integral drip tray) will have drip trays positioned beneath it when stored. Additional drip trays and spill kits will be provided near plant to contain any leaks should they occur. Drip trays will also be used when refuelling or breaking containment in equipment or pipe lines. Contents of drip trays and waste oils are to be decanted into suitable containers, preferably tiered interceptor trays, which will be stored in a suitable area, (hard standing) whilst awaiting collection from an approved waste contractor. Under no circumstances should drip trays be emptied into the drainage system. Handling, Storage and Spill Response of Materials provides guidance.

Any other substances hazardous to health which are to be used on the project will be stored in the designated area only and will be handled correctly i.e. by using appropriate containers and in accordance to the appropriate COSHH/MSDS sheets. Substances and chemicals handled/stored by subcontractors shall be monitored to ensure compliance with company procedures, i.e. appropriate method statements, COSHH sheets available, preventative measures against spillage's, etc. Compliance against these requirements will be checked as part of the weekly environmental inspection and the results recorded. These inspection forms will be reviewed during formal environmental audits.

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4.3 Spill Response and Emergency Preparedness

As polluting materials will be stored and used on site, an adequate number of spill response measures will be provided. Spill response stations will be available in several locations around the site in the case of accidental release. In addition all project vehicles will carry a 25 litre spill response kit on board. Cranes, service and subcontractor vehicles must also carry a spill kit for immediate use in case of an accidental release. An emergency flow chart for environmental spillage shall be developed by the project. This flowchart will be discussed as part of the SHQE Induction and will be displayed around the site to ensure appropriate measures to prevent and mitigate damage due to accidents and spillages are communicated. The flow chart will include the following details:

- Contact names and numbers
- Emergency response actions

Compliance against these requirements will be checked as part of the weekly environmental inspections and the results recorded. This inspection checklist will be reviewed during formal environmental audits.

4.4 Nuisance

Measures shall be taken to prevent the occurrence of any nuisances arising because of any activities on the Project. A complaints procedure shall be instigated on the project and contact numbers being communicated to all personnel and displayed on office notice boards. In the event of an environmental nuisance complaint being received, these must be logged on the complaint register and where required corrective measures undertaken. The complaints register will be reviewed during formal environmental audits

4.4.1 Noise and Vibration

The project shall establish a system to ensure that the noise emitted from all equipment, operations and services used during the project will be practically minimised. All vehicles, plant and machinery used on site will be properly silenced and maintained in efficient working order. Mobile plant are to be sited as far away from vessel entry activities as far as possible. Construction work that gives rise to noise that is audible out with the site boundary shall not be carried out except between agreed hours and with the appropriate approval. Any work to be carried outside the agreed hours shall be notified to the relevant Departments of the Local Authority for prior approval. In general site management will take into account the following noise hierarchy:

- Eliminate the source of the noise
- Substitute for quieter methods of working
- Isolate source of the noise
- Engineering controls, i.e. barriers, silencers, insulation
- Restriction of working hours

WBCL and contractors will adopt mitigation measures, including but not limited to the following:

- All mobile plant and equipment will be fitted with acoustic panels that will be kept closed whilst running
- All mobile plant and equipment will be switched off when not in use
- All equipment will be well maintained, including dampers and silencers
- Faulty equipment will be removed from use
- Restrict the number of vehicles allowed on site

Polyfan/PCT grinding and cutting discs will be used, where appropriate, that allow up to four times the exposure to both vibration and noise over conventional discs. Regular noise surveys including octave band analysis, where appropriate, will be undertaken throughout the works, in particular during grinding, drilling and other noise generating activities. Any suspect equipment/plant that appears to be generating high noise levels will be checked and removed from site if found unsuitable. If noise limits have been set by the Local Authority or Client details of these and how they will be monitored must be detailed here. Compliance against

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these requirements will be checked as part of the weekly environmental inspection and the results recorded. This audit checklist will be reviewed during formal environmental audits.

During construction of the caissons on either sides of the river embankment. Settlement monitoring will be carried out on a daily basis to ensure stability of the embankment is not compromised.

4.4.2 Dust

If there are any issues with dust during the execution of the works, the project team will implement control measures such as damping down in order to prevent the spread of airborne particulates. If harmful particulates are to be disturbed (e.g. MMMF) more stringent controls will be enforced in accordance with the legislation and/or Client procedures. Compliance against these requirements will be checked as part of the weekly environmental inspection and the results recorded. This inspection checklist will be reviewed during formal environmental audits. Debris netting will be installed on fencing to reduce the risk of airbourne particulates entering adjacent watercourses.

4.5 Aqueous Discharges and Abstraction

The project shall ensure that harm to individuals or to the environment as a result of aqueous discharges into controlled waters is minimised. Water or other liquid carrying silt or other forms of pollution caused by the project will not enter any watercourse or be allowed to enter onto adjoining land, under any circumstances. Measures such as bunding, gully suckers, settlement lagoons etc will be utilised to ensure this does not occur. Discharges will only be carried out via the approved discharge route which will be monitored on a regular basis, as defined within the consent/permit to ensure they do not cause a breach any of the limits set by the regulator. During excavation works, pumped water will be directed to a settlement tank, lagoon area or to a filtration system prior to discharge dependent upon the location and size of the excavations. All pumping operations will be carried out in accordance with an approved instruction developed by the project. During removal of spoil from the caisson, a settlement lagoon lined with terram will be used to store the spoil for settlement and filtration of liquid content. No discharges to controlled waters will be made without prior authorisation from the SHEQ Advisor . When large pumping operations are being undertaken on the project, a dedicated team will be established. Compliance against these requirements will be checked as part of the weekly environmental inspections.

Under the Water Act 2003, anyone can abstract 20 m3 of water per day from any water source without the need for an abstraction licence. The works are unlikely to require a daily take greater than this amount, and as such, meet the terms of this exemption. If at any time WBCL intend to use more than this amount, on any one day, then an abstraction licence must be applied for, prior to the abstraction taking place. The EA and YW permitting team will be contacted in the event additional abstraction or discharge is required.

Normal control measures should be employed on the intake to prevent entrainment of fish species.

4.7 Flora

All trees, hedges and shrubs within or adjacent to the site, except those that have been approved for removal shall be protected from damage during construction work by the erection of 'Herras' Fencing. Wherever possible the removal of any flora will be limited and removal will only be carried out with the prior approval of the SHEQ Advisor and relevant authority.

Ecological Constraints and Mitigation Measures –

Ecological Feature	Notes	Mitigation
Statutory Designated Sites	N/A	N/A
Reedbed UKBAP Priority Habitat	N/A	N/A

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Other UKBAP Priority Habitat	UKBAP Lakes, Rivers and woodland are present in close proximity to the works.	Methodology for works in close proximity, notably pollution prevention and vehicle/person access.
Biosecurity	Risk of spreading disease/invasive flora and fauna within/onto/beyond site. Notably marsh frog are present, chytrid and crassula etc.	Methodology for biosecurity: all plant/ vehicles/contractors to be clean before arriving or leaving site.

4.8 Fauna

Wherever possible the project will avoid disturbing any fauna within/near to the project works. Any fauna observed will be monitored and avoidance techniques utilised.

Ecological Feature	Notes	Mitigation
Statutory Designated Sites	N/A	N/A
Habitats	No priority habitats are present within the working area. The River Hull is likely to qualify as UKBAP Rivers.	Ensure pollution prevention measures notably to avoid impact on adjacent watercourses.
Nesting Birds	The construction works will occur outside of the nesting birds season	A nesting bird inspection will be undertaken of trees prior to pruning.
Great Crested Newts	N/A	n/a
Roosting Bats	N/a	N/a
Badger	No evidence of badger presence within the site or within 30m.	A pre-works walkover to confirm the absence of badger. Excavations will be constructed to prevent accidental access from mammals i.e. sheet piling will extend at least 1.5m vertically from the edge of excavations.
Fish	N/a	N/a
Invertebrates	n/a	n/a
Otter	n/a	Excavations will be constructed to prevent accidental access from mammals i.e. sheet piling will extend at least 1.5m vertically from the edge of excavations.
Water Vole	N/a	N/a
Reptiles	Surrounding vegetation may be suitable for reptiles.	Two stage vegetation clearance of scrub to construct the laydown area
Great Crested Newts	N/A	N/a
Badger	No evidence of badger presence within the site or within 30m.	A pre-works walkover to confirm the absence of badger. Excavations will be constructed to prevent accidental access from mammals i.e. sheet piling will

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		extend at least 1.5m vertically from the edge of excavations.
Fish	N/A	N/a
Invertebrates	A small area of priority habitat will be impacted, which may support notable invertebrates.	Minimise the impact on priority habitats. The extent of habitat to be temporarily and permanently lost, being a small percentage of the total area of these habitats, is not anticipated to impact on invertebrate populations.

4.9 Energy Consumption and Minimisation

Energy consumption on the project will be monitored and the information (invoice copies) submitted to the SHEQ Department on a quarterly basis. Wherever possible renewable sources of energy will be utilised on the project, either directly or indirectly. Measures will be implemented on site to reduce the energy used e.g. poster campaign to remind personnel to switch off equipment when not in use, switch off stickers to be placed above light switches, energy conservation tool box talk to be carried out etc. Plant and equipment should be sourced which is adequate for the required task (for example an appropriately sized generator).

4.10 Fluorinated Gases

Any refrigerant gases used in equipment, such as air conditioning units must be known. A register of equipment, containing such gases must be kept detailing the type of gas and the quantity. The amount of gas within each piece of equipment will determine if six monthly or annual maintenance is required. Maintenance must be carried out by trained, competent personnel. Copies of qualifications for those undertaking the maintenance of the equipment must be held on file at the relevant location/site. Personnel wishing to undertake leak checking, recovery, installation, servicing and maintenance on RAC systems containing or designed to contain 3 kg or more of an F gas refrigerant need to hold formal qualifications which cover as appropriate: installation, testing and maintenance of air-conditioning and heat pump systems; Installation and maintenance of refrigeration systems; leak checking, recovery, servicing and maintenance of equipment.

Personnel wishing to undertake leak checking, recovery, installation, servicing and maintenance on RAC systems containing or designed to contain less than 3 kg of F gas need to hold formal qualifications covering; Installation, servicing and maintenance of equipment with a charge of less than 3kg, (6kg if hermetically sealed) and leakage checking.

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4.11 Traffic Management

Noise and nuisance caused by traffic associated to the project should be minimised as far as possible. These precautions should be followed in order to reduce the likelihood of nuisance arising:

- Traffic to and from site shall use the approved route for site traffic shown on the approved plan. Signage warning of a construction site will be positioned at the junction of the un-named road with Common Lane at the North side and South side approach.
- The width of the un-named single access track off Common Lane to the site is 5 meters. The width of the mouth of the track onto Common Lane widens to 10 meters. Overall, the visibility arrangements at the junction of the track with Common Lane is indeed suitable for the Kiosk delivery vehicle to turn in and out without going over the highway verge. There is a passing place on the unnamed road installed for traffic mitigation purposed.
- Heavy goods vehicles shall not arrive or leave the site except between agreed hours which are between 0730 hrs and 1500hrs Monday to Friday. There will be no working on weekends. The agreed construction working hours are 0730hrs to 1700hrs.
- During construction the approved traffic route is to be kept free of mud and debris resulting from the development. Any such deposits found on the local roads is to be removed regularly using road brushes and vacuum road sweepers.

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Signage Management Plan

Image: 1 – Site Location

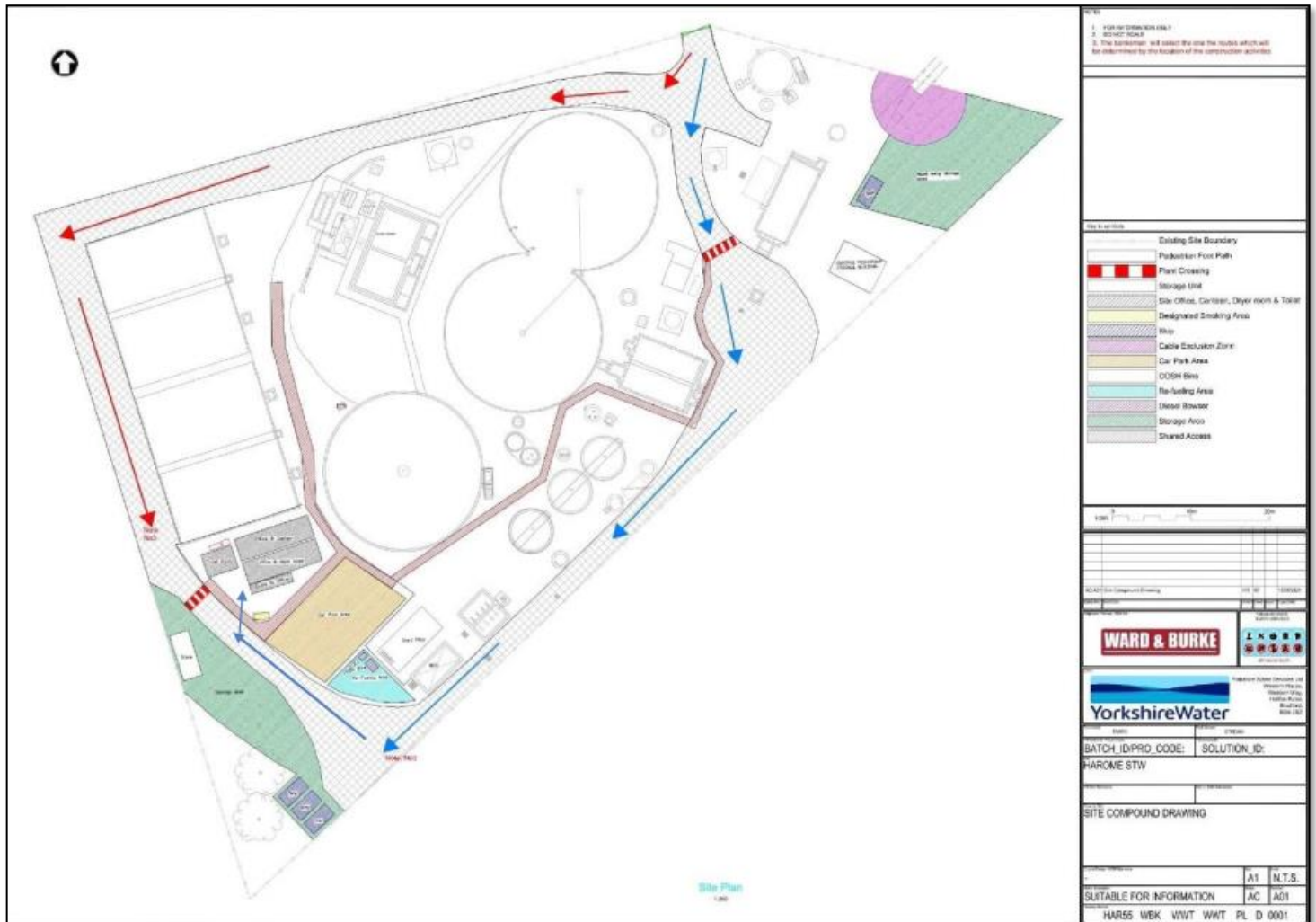


Image: 2 – Location of signage for approaching traffic in relation to site entry point



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Image:3- The site layout showing the pedestrian and traffic routes



Kiosk Delivery Information

Amount of vehicles used in delivery	Frequency of vehicle movement	Post construction traffic movement	Timeframe for installation
1 x 6 wheeler rigid truck	1 x 6 wheeler 1 x 60t crane	1 x delivery of kiosk on construction completion day or following day	1 day

FURTHER SOURCES OF INFORMATION & ADVICE

<https://www.gov.uk/government/organisations/environment-agency/services-information>
<https://www.gov.uk/government/organisations/environment-agency>

ENVIRONMENTAL AGENCY

Environmental Agency Inspectors have similar powers to HSE Inspectors. They can go anywhere on site, remove any evidence or sample for testing and investigation, take statements, photographs and documentation, and they can serve improvement/abatement notices, impose fines and prosecute offenders. They can also advise you of ways to comply with legislation and your Duty of Care

Emergencies EA & SEPA (Eng. Wales & Scot.): 0800 80 70 60

General Enquiries EA (Eng. and Wales): 03708 506 506

General Enquiries SEPA (Scotland): 01786 457700

General Enquiries EPA (Ireland): 053 916 0600

Waste Action Line SEPA (Scotland): 0800 389 5270

Waste Registration EA (England): 03708 502 858