Nuvu Developments Ltd

Former Jackson's Brickworks

Construction Environmental Management Plan

Rev C

October 2024

Vertase FLI

Contaminated Land, Brownfield & Environmental Contracting

REPORT TITLE: **Construction Environmental Management Plan**

REPORT NUMBER: **4744-129197/FO/2021-Cond.04 CEMP REV B**

CLIENT NAME: **NUVU Developments Ltd**

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1.0 Introduction

1.1 Introduction

1.1.1 This document is a Construction Environmental Management Plan (CEMP), and has been developed to discharge planning condition 4 relating to planning application 129197/FO/2021 dated 25th January 2021 granted by Manchester City Council:

#4 Prior to the commencement of the development a detailed construction environmental management plan outlining working practices during development shall be submitted to and approved in writing by the local planning authority, which for the avoidance of doubt should include: -

- *- Construction Logistics Plan (incl. dust and odour monitoring)*
- *- Dust Management Plan*
- *- Lighting drawings and specifications*
- *- Site compound facilities plan*
- *- Details of perimeter fencing (including location)*
- *- Surface Water Management Plan*
- *- Noise and Vibration Management Plan*
- *- Non-native species Management Plan*
- *- Air Quality Statement*
- *- Construction Dust Assessment*
- *- Traffic Management Plan*
- *- Site Waste Management Plan*
- *- Materials Management Plan*
- *- Environmental Response Plan*

1.2 Document Layout

1.2.1 The CEMP outlines a series of strategies, standards, best practise techniques and procedures that will be observed through the enabling and remediation works at het Former Jacksons Brick works, Ten Acres

Lane, Newton Heath, to ensure compliance with the environmental legislation and H & S regulations applicable to date.

1.2.2 The CEMP has been written by VertaseFLI Ltd (VFLI), the Principal Contractor for the works.

1.2.3 VFLI have worked as the principal contractor on numerous projects and extensive knowledge and experience of compliance with site practice and regulations has been gained. The VertaseFLI Environmental Policy and accreditations are provided as Appendix A.

1.2.4 This Construction Environmental Management Plan (CEMP) will be incorporated within the site file and will be reviewed and assessed during the contract. This document demonstrates VFLI's capability as a principal contractor to minimise impact to the neighbouring residents, highway safety and environmental impacts during the enabling and remediation phases of this project.

1.2.5 VFLI will ensure that this management plan will be employed and maintained throughout the enabling and remediation works, ensuring that regulatory standards and compliance with legislation are maintained from the start of works through the entire lifespan of the enabling and remediation works, including post phase monitoring, if applicable.

1.2.6 For clarity, this CEMP covers the enabling and remediation works to be completed by VertaseFLI at the Former Jacksons Brick Works, Ten Acres Lane, Newton Heath, Manchester.

1.2.7 This CEMP has been written to specifically address each working practice as per the wording of Condition #4. The table below is provided to direct the reader to each relevant section in the CEMP.

CEMP Section references

Requirement as per Condition #4	CEMP Section Reference
Construction Logistics Plan (incl. dust and odour monitoring)	Drawing D1932_23
Dust Management Plan	Section 8.4, 8.5, 8.6 and Section 9
Lighting drawings and specifications	Section 8.11
Site compound facilities plan	Section 6 and D1932_22
Details of perimeter fencing (including location)	Section 6.2 and D1932_22
Surface Water Management Plan	Section 8.1 and Section 9
Noise and Vibration Management Plan	Section 8.8, 8.9 and Appendix B
Non-native species Management Plan	Section 8.10
Air Quality Statement	Section 8.4 and Appendix B
Construction Dust Assessment	Section 8.4, 8.5, 8.6 and Section 9
Traffic Management Plan	Section 7
Site Waste Management Plan	Section 8.3
Materials Management Plan	Section 8.2
Environmental Response Plan	Section 10

2.0 Key Documents

2.1 Additional Key Documents

2.1.1 The following additional documents have been written by others in relation to planning conditions 4 and should be read in conjunction with this CEMP.

Document Title	Document Author	Location
Remediation Options Appraisal & Remediation Strategy	VertaseFLI	Planning Portal*
Noise and vibration Management Plan	Wardell Armstrong LLP	Section 8.8, 8.9 & Appendix B
Air Quality Statement	Wardell Armstrong LLP	Section 8.4 & Appendix B

Notes:
*Remediation Options Appraisal & Remediation Strategy as approved by Condition 7 of 129197/FO/2021

3.0 Scope of Works

3.1 Scope of Works

3.1.1 The purpose of the works is to remediate/prepare the Site for a proposed housing development with separate educational facilities and light commercial premises. The proposed enabling/ remediation works include but are not limited to:

- Site preparation works to secure the Site and to determine Site protocols.
- Clearance of vegetation including the removal of vegetation, hedges and trees that are not retained for preservation or retained as part of the proposed development.
- Clearance and creation of temporary accesses/haulage routes through the Site.
- Excavation, segregation and Treatment of non-native invasive plant species
- Remediation works to historic waste and general fill materials, to comprise excavation, segregation processing and reuse of materials where required.
- Ex situ processing and treatment of contaminated soils.
- Offsite disposal of materials unsuitable for re-use on site.
- Ex situ pump and treat to facilitate excavation.
- Validation of soils and groundwater geochemically
- Bulk earthworks to ground formation levels.
- Validation of soils geotechnically.

4.0 Site Details and Project Considerations

4.1 Site Details

4.1.1 The site is located at the Former Jacksons Brickworks, Ten Acres Lane, Manchester, National Grid Reference 387599, 400309

4.1.2 The site is located between Ten Acres Lane and Mitchell Street, Newton Heath, Manchester approximately 4Km northeast of Manchester City centre.

4.1.3 The site is bounded to the: -

- North by the Rochdale Canal.
- East by Mitchell Street and Residential Development beyond.
- South by Briscoe Lane Academy (Primary School) and Residential Development beyond.
- West by Ten Acres Lane Sports complex and Ten Acres Lane.

4.1.4 No SSSIs, RAMSARs, SACs etc lie within 500m of the Site. However, it should also be noted that the Rochdale Canal Special Area of Conservation (SAC)/ Site of Special Scientific Interest (SSSI) is approximately 1.5 km from the Site. A non-designated stretch of this canal borders the Site to the north.'

4.2 Site History

4.2.1 The site is commonly referred to as a former landfill. This is not technically accurate as whilst some landfilling has occurred on the site in historic brick pits this is relatively restricted to certain areas of the site where extensive clay extraction had historically taken place. In broad terms the site can be split into three sections as described below.

1) The middle of the site comprises a former clay pit (the clay having been extracted for making bricks), which has been infilled with waste (predominantly construction and demolition waste and household waste).
2) The western end of the site was once home to the Former Jacksons Brick works adjacent to the clay pit until demolished in the 1930s. Ground levels in this area have been historically raised with general Made Ground.

3) The eastern end of the site was also home to an early 20th century Brickworks until demolished in circa 1970. Following this, the site has been raised by the placement of predominantly reused natural materials from the coal measure strata.

4.3 Current Site Conditions

4.3.1 The site is approximately rectangular in shape. There is extensive, low-quality vegetation across the whole of the site. This includes stands of Japanese Knotweed which is in the process of tri-annual herbicide treatment. There are scattered areas of bare earth across the site with some evidence of fires and burning in these locations. The site is crossed by numerous informal paths and tracks.

4.4 Project Considerations

4.4.1 The proposed development is for the construction of up to 716 dwellings with new areas of open space, construction of schools and some light commercial units.

4.4.2 To facilitate remediation of contaminated soils within the development area, a treatment area will be set up to treat and process soils making then suitable for re-use on the development site.

4.4.3 To facilitate remediation of contamination groundwater within the development area, treatment plant will be installed in a dedicated treatment area.

4.4.4 This plan has been devised to ensure that adverse effects of the enabling and remediation works to the existing environment are minimised.

5.0 Management Awareness

5.1 Management Team

5.1.1 A suitable management team is assigned to the project, and they are fully aware of the environmental standards detailed in this CEMP.

5.1.2 A copy of the CEMP will be held on site. The Project Manager will be responsible for ensuring the site team is briefed and aware of this documentation.

5.1.3 The site will be internally audited regularly by an appropriately experienced and qualified person. Regular toolbox talks will be held on environmental matters as well as health and safety.

5.2 Site Inductions and Training

5.2.1 All site personnel and visitors will be given a site induction to ensure that they comply with health and safety measures and site rules. The induction will also identify any site hazards they should be aware of and given appropriate advice for good site practice to minimise risk.

5.2.2 If it is deemed that any site personnel is under qualified or does not possess the adequate training for the scheduled work on site, then this will either be addressed by providing the training to the employee or replacing this employee with an appropriately trained employee.

5.2.3 All site workers will be given information on environmental issues on site at the site induction.

5.2.4 The VertaseFLI Learning and Development Policy is provided as Appendix C.

5.3 Supervision

5.3.1 During enabling and remediation works the site manager is responsible for the daily management of site operations and the environmental engineer is responsible for management of environmental operations.

5.3.2 A VertaseFLI Environmental Engineer will also supervise and oversee operations on site in relation to the prepared method statement, this CEMP, and other relevant documents.

5.4 Roles and Responsibilities

5.4.1 Staff, operatives and subcontractors have the authority and responsibility to protect the environment at all times during execution of the works; responsibilities are highlighted during the site induction. All personnel will be trained in the necessary skills to fulfil their role.

5.4.2 Key personnel for specific job roles are set out in the table below.

Role	Key Environmental Responsibilities
Project Manager	Overall responsibility for undertaking the project and implementing the Contractors Environment Policy Implementation of Construction Environmental Management Plan and Procedures Investigation of any complaints and the identification and delivery of appropriate and reasonable remedial measures Management and monitoring to ensure effective resolution. Notifying the Employer of any Major Environmental Incident Reviewing Roles and Responsibilities Act as a single point of contact for complaints or queries during the construction period. Maintain records of any communication from and to local residents Ensure KPIs are report and met across the project. Assessing Training needs along with the Environmental Manager.
Site Manager	Ensure works are carried out in accordance with the CMP & CEMP and other documentation. Ensure staff are aware and follow the requirements of environmental management plans and procedures. Ensure weekly environment site inspections are undertaken. Ensure site documentation (Method Statements and Environmental Risk Assessments) are successfully implemented. Develop and implement water monitoring as necessary. Implement mitigation measures identified in the CMP & CEMP and method statements. Brief site personnel and subcontractors on latest environmental issues.

Role	Key Environmental Responsibilities
HSE Manager & Advisors	Ensure environmental issues are discussed and communicated effectively to the project team. Liaise with procurement personnel to integrate sustainability into the procurement process. Work with the Employer to develop, manage and maximise the delivery of sustainability initiatives. Providing environmental and sustainability advice and guidance to the team Identify, develop and provide sustainability training. Input into the production and ongoing maintenance of the CMP & CEMP Identify and implement ways to avoid, reduce, reuse and recycle waste. Establish and oversee environment monitoring onsite. Report best practice across the project and to the Employer. Assist in incident investigations and reporting. Encourage near miss reporting and identify trends. Support the site team to ensure compliance with environmental legislation. Assist in preparation of environmental permits, licences and consents as required. Develop relevant toolbox talks for site.
Engineering Staff	Ensure sub-contractor's method statements incorporate the appropriate environmental mitigation and risk assessment prior to the commencement of works. Ensure work is undertaken to reduce or avoid environmental impacts. Support Site Manager in delivering relevant training to all personnel onsite.
Procurement Team	Ensure sustainability and environmental requirements are outlined in subcontractors' scope of works and contracts.
Design Team	Incorporate the use of sustainable materials, minimise material consumption and design out waste where feasible.
All Personnel	Carry out the works in accordance with agreed methods and briefings. Report anything that deviates from agreed processes. Report all incidents, spills and best practice to site managers. Attend environmental training and toolbox talks. Adherence to Considerate Constructor requirements.

5.5 Documentation

5.5.1 The following documents are an integral part of the environmental management of the project and will be available on site within the site files and updated as required:

- Planning permission, planning conditions etc.
- Remediation strategy / Remediation method statement
- Air Quality Management Plan
- Non-native species Management Plan
- Hazardous Waste Consignment notes and Duty of Care Waste Transfer Notes for waste produced on site.
- Contact names, addresses and telephone numbers and general emergency procedures for environmental or health and safety incidents.

5.6 Complaint and Notifiable Incident Procedures

5.6.1 Any complaints or notifiable incidents will be recorded within the Site Operation File in accordance with the VertaseFLI Complaints Procedure.

5.6.2 Any accidents or incidents will be recorded within the VertaseFLI Accident and Incident reporting framework.

5.7 Compliance Monitoring and Reporting

5.7.1 Compliance monitoring is detailed in Section 10, and reporting will be undertaken to check conformance with regulatory controls and will be recorded within the Site Operation File.

5.7.2 In addition, all monitoring undertaken by or on behalf of the VertaseFLI will be undertaken according to VertaseFLI protocols, the remediation strategy and EA /LPA guidance unless otherwise agreed with the regulators in advance.

5.7.3 An example IMS Site File is provided as Appendix D.

5.7.4 VertaseFLI Monitoring Protocols are provided as Appendix E.

5.8 Environmental Audits

5.8.1 VertaseFLI holds an ISO14001 (Environmental Management System) accreditation which is audited every year by a recognised competent assessor. This involves review of all VFLI Environmental Policies and Procedures and checking these against activities on site to ensure that they are being implemented. A full comprehensive report is issued by the assessor with recommendations.

5.8.2 In addition to the external audits, there are internal monthly Health, Safety & Environmental inspections conducted by VertaseFLI's Health and Safety Manager (NEBOSH Diploma HSE Qualified). Key Performance Indicators (KPIs), checked during the inspections include applicable permits e.g., waste exemptions and discharge consents, and to ensure conditions stipulated in the permits are being implemented. Waste management, Dust/Noise/Odour control, Surface water runoff, and the control and management of fuel bowsers to prevent spillage are also areas of focus. The findings of the inspections are verbally relayed to the Site Management team with recommendations and followed up with a written report specifying timescales as to when they should be closed out depending on the level of severity.

5.8.3 Furthermore, VFLI have internal competent WAMITAB inspectors that conduct monthly or weekly inspections of some of our sites depending on the scope of works and the permit conditions. Again, findings are related to the site management with timescales on when they should be closed out.

5.9 Review and Updating of the Plan

5.9.1 This CEMP will be reviewed and updated, if necessary, every 3 months by the project manager or if any relevant design changes occur.

6.0 Site Layout and Activities

6.1 Contractors Site Compound and Facilities

6.1.1 Several strategic facilities will be established to serve the needs of the proposed works and to allow materials deliveries to be managed in a coordinated way to avoid peak periods. The facilities will include:

- A secure holding compound.
- Strategic haul routes and pedestrian routes.
- Soils storage and handling facility; and
- Stockpiles for surplus material and topsoil.
- Loading and unloading areas
- Turning area for vehicles
- Parking for site staff and visitors

6.1.2 The contractors' compound is shown on Drawing D1932_22A in Appendix F.

6.2 Fencing, Screening and Hoarding

6.2.1 The site is currently fenced with 2.4m high tight mesh security fencing around the remediation perimeter (Redline boundary on Drawing D1932_22D, Appendix F) however the entire perimeter will be surveyed to assess the standard and function of the current fencing around the site. The site boundary will be made secure by use of appropriate fencing or repairs to the existing fencing where appropriate.

6.2.2 The site boundary will be marked with warning signs to inform of the dangers of construction sites and to advise against unauthorised access.

6.2.3 Where necessary to ensure safety, individual locations within the site where hazardous activities are being carried out, will be secured with the installation of appropriate fencing.

6.3 Working Hours

6.3.1 The proposed programme for site preparation, earthworks and remediation works is presented in Appendix I. It has been assumed for the purposes of this CEMP that working hours for all construction activities will be:

07:30am to 18:00hrs Monday to Friday; 08:30am to 14:00hrs Saturdays.

No working on Sundays and Bank Holidays- unless approval from Manchester City Council has been sought and granted.

6.3.2 Operations on site will adhere to these working hours as far as is reasonably practicable. However, certain operations are seasonal and weather dependent, and, in these instances, it may be necessary to extend working hours for such operations to take advantage of daylight hours, subject to prior agreement with Manchester City Council. Similarly occasional Sunday working may be undertaken where deemed appropriate and approved by Manchester City Council.

6.4 Site Offices and Cabins

6.4.1 Appropriate site offices and cabins appropriate for the number of workers and expected visitors, will be strategically located on site and will be relocated if necessary, during the works. The initial proposed location for the Site Compound is shown on Drawing D1932_20 Site Access and Compound.

6.4.2 The site office and site access gate will be identified with a sign providing instructions on how the Site Manager may be contacted if the office/site is unattended. The condition of site offices will be maintained to ensure they are clean, tidy, and free from mud and dust.

6.5 Welfare Facilities

6.5.1 Lavatories (separate male and female) and washing facilities will be maintained in a clean and hygienic condition suitable for staff and site visitors. All drainage from sinks, showers and lavatories will be connected to a septic tank throughout the site works.

6.6 Procedures for Interference with Public Highways

6.6.1 VertaseFLI and subcontractors will be required to take all necessary measures to ensure that public roads are maintained clear of construction debris. Measures will include:

- Vehicles carrying loose aggregate and workings to and from the Site to be sheeted at all times.
- Provision of wheel washing facilities for all construction vehicles.
- Regular monitoring and maintenance of the wheel washing facilities.
- Inspection of the on and off-site routes daily and employing road sweepers where necessary.

6.6.2 A condition survey of the designated construction routes will be carried out prior to construction.

6.6.3 Disruption to traffic as a result of off-site works in connection with the development will be minimised.

6.6.4 Traffic management is discussed further in section 8 of this document.

6.7 Restriction of Public Access

6.7.1 Construction areas of the site will be made secure from members of the public by the provision of additional fencing and by securing existing fencing as required. Signage will be placed to prevent unauthorised access. Manned security will be in attendance on site in the evenings and during weekends.

6.8 Public Liaison

6.8.1 Initial public liaison and consultation with neighbours and the nearby businesses, school etc has already been carried out by the client as part of the planning application process. Nearby residents, businesses and the primary school will be notified by letter drop in advance of the proposed start on site and will also be notified of significant activities and milestones during the progress of the project.

6.8.2 Contact details for the contractor's public liaison manager will be provided at the site entrance and a complaints and feedback procedure will be available for regulators upon request.

7.0 Traffic Management and Access

7.1 Highway Dilapidation Survey

7.1.1 In accordance with the planning requirements set within condition 3 the Contractor will undertake a highway and footways dilapidation survey on Ten Acres Lane comprising photographic record with commentary. The extent of the survey will be 20m beyond the curtilage of the site each way along Ten Acres Lane.

7.1.2 The survey will be undertaken no earlier than 4 weeks prior to the commencement of the remediation works, with reports being issued to the local authority and highways department for information.

7.2 Construction Traffic Permitted Routes to and from site.

7.2.1 During each phase of the works traffic assessments will be undertaken throughout the works to minimise the impacts of traffic movement, on the surrounding road network, and impact to the general public.

7.2.2 It is proposed that all construction traffic will access the site at the gated entrance on Ten Acres Lane. The location of the access is shown on drawing number D1932_24 Traffic Route.

7.2.3 This main entrance was more recently constructed wide enough and sufficiently set back from the main carriage way to allow articulated waggons and low loaders access to the site unhindered. This access proved sufficient during the tree removal phase undertaken in the winter of 2022, when low loaders brought large plant to site, and articulated waggons removed from site large quantities of felled trees and green waste.

7.2.4 All HGV traffic will approach the site from the North and turn left into the site. All HGV traffic will leave the site and turn right towards the north and the A62. This methodology is designed to avoid the low bridges on Ten Acres Lane and Briscoe Lane to the South where these roads cross under the railway, and to limit the passage of HGV traffic through residential areas as far as possible. Cars and LGV will approach and leave the site in either direction.

7.2.5 During the site preparation, earthworks and remediation phases of the proposed development, an increase in HGV traffic may be experienced

on the local road network. However, it is anticipated that the increase in the number of HGV movements to and from the Site would not be significant. The proposed routing of HGVs will direct vehicles to the A62 and the M60 at Junction 22 where necessary.

7.2.6 Where possible, the times of arrival and departure of vehicles from the site will be planned (at site level) to limit additional traffic during identified peak times, thus minimising disruption to the local road network.

7.2.7 All persons engaged in the site preparation, enabling and remediation phases entering the Site in an HGV will be provided in advance with a copy of the Construction Traffic Management Plan (Drawing) to ensure that it is followed. This is issued to suppliers and subcontractors by the Principal Contractors procurement team at the time of instruction.

7.2.8 Appropriate signage will be erected to direct traffic at the site entrance and a banksman / gateman will be provided where necessary.

7.2.9 The movement of construction vehicles along sensitive roads, wherever possible, will be prevented/minimised through consultation and ongoing engagement with Manchester City Council and other partners.

7.2.10 Movement of HGVs will be restricted at peak times, when possible, to lighten the vehicular traffic upon the route onto Ten Acres Lane and the junction with the A62.

7.3 Materials Deliveries/Collections

7.3.1 The supply of materials to the Site will be managed to avoid the need for deliveries during the restricted peak periods. The Site will establish a secure holding compound to manage vehicles and materials.

7.3.2 The role of the holding compound will be:

- To facilitate the delivery of materials and plant outside of the peak periods.
- To manage the supply of materials and plant to the work areas during peak periods.
- To store plant and materials.

- To Facilitate unloading and loading of plant and materials for the works.
- To ensure that no deliveries (loading/unloading) take place on the public highway.
- All loading and unloading of muck away lorries will be undertaken in a designated location off the adopted highway.
- Allow vehicles to turn on site and avoid, where possible, reversing out of the site onto Ten Acres Lane.

7.3.3 The arrangements for deliveries to and from site will be advised in writing to both subcontractors and suppliers.

7.4 Plant Deliveries

7.4.1 It is envisaged that plant would be delivered to Site using standard low loader-type transport vehicles. Any significant abnormal loads that warrant specific engagement with local transport police will be notified within the required timescales. All suppliers delivering large plant or materials will be advised that they are responsible for movement orders for their plant and equipment if necessary.

7.4.2 All large deliveries will be instructed to call the site team ahead of their arrival. The site entrance will then be manned to allow the vehicles to enter the site swiftly reducing the requirement for them to wait on Ten Acres Lane or surrounding roads, potentially causing congestion and reducing visibility along the highway.

7.5 Traffic Routes

7.5.1 Consideration of access routes to site will also apply to all site workers, deliveries, and visitors to ensure appropriate management of construction-related traffic. The site access and egress point and proposed traffic management processes will be provided to all suppliers and contract staff to minimise impacts on local roads. Adherence to traffic management would be further managed using appropriate external signage.

7.5.2 Site-specific traffic management requirements will be included in contractor and visitor site inductions.

7.5.3 Sufficient space for contractor parking will be provided on site adjacent to the site welfare compound, see drawing D1932_22A, appendix F.

7.5.4 The contact details for key members of the project team will be circulated as part of the proposed local liaison and will allow any complaints about vehicles routing to be handled quickly and appropriately. Key members of staff will include.

- Project Manager
- Site Manager or Environmental Engineer

7.5.5 Regular meetings will be held with the site management team to review access arrangements. The Site Manager will monitor traffic movements to ensure compliance with the agreed arrangements.

7.5.6 Emergency contact telephone numbers for the Principal Contractor will be displayed on the site entrance throughout the works.

7.6 Access for other Vehicles and Personnel

7.6.1 All vehicles will be directed to the site access. Upon entering the site, they will be directed to the main site compound from where they will be directed to their site destination along designated construction traffic routes. The vehicles routes will be subject to a 10mph site speed limit.

7.6.2 All visitors will be required to report to the main site office prior to entering the work area. Provision will be made in the main site compound for site vehicles and visitor parking. No parking is permitted on the surrounding road network.

7.6.3 The main site compound area will be fenced off and secured.

7.6.4 The general public will be excluded from the Site area using appropriate fencing and signage.

7.6.5 Unauthorised access to construction work areas will be prevented by suitable barriers/fencing which will be installed around the boundary of the individual work areas with appropriate warning signs applied to the fencing. Areas which are typically prone to unauthorised access will be installed with pedestrian secure fencing. Within the site area, the haul routes may not be fully fenced but will be marked by appropriate means to avoid construction traffic entering unauthorised areas.

7.6.6 Health and safety signage will be displayed at appropriate locations throughout the works.

7.6.7 A suitable turning area for HGV traffic will be provided within the site boundary to minimise the need to reverse onto the public highway. A designated banksman will be used where vehicles cannot avoid the need to reverse. However, the site traffic management plan has been designed to reduce the need for reversing wherever reasonably practicable.

7.6.8 Prior to leaving the site, all vehicles will be required to be inspected by the driver to ensure that the vehicle is clean and safe to leave the site. All waste lorries with loose material which may lift during transit will be sheeted over.

7.6.9 All vehicles will be inspected to ensure wheels are free from mud and debris prior to entry onto the public highway from the site. Wheel washing facilities will be provided. No vehicle that is likely to deposit mud or other material on the road surface will be qted back onto the public highway.

7.6.10 In addition, all adjacent roads will be kept clean by manual and mechanical means if required to reduce the incidence of mud and associated dust generation.

7.6.11 All site traffic movements will be in accordance with local authority and police requirements.

7.7 Site Haul Routes

7.7.1 For the purpose of minimising dust and other environmental disruption, consideration will be made to both the construction of (i.e. materials used) and management of the temporary haul roads. Dust suppression facilities such as tractor and bowser, will be available and will be utilised along the haul roads as required.

7.8 Plant Movements

7.8.1 Throughout the works, plant will be limited to within the site boundary except for occasional unavoidable movement on and off site. Traffic movement will increase during mobilisation of the site; however, this will be a temporary inconvenience and will not adversely affect local

residents. The impact on the local community will be minimised by employing the following mitigation measures:

- Implementation of the traffic management plan for the site.
- A single point of access.
- Monitoring of the route and traffic movement throughout the day.
- A lockable gate to prevent unauthorised access.
- Appropriate signage.
- A contact for out of hours complaints.

7.9 Local Highway Condition and Cleanliness

7.9.1 Prior to the commencement of the enabling and remediation works a full highway dilapidation survey will be undertaken, mainly comprising photographic record. This will be issued to the client for further issue to the local authority.

7.9.2 Regular vehicle movement on and off the site will create the potential for mud and debris to be deposited on the local highways by vehicles as they leave the site area.

7.9.3 Throughout site works, the site manager and environmental engineer will monitor the condition of public roads, namely the transport route on Ten Acres Lane, to ensure no significant deposit of mud or debris.

7.9.4 The use of a road sweeper will be considered as required.

7.9.5 Within the Site, road going vehicles will be retained on areas of hard standing or stoned haul roads which will significantly reduce the likelihood of mud or debris collection on the wheels or undercarriage of vehicles. In instances where this is not possible wheel washing facilities will be available.

7.9.6 Wheel washing facilities will be put in place at a location to be agreed with the client through which all vehicles that have entered the site must pass before entering the public highway. Plant movement across the public road is very unlikely and will be limited to prevent the possibility of depositing mud on the road.

8.0 Specific Environmental Issues

8.1 Water Protection and Surface Water Management Plan

8.1.1 Adequate prevention measures will be employed to ensure water management. The control of contaminated and wastewater is crucial throughout the project for the protection of controlled waters and surrounding environment.

8.1.2 Surface water runoff on site has historically collected / ponded on the southern boundary of the site, the current landowner installed a collection trench system along this boundary and a means of water treatment in December 2022. This system has function well since its installation and has prevented surface water running off the site.

8.1.3 It is our intention to utilise and maintain this collection trench system for as long as feasibly possible to aid in the collection and control of surface water (See Drawing D1932_25). The trench will be extended where required should other low points on the southern boundary be identified.

8.1.4 Where the site has generally higher ground i.e., to the north and east shallow earth bunds will be created to prevent localised surface water from running off the site (See Drawing D1932_25). Localised surface water will be collected in temporary sumps and pumped to the collection trench.

8.1.5 Water encountered within excavations and low points on site will be pumped via the existing collection trench and on-site water treatment plant to reduce contaminant concentrations to acceptable levels prior to discharge from site.

8.1.6 The water treatment plant will be located on an impermeable bunded pad. The pad and bund will be subject to repair as required, to ensure that there is no further risk to subsurface/controlled waters in the event of system failure. Any build-up of rainwater or spillage water will be held within the bund and passed through the treatment plant for consented discharge.

8.1.7 Wherever safe and practical to do so, open top vessels will be covered.

8.1.8 Details of the Site Water Drainage Strategy are provided in documentation submitted in relation to Planning Condition #14.

8.2 Materials Management Plan

8.2.1 A DoW: CoP Materials Management Plan (MMP) is unlikely to be formally required for the reuse of soils under the proposed Environment Agency Permitting Regime for the site. However, the Principal Contractor will be operating an app based real-time materials management tracking system which will serve many functions but to principally ensure compliance with the anticipated environmental permit for the treatment of waste throughout the remediation project.

8.2.2 These materials tracking system will detail the time and date the proposed methods for handling, specific chemical testing, storage and management of materials on-site and the location of reinstatement shall be developed to ensure that site won materials, treated during the remediation works can be tracked from excavation, treatment to reinstatement.

8.3 Site Waste Management Plan

8.3.1 Waste generated during the remediation process will be minimised where possible to limit the number of materials taken off site. In order to mitigate the impact of waste, the following measures will be employed as required:

- Segregated skips and/or stockpiles for soils, vegetation, wood, plastic, concrete brick, metal electrical/batteries and rubber wastes.
- All office and waste from welfare will be segregated prior to recycling / disposal.
- All wastes unsuitable for reuse on site will be either recycled where possible or disposed of where recycling is not an option.
- Closed skips where required to minimise wind-blown waste from site.
- Litter picking to remove wind-blown waste from site.

- Suitable positioning, identification and labelling of waste storage areas.
- Use of suitable waste storage containers e.g. double skinned storage tanks for waste oil.
- Management throughout the works under the Materials Management Plan prepared for the site.

8.3.2 All waste movements will be recorded by VertaseFLI and handled in accordance with Duty of Care and Hazardous Waste Regulations where appropriate. Duty of Care and consignment notes will be stored on site throughout the project.

8.3.3 The site will be operating under an anticipated environment permit for processing and treatment of waste soils (site-based installations permit for the treatment of waste). Treated soils will be reused on site.

8.4 Air Quality and Dust Management Plan

8.4.1 There is the potential for dust to be generated during the enabling and remediation works, particularly during prolonged periods of dry weather.

8.4.2 Dust is considered to be generated primarily by activities such as demolition, on site vehicle movements, tipping of materials from vehicles, materials treatment operations including screening, crushing, stockpiling, and reinstatement activities.

8.4.3 The VertaseFLI Site Manager, nominated deputies and all site staff, following the necessary site inductions and toolbox talk, will proactively manage the works to minimise the raising of dust and controlling risk. Such control procedures will include, where appropriate:

- The use and maintenance of good quality site roads, and the suppression of dust on haul roads through the implementation of a tractor and bowser to dampen down running surfaces.
- Enforcing speed limits of site plant along site access and haulage roads;
  • Using dust suppression misters / spray bars during treatment works as required;
  • Suspending certain works during unfavourable weather

conditions if wind is blowing towards or dust is identified beyond site boundaries;

- Carrying out operations with the potential to generate significant dust away from the sensitive receptors whenever possible;
- Minimise the tipping height from which materials are dropped from excavator buckets onto the ground or into lorries;
- Use of modern and properly maintained mobile plant;
- Implementation and maintenance of wheel washing facilities to minimise the deposition of mud / dust on the public highway.

8.4.4 The VertaseFLI Site Manager / Environmental Engineer shall assess dust and its impact upon neighbours throughout the working day.

8.4.5 The dust rating, below will be adopted:

1. Not noticeable
2. Slight dust – not likely to be a nuisance off-site.
3. Moderate dust - not likely to be a nuisance off-site.
4. Unacceptable dust – likely to be a nuisance off-site (remedial action required)

8.4.6 Real-time dust monitoring will also be carried out, consisting of daily visual inspections at the site boundary and downwind of the active works.

8.4.7 A record will be kept of any visual dust seen to be leaving the site boundary.

8.4.8 A Nephelometer or similar will be used to undertake real-time monitoring of particle mass fractions including PM10 concentrations.

8.4.9 Nephelometers provide real-time concentrations of particulate matter in various size fractions by operating on a light-scattering principle. The Nephelometer will be fully calibrated prior to use on site and will receive regular services as per the manufacture's recommendations. The monitoring results will be compared to those established during the background / baseline monitoring.

8.4.10 Dust monitoring will be undertaken at the site boundary at the locations identified on the Monitoring Plan (D1932_23) during the remediation and earthworks. In occasional instances, additional dust monitoring will be undertaken as dictated by site operations given the prevailing wind direction. Proposed monitoring and compliance limits are outlined in Section 10.

8.4.11 A meteorological station will be installed to monitor wind direction and speed. Daily site logs will also contain a record of daily site weather conditions and completed by the site manager.

8.4.12 All dust monitoring records will be maintained on site for the duration of the works.

8.5 Dust from Vehicle Movements

8.5.1 Exposed soil at the site surface may be present on site. It is possible that vehicle movement across the site will generate dust, especially on loose and soft ground. Where possible a sealed running surface will be created as a temporary haul route to ensure that minimal amounts of dust will be generated through vehicle movement on site.

8.5.2 Where possible, site vehicles will be restricted to hardstanding and a site speed limit employed to further reduce the potential for dust generation.

8.5.3 A site speed limit of 10mph will be imposed on site. The speed limit will be clearly communicated in site inductions, including disciplinary measures if the site speed limit is not adhered to. The site speed limit is both a health and safety measure and a dust prevention measure. By adhering to the site speed limit there is a reduced likelihood of dust emission generation from materials in the skips of articulated dump trucks and from tracks and tyres.

8.5.4 Road going vehicles leaving the site will be sheeted where required and will be inspected for mud on their tyres and bodywork prior to entering the public highway.

8.5.5 A site-specific traffic management plan has been developed. This will minimise the risk from dust emissions affecting nearby properties.

8.5.6 A tractor and water bowser with spreader bar, or similar, will be deployed onsite and along the entrance onto the site to regularly damp down roads and exposed surfaces where there is potential for dust generation, particularly during dry weather.

8.5.7 It is expected that the majority of materials excavated onsite shall be reused on site. Consequently, the volume of heavy traffic transiting to and from site on public highways is anticipated to be low, significantly reducing the likelihood that dust and dirt will be transited offsite. Notwithstanding this, the site entrance and public highways will be inspected regularly by the site manager and / or environmental engineer.

8.5.8 Where heavy vehicles leaving site are observed to have significant quantities of mud on their tyres, this will be removed using a jet wash bowser or similar (wheel wash station).

8.5.9 In the event that the site entrance and public highway are significantly soiled as a result of site activities, the site entrance and public highway may be maintained using a water-assisted road sweeping vehicle or similar.

8.6 Excavation: Dust and VOCs

8.6.1 Excavation of soils and general cut and fill across the site has the potential to generate dust and air emissions. Excavation works will occur in stages and will be limited in size, reducing the potential for large amounts of dust generation.

8.6.2 During excavation works, constant monitoring of the works will be undertaken by the site manager and / or environmental engineer and if required, mitigation measures will be implemented. These measures may include suspending works during windy and adverse weather conditions to limit the potential for dust and air emissions to be generated and the use of water sprays to suppress dust (and odour).

8.6.3 Other general mitigation measures include the following:

- Use of appropriately designed vehicles for materials handling.

- All plant and equipment to be maintained in good working order. If possible, plant should be located well within the Site, away from the site perimeter and existing sensitive locations.
- Regular inspection of local highways and Site boundaries to check for dust deposits, taking remedial measures where necessary. Inspections will be carried out on a daily basis, during the working week, or more frequently depending on the nature of the activity being undertaken.
- When loading materials into vehicles or using transfer chutes and skips, drop heights should be kept to a minimum and enclosed wherever possible/appropriate.
- Skips should also be securely covered during transportation on the public highway.
- Observation of wind speed and direction prior to conducting dust-generating activities to determine the potential for dust nuisance to occur, avoiding potentially dust- generating activities during periods when wind direction may carry dust into sensitive areas and avoiding dust-generating operations during periods of high or gusty winds.
- Where possible, stockpiles of soils and materials should be located as far as possible from surrounding sensitive uses, taking into account of prevailing wind.
- Surface areas of stockpiles should be minimised where possible (subject to health and safety and visual constraints regarding slope gradients and visual intrusion) to reduce the area of surfaces exposed to wind pick-up.
- Dampening of exposed soils and stockpile materials to be carried out as and when appropriate, using hoses and/or sprinklers. If longer term exposure is anticipated, then consideration should be given to grassing of these areas.
- Windbreak netting should be positioned around materials stockpiles and vehicle loading / unloading areas, as well as exposed excavation and material handling operations, where appropriate.

- Completed earthworks to be covered or vegetated as soon as is practicable.
- Use of dust-suppressed tools for all operations; and
- No unauthorised burning of any material anywhere on-site.

8.7 Air Quality

8.7.1 During the works there will be control measures in place to manage fugitive dust, odours and gas. Monitoring of dust and odour will be carried out in accordance with Sections 9.6 to 9.8 above. Monitoring will be at the locations on the monitoring plan drawing D1932_23. The frequency and type of monitoring is set out in Section 10.

8.8 Noise Management Plan

8.8.1 The use of heavy plant and machinery can create the potential for high noise. Levels of noise will be monitored daily at 11 boundary locations see drawing D1932_23 (Appendix F). Should excessive noise be recorded the following mitigation measures will be implemented as required. A baseline for noise will be taken prior to works being completed.

8.8.2 All monitoring data will be logged in accordance with VertaseFLI Standard Operating Procedure 021 by the Environmental Engineers and stored both electronically and available on site, for issue to Local Officers as required.

8.8.3 Below are the typical types and models of earthmoving plant and processing equipment that would be utilised on site for remediation processes, notable the majority of this plant would be mobile throughout the project. Presented along site are the at source point noise outputs, plus noise levels at the point of the operators, where applicable:

8.8.4

Remediation Plant /Equipment	External Point Source Sound Power Level LwA dB(A) (2000/14/EC Stage II)	Internal Operator Noise Levels (ISO 6396 dynamic test)
35T Excavator (Komatsu)	105	71

20T Excavator (Komatsu)	102	69
A25 Dump truck (Volvo)	108	74
A30 Dump truck (Volvo)	109	74
D61 Bulldozer (Komatsu)	107	78
BW213 Compaction Roller	108	77
QJ341 Sanvik Crusher	198	NA
3 Way Screener (Warrior)	105	NA
Trommel Screener (Powerscreen)	101	NA

8.8.5 Noise mitigation measures will comprise of the following:

- Initially, the correct selection of plant and equipment will ensure that noise generation is minimised. The selection process will include a) the use of only modern and properly maintained plant, b) all plant and equipment fitted with adequate silencers, c) the use of white noise reversing alarms, d) the use of silenced generators and pumps where practicable.
- The main waste processing area will be located towards the north of the site generally away from the majority of the residential properties to the south of the site, however the site team will be made aware of residential receptors further to the north beyond the canal and light industrial areas.
- Site will be operated in accordance with the agreed site hours.
- Prescribed traffic routes will be established within the centre of the site where possible.
- Plant to be well maintained and fitted with effective silencers.
- All acoustic covers to machines will be kept closed whenever the machines are in use.
- Noisy operations will be located as far as practicable away residential property.
- Prompt action to complaints.

8.9 Vibration

8.9.1 The risk to off-site receptors is minimal and as such no formal monitoring is proposed.

8.9.2 However, an assessment will be made by the VFLI resident engineer for each treatment activity as to the potential for unacceptable vibration. Where it is considered likely that vibration may affect nearby properties a specific monitoring plan for that activity will be developed.

8.9.3 The vibration monitoring plan will include, where necessary, condition surveys of properties. Monitoring of vibration at "at risk" properties will be carried out during the activity and condition surveys carried out once the activities have ceased on site.

8.9.4 All monitoring data will be logged electronically by the calibrated equipment and stored both electronically and available on site, for issue to Local Officers as required.

8.10 Non-Native Invasive Species Plan

8.10.1 A programme of spraying identified non-native invasive species, notably Japanese Knotweed, was begun in 2021. Since that time 6 No visits to re-spray the knotweed have been carried out in order to reduce its spread across the site.

8.10.2 All Japanese Knotweed encountered during the project works will be excavated including crown removal and rhizomes chased out via excavation under the control of Invasive species specialists and quarantined on site to minimise the risk of further spread.

8.10.3 All quarantined materials will be wrapped in a suitable root barrier and place at a depth of more than 2m on site below final finished levels. The location of the Japanese Knotweed burial cells will under public open space (LEAP) and or recreational playing fields, and at least 2m away from buildings roads and sewers.

8.11 Light Disturbance and Lighting specification

8.11.1 The site works are programmed for up to 24 months and therefore will encounter days with reduced daylight hours. A detailed programme can be found in Appendix I.

8.11.2 Whilst it is not anticipated to carry out works outside of daylight hours, some limited processing and access and egress from the treatment

areas is anticipated during the winter months particularly. Therefore, some artificial temporary construction lighting will be used.

8.11.3 Mobile telescopic lighting towers will be deployed along access routes on the site, around the compound and treatment areas in accordance with Drawing D1932_22.

8.11.4 The specification for the lighting where possible will be:

- The use of mobile units with telescopic lighting masts to no more than 9m.
- The use of energy efficient 100-watt LED Lighting heads.
- Fully rotational and full splay control of lighting heads.
- Solar charging of the lighting units in the day where possible, with potential generator charging in the day to reduce noise pollution outside of working hours.
- To minimise light intrusion to nearby residential properties, lights will be positioned facing away where possible and only used where necessary for safety and security reasons.

8.11.5 The location of the proposed lights is shown on Drawing D1932_22 and will be placed along the main access route to the welfare, around the welfare compound, and treatment area.

9.0 Monitoring and Compliance

9.1 Monitoring and Compliance

9.1.1 Documents addressing VertaseFLI's monitoring compliance and procedures will be provided in Appendix E.

9.1.2 Monitoring will be as agreed with the EA in accordance with the terms of the anticipated environmental permit for the treatment of waste.

9.1.3 The terms of the anticipated environmental permit for the treatment of waste are currently in discussion with the EA. However, the summary of monitoring and compliance provided below is anticipated to be required.

9.1.4 Baseline monitoring will be undertaken pre-start to establish baseline environmental quality with regard to noise, dust and odour with which to compare results with throughout the project.

9.1.5 Environmental monitoring will be undertaken by a trained and competent VertaseFLI Environmental Engineer.

9.1.6 Environmental monitoring records will be retained onsite for the duration of the project and are available to view on request.

9.1.7 Based on VertaseFLI's experience of remediating similar sites, it is proposed that the levels presented below are the targets not to be exceeded at either off-site receptors or at boundary locations. Please refer to Drawing D1932_23 for Monitoring Locations.

Species	Target Level	Method of Determination
VOCs (general)	1ppm	PID
Odour	No Nuisance	Olfactory
Noise	10dBA>background Continuous	Sound Level Meter
Asbestos Fibres	0.1f/cm3	Filter Microscopy
Dust	No Nuisance	Visual
PM10s	250ug/m3	Nephelometer
Deposited Dust	200mg/m3/day	Static Dust Gauge

Surface Water Quality (Rochdale Canal)	No deterioration	Laboratory Testing
Boundary Groundwater Monitoring	No deterioration in boundary trench	Laboratory Testing

10.0 Emergency & Environmental Incidents

10.1 Environmental Response Plans

10.1.1 Documented emergency controls, known as Emergency Plans, will be presented in the Construction Phase Plan (CPP) for the works.

10.1.2 The Emergency Plans stipulate a systematic course of action that will be carried out in response to a situation to prevent injury or to mitigate any environmental impact arising from the occurrence. The Emergency plans define the action(s) to be taken in response to an emergency situation. Emergency plans consider the needs of relevant interested parties including emergency services and neighbours. The following Emergency plans have been prepared for the site:

- Significant oil or fuel spill.
- Fire on site.
- Damage to Mains Service/utilities.
- Exposure to unknown substance.
- Contaminated water / liquid release.
- Significant chemical spill.
- Unexpected asbestos.

10.2 Incident Reporting

10.2.1 All incidents shall be reported to the client (NUVU Developments Ltd) at the earliest opportunity, following which VertaseFLI will respond accordingly.

10.2.2 All incidents shall be recorded to detail the aspects of the operations that caused the emergency situation and the actions taken to minimise/ alleviate any significant H&S risk and environmental impacts. The reports shall be investigated to identify the root cause the emergency. If the Accident / Incident Investigation Report identifies that an incident occurred because the documented operational controls were insufficient, then amendments shall be made to the corresponding procedure and or risk assessment.

10.3 Reviewing Emergency Procedures

10.3.1 The emergency response and the associated plan shall be reviewed following any emergency situation that occurs on site.

11.0 List of Relevant Legislation

11.1 Relevant Legislation

- The Environmental Damage (Prevention and Remediation) Regulations 2015 – Relates to pollution prevention during ongoing site operations.
- Environmental Permitting Regulations (England and Wales) 2016 – governs the handling, treatment and re-use of waste materials.
- The Environmental Protection (Duty of Care) Regulations 1991

  - Relevant to sites which import, produce, carries or treats or disposes of controlled waste.
- Landfill (England & Wales) Regulations 2002 and Hazardous Waste Regulations - Relevant to sites which dispose or move hazardous waste.
- The Hazardous Waste (England) Regulations 2005.
- The Control of Pollution (Oil Storage) (England) Regulations 2001 - Set general requirements for oil storage containers, with additional measures for fixed tanks and mobile bowsers.
- The List of Wastes (England) Regulations 2005.
- Water Resources Act 1991 - Relevant to sites which could knowingly permit any poisonous, noxious or polluting matter or any solid waste (including silt) to enter any controlled waters.
- Water Industry Act 1991 - Relevant to sites which discharge to a sewer.
- Water Act 2003
- Control of Pollution Act 1989 - Relevant to sites that can produce noise impacts to neighbours.
- Clean Air Act 1993 - Relevant to sites which will or may burn construction waste.
- Common Law Nuisance - Relevant to sites where third parties have brought or may bring a civil case where liability has been due to nuisance.

- Noise and Statutory Nuisance Act 1993 - Relevant to sites which may produce excessive noise on public streets from alarms, plant or machinery.
- Site Waste Management Plans Regulations 2008 – relevant to contracts worth more than £300,000.
- Environmental Protection Act 1990 - Relevant to sites where a Local Authority or private individual can apply for the serving of an Abatement Notice when a nuisance exists or is likely to occur. Relevant to sites which produce waste and dispose of waste off-site. Relevant to sites requiring remedial action for contaminated land where these is actual or potential for significant harm to human health or pollution to controlled waters or the environment.
- Control of Asbestos at Work Regulations 2012 - Relevant to sites which could expose third parties to asbestos in dust either from site activities or haulage of materials off-site.
- Control of Substances Hazardous to Health (COSHH) Regulations.
- Control of Lead at Work Regulations 2002 - Relevant to sites which could expose third parties to products that could contain lead.
- Conservation (Natural Habitats &c) Regulations 1994 - Relevant to sites designated as Special Areas of Conservation and/or Special Protection Areas and the habitat of species listed on Schedule 2 of the Regulations (including bats).
- Wildlife and Countryside Act 1981 - Relevant to sites designated as Sites of Special Scientific Interest (SSSI) and sites supporting species listed on Schedule 1 and Schedule 5 (including bats) of the Act and most breeding bird species. Also prohibits the spread of invasive, non-native plants, such as Japanese knotweed, which are listed on Schedule 9 of the Act.
- Protection of Badgers Act 1992 - Relevant to sites inhabited by badgers or used by badgers for foraging.

- Ancient Monuments and Archaeological Areas Act 1979 - Relevant to sites with known or suspected monuments or where monuments are discovered during works.
- National Planning Policy Framework 2023.
- The Hedgerows Regulations 1997 - Relevant to sites with hedgerows.
- Countryside and Rights of Way Act 2000 - Relevant to sites designated as Sites of Special Scientific Interest (SSSI) and sites supporting species listed on Schedule 1 and Schedule 5 of the Act.
- Salmon and Fresh Water Fisheries Act 1975 - Relevant to sites which could cause pollution that is poisonous or injurious to fish, their food, spawn or spawning grounds.

Appendix A

Environmental Policy and Accreditations

Quality, Environmental and Health & Safety Management System Manual

(to the requirements of ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018)

Registered Offices:

Number One Middle Business Park
Bristol Road
Portishead
BS20 6PN

19 Napier Court
Barlborough,
Sheffield
S43 4PZ

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*Note: The title of a controlled 'document' or 'record' referenced in the text of this manual is shown in **BOLD BLACK CAPITAL TEXT.***

1.0 VertaseFLI Limited

1.1 IMS Management System processes

Our senior management ensures that our IMS Management System, our key processes and their interactions are established, implemented, maintained and continually improved.

Related documented information:

- **MP00 PROCESS MAP**

These key processes may be supported by other tasks or sub-processes, which may or may not be documented, but are controlled through the key process.

Our senior management ensures that we maintain documented information to support the operation of our processes and retain documented information to demonstrated confidence in the processes (see paragraph 4.4).

1.2 The business context

Our senior management has identified and assessed the needs and expectations of interested parties (*those person(s) or organisation(s) that can affect, be affected by, or perceive themselves to be affected by our decisions or activities*) and the internal and external influences that can control or influence the way we operate and the decisions we have to make.

Related documented information:

- **MS02 BUSINESS CONTEXT**

We primarily focus on the impact on the intended outcomes of our Management System. These outcomes include our aim to:

- provide services that will meet our customer requirements.
- enhance customer satisfaction.
- protect the environment from adverse environmental impacts
- protect the Company from adverse environmental conditions
- Eliminate / minimise risks to personnel and any other parties that may be exposed to occupational Health & Safety hazards associated with all our activities.
- conform with compliance and regulatory obligations and other business requirements to which it subscribes
- enhance our business, health & safety and environmental performance
- fulfill our objectives.

A number of professional memberships are held within the company both at business and personal level which contribute to the awareness of changes in relevant areas that impact upon our business context. Our context and any changes are periodically reviewed for adequacy and compliance, see paragraph 6.3 Management Review.

1.3 Scope of our Management System

With our understanding of our business context and considering our services we have determined the certification scope of our IMS System to be:

SPECIALISING IN BROWNFIELD AND CONTAMINATED LAND REMEDIATION, ENABLING AND ENVIRONMENTAL CONTRACTING SERVICES

Our IMS System applies to the key processes, other activities, resources and employees at our Registered Offices (see front cover).

We contract out a number of services, e.g. Plant Hire, IT Support and Equipment Maintenance. Various activities are performed at the two registered offices as follows:

Bristol: Management, Administration, Commercial, Tendering, Technical, Operations and Finance.

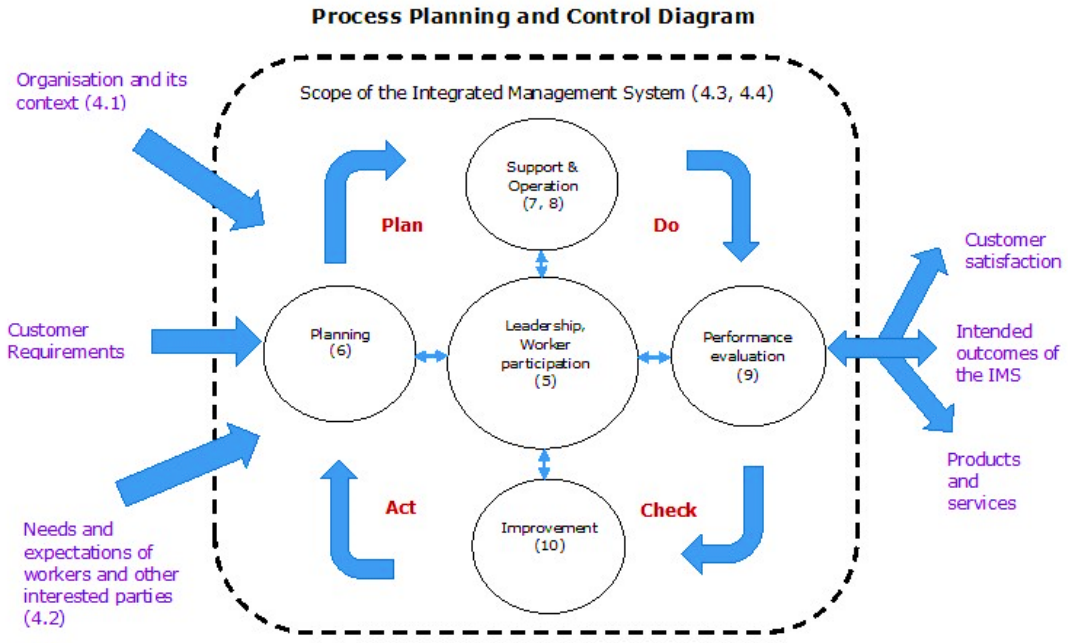
Sheffield: Management, Administration, Commercial, Tendering, Technical, Operations, Purchasing and QESH Administration.

VertaseFLI Limited is part of the FLI Group of companies and provides a unique service in the assessment and remediation of brownfield land, contaminated sites, including associated demolition and groundwork.

We work for development, house building, manufacturing and petrochem sectors delivering complete remediation solutions and development ready platforms together with our clients' and their teams.

Our culture is to work collaboratively with our partners to embrace technology and innovation in order to reduce carbon footprint, improve project efficiencies and minimise total expenditure [Totex]. Our commitment to sustainability is reflected in our certifications to ISO 9001, ISO 14001 and ISO 45001.

The interactivity between the operating procedures supporting the processes defined by the IMS is illustrated in the diagram below.



NOTE: Numbers in brackets refer to the clauses in the international standards

1.4 Justified exclusions and non-applicability

Our IMS System is developed to maintain compliance with:

- ISO 9001:2015 – Quality Management Systems, requirements;
- ISO 14001:2015 – Environmental Management Systems requirements.
- ISO 45001:2018 – Occupational Health and Safety Management Systems requirements

It is intended that all requirements of all three standards be applied, and no exclusions are claimed.

Our IMS System scope and exclusions are periodically reviewed for accuracy and compliance, see paragraph 6.3 Management Review.

2.0 Leadership

2.1 Leadership and commitment

Our senior management ensures that our IMS system requirements are adequately and effectively integrated into the business.

The commitment of our senior management ensures our IMS System achieves its intended quality, health & safety and environmental outcomes and has sufficient resources to do so.

Our senior management determines the risks and opportunities regarding conformity of our services (and so customer satisfaction), health & safety provision and environmental impacts, as well as the consideration of the statutory and regulatory requirements. Our senior management are accountable for the outcomes.

2.2 Policy

Our senior management authorises our company policy which is maintained as documented information**.** The senior management ensures this policy is communicated to all personnel and those working on the Company's behalf and is available to interested parties as required.

Related documented information:

- **Pol 01 SHEQ POLICY**

The company policy is periodically reviewed, see paragraph 6.3 Management Review.

2.3 Roles, responsibilities and authorities

We have established a functioning business structure, with suitable reporting and communication lines. Our senior management ensures that the authorities and responsibilities for individual personnel are agreed.

Related documented information:

- **MS04 ORGANISATION DIAGRAM**
- Various process procedures, work instructions, etc

We monitor our business structure and make changes as required. Key company personnel's roles and responsibilities are defined below:

Managing Director (MD)

- To plan, direct and control the activities of VertaseFLI in order to ensure its commercial and other business objectives are achieved.
- To agree objectives and strategy with VertaseFLI's parent company, FLI Global, and to ensure plans, processes and resources are in place to implement the agreed strategy and meet the agreed objectives.
- To be the managing member of the Management Team of VertaseFLI.
- To ensure that a structure is in place to implement the requirements of VertaseFLI's IMS System.
- To undertake any other function as agreed from time to time with the Board of VertaseFLI.
- Ensure that customer and applicable regulatory requirements are determined, understood and consistently met.
- To ensure that we focus on enhancing customer satisfaction by determining and addressing risks and opportunities that can effect conformity of our services.

Directors

Directors' responsibilities include:

- Maintaining their own awareness of the Company SHEQ policy / supporting procedures, obligations and objectives.
- Fostering awareness of, and an active concern for, Health & Safety by personal example and by encouragement.
- Ensuring adequate resources are available to fulfil the Company policy, procedures and objectives, including resources for training.
- Supporting corrective actions in response to any non-conformity, identified as a result of regular site inspections and / or internal audits which are reported.
- Participating in the review of the IMS by being a member of the management review team.
- Actively ensuring that the IMS is effectively implemented within their areas of responsibility.
- Ensure that customer and applicable regulatory requirements are determined, understood and consistently met.
- To ensure that we focus on enhancing customer satisfaction by determining and addressing risks and opportunities that can effect conformity of our services.

Health & Safety Manager

The Health & Safety Manager (HSM) responsibilities include:

- Monitor changes in Health & Safety legislation and guidance.
- Representing the Company in consultations with any officers of Health & Safety authorities at the workplace.
- Visiting sites regularly and undertaking inspections of work activities, site accommodation and communicating with relevant individuals in the business.

- Providing Health & Safety advice to all employees and subcontractors when sought or required.
- Liaising with the Director responsible for Health & Safety on all matters relating to Health & Safety and the Company's overall performance.
- Reporting on the overall performance and compliance of the IMS to the Directors at the management review meetings.
- Arranging and setting the agenda for the annual Health & Safety committee meetings.
- Setting / coordinating an effective internal audit programme to ensure IMS is audited annually, to ensure continued compliance with the ISO 45001 standard and all relevant applicable legislation.

Quality Environmental Safety & Health (QESH) Coordinator

The QESH coordinator's foremost responsibility shall be to the IMS, responsibilities include:

- Ensure all management systems are maintained in a functional state at all times and through continual review and improvement, meet the requirements of the standards and the business, which change from time to time.
- Being empowered to instigate the Company SHEQ Policy.
- Maintain all ancillary systems associated with the management systems, i.e., legislation, KPIs, supplier/subcontractor database.
- Prepare / co-ordinate the internal auditing schedules and ensure all audits are undertaken on time.
- Undertake internal management system and site audits as part of the internal audit team and ensure the competency of the internal audit team.
- Ensure any non-conformances / observations raised as a result of internal or external audits are effectively resolved and close out in a timely manner.
- Ensuring all new employees receive adequate IMS induction training when joining the Company.
- In combination with the H&S Manager, co-ordinate and attend company management system meetings, i.e., IMS, QA, Environmental and H&S.
- Developing existing and new procedures in line with ISO 45001, ISO 9001 and ISO 14001 to support the Company requirements.
- Ensuring personnel or companies contracted to carry out services for or on behalf of VertaseFLI, are selected in line with business, contractual, quality and environmental requirements.

Safety Representatives (Committee Members)

Responsibilities include:

- Making arrangements to ensure persons for whom he / she is representing has the opportunity to raise any concerns they may have on health, safety and welfare. They will ensure any issues are raised at the annual safety committee meetings that they attend. Absolute responsibility to feedback to persons they represent as to the outcome of the meetings.
- Take reasonable care for the health and safety of themselves and of other persons who may be affected by their acts or omissions at work.

Fire Wardens

Responsibilities include:

- Ensuring that there is adequate firefighting equipment available and that it is regularly inspected and serviced on an annual basis.
- Ensuring that the fire alarm system is tested monthly and the results are suitably recorded.
- Arranging for fire drills to be carried out at least annually and ensuring the drill is suitably recorded.
- Liaising with the Fire Brigade in the event of an emergency.
- Ensuring all persons are accounted for in the event of an emergency.
- Ensuring all persons are aware of the emergency procedures applicable for the particular Company office or site.
- Ensuring that the Muster Point at the particular Company office or site is clearly identified and is free from obstruction at all times.

Project Lead (or appointed person)

Responsibilities include:

- Ensuring the Company complies with any enforcing authority, e.g., HSE, EA etc.
- Understanding your duties and obligations under current Health & Safety Legislation.
- Where required, undertake the duties of Temporary Works Coordinator as per any Temporary Works Coordinator training received. **N.B:** To avoid any vested interest, Project Leads can only be an appointed TWC for a different site.
- Ensuring that Site Managers / Supervisors are qualified and experienced for the work being undertaken.
- Ensuring that Site Managers / Supervisors who come under your field of responsibility understand their Health & Safety responsibilities.
- Monitoring Site Managers / Supervisors performance in respect of Health & Safety.
- Undertaking periodic Health & Safety inspections and audits, initiating and monitoring corrective actions as appropriate.
- Ensuring that the Company meets its obligations as contractor, principal contractor, designer or client as applicable under the CDM Regulations 2015.
- Reviewing and approving arrangements for first aid provision on site in accordance with Company and legal requirements.
- Supporting the Site Manager / Supervisor in any disciplinary action relating to Health & Safety.
- Ensuring that regular Toolbox talks are undertaken by Site Managers / Supervisors and that the subjects covered, are relative to the tasks being undertaken.
- Developing Risk Assessments, Method Statements (RAMS) and Safe Systems of Work for the work to be undertaken. Ensuring that these documents are briefed to the responsible Site Manager / Supervisor for onward briefing of others.

- Ensuring that all RAMS are retained on site and are kept up-to-date with any changes in legislation, circumstances or methods of work, and that they are subsequently briefed to all operatives on site.
- Ensuring that frequent monitoring of all site operations is carried out by the Site Manager / Supervisor to ensure compliance with the agreed RAMS.
- Not allowing unorthodox methods of work and ensuring Site Managers / Supervisors prevent operatives from taking unnecessary risks by improvising work equipment.
- Ensuring the reporting of incidents, accidents, thefts, safety observations, near misses and environmental incidents.
- Ensuring all permits are completed and issued.
- Ensuring all IMS related processes are understood and followed.

Site Managers and Supervisors

Site operations are the responsibility of the immediate Site Manager or Supervisor coordinating each project. Responsibilities include:

- Carrying out health, safety and environmental inductions.
- Determining and delivering necessary tool box talks and other site safety briefings are required.
- Ensure that only approved sub-contractors are used.
- Ensuring that all site staff work within their ability.
- Ensuring all site staff understand the nature and extent of the work to be undertaken, especially any hazards to staff or others including members of the public that may arise and the precautions to be taken.
- Ensuring there is provision of the necessary protective clothing and safety equipment and ensuring it is worn / used correctly.
- Devising appropriate safe systems of work and ensuring that they are followed at all times.
- Checking that all plant, machinery, power and hand tools are maintained in good condition and inspected at the required intervals.
- Maintaining Health & Safety records including; induction, training, RAMS (Risk Assessments and Method Statements), site attendance records, daily briefings, tool box talks, allocation of PPE, Lifting equipment, PUWER, audits and inspections.
- Ensuring that suitable welfare facilities are provided to Company staff and sub-contractors and they are maintained in a clean and tidy condition.
- Ensuring that, if any hazardous substances are used or form part of the remediation process then; COSHH Assessments are prepared and briefed to all personnel.
- Ensuring that site staff sign in and out at all times.
- Co-operating with the Health & Safety Manager, HSE Inspectors and other agencies.
- Where required, undertake the duties of Temporary Works Supervisor as per any Temporary Works Supervisor training received.
- Reporting accidents and incidents in accordance with Company procedures.

- Appointing and delegating a competent person to be in charge during any absence.
- Ensuring the reporting of incidents, accidents, thefts, safety observations, near misses and environmental incidents.
- Chair the Monthly Site H&S Meeting.

Office Administrators

The Office Administrators are responsible under the IMS for all Health & Safety aspects relating to persons who come under their supervision on the premises. These responsibilities include, but are not limited to:

- Ensuring a good standard of housekeeping is maintained, and waste is not permitted to accumulate.
- Ensuring that contractors who carry out work on the premises are approved and provide the appropriate RAMS for the job they are contracted to carry out, i.e., Window Cleaners and Office Cleaners.
- Ensuring a current electrical supply safety certificate is provided by the landlord or Company at the office and that this is reviewed and up-dated every 5 years.
- Ensuring First Aid facilities are maintained, and appointed First Aiders training is kept up-to-date.
- Ensuring Accident Record Books are readily available.
- Ensuring all portable electrical equipment is tested at the prescribed intervals.
- Ensuring computer workstation assessments are carried out at prescribed intervals and when layouts change.
- Ensuring administrative tasks are designed and organised to avoid musculoskeletal disorders, particularly due to lifting, poor posture or intensive keyboard use.
- Ensuring manual handling assessments are carried out prior to moving heavy or awkward loads.
- Ensuring a system is maintained to account for all present on the premises, including visitors and contractor's staff.
- Ensuring records relevant to the premises are kept readily available.
- Ensure that IMS paperwork in the office is filed appropriately and that adequate paper and/or electronic filing systems are maintained.
- Fulfils the role of Monitoring & Measurement Equipment Coordinator as per *WI-004 Equipment Maintenance and Calibration.*

Sub-Contractors

Sub-contractors must comply with all the requirements of the Company SHEQ policy. They must provide copies of their own Health & Safety policy and any other documentation appertaining to Health & Safety, which may be requested.

Sub-contractors shall, for the purposes of Health & Safety only, be considered as employees of the Company. Provision of PPE however, still remains the responsibility of the Sub-contractor. Responsibilities shall include:

- All work must be carried out in accordance with the relevant statutory provisions and taking into account the safety of others on the site and the general public.
- All plant or equipment brought on to site by sub-contractors must be safe and in good working order and comply with statutory inspection criteria where required.
- Any injury sustained or damage caused by sub-contractors' employees must be reported immediately to this Company's site representative.
- Sub-contractors' employees must comply with any safety instructions given by the VertaseFLI site representative.
- Detailed Risk Assessment and Method Statement (RAMS) will be required from all sub-contractors carrying out any activities. The RAMS must be agreed with our Site Manager / Site Engineer before work commences and copies made available on site.
- Sub-contractors whose works package includes a design function will present those designs either to VertaseFLI or the Principal Contractor for onward transmission to the Client in sufficient time to allow those designs to be considered by the design team prior to work commencing. Any such design work shall be included in the information passed to the Principal Designer as part of the Health & Safety file.
- The sub-contractors' senior site representatives shall attend safety meetings as deemed necessary.

All Employees / Agency Labour

Due to the nature of the Company's various operations, it is important that all safe working procedures identified in any Method Statement / Risk Assessments are followed. Responsibilities include:

- Take reasonable care for the health and safety of themselves and of other persons who may be affected by their acts or omissions at work.
- Ensuring their supervisor / manager or another employee is aware of their movements and approximate timings in accordance with *SSOW-003 Lone Working.*
- Involvement in the investigation of accidents / incidents reporting process where required.
- Ensure all IMS related processes are understood and followed.
- Must follow instructions given by VertaseFLI Site Managers.
- Must be familiar with relevant RAMS.
- Raise with the Site Manager any observations, safety observations or unsafe conditions.

Our roles, responsibilities and authorities and any changes are periodically reviewed for adequacy and compliance, see paragraph 6.3 Management Review.

2.4 Consultation and participation of workers

Our Senior Management ensures communication and participation with all workers at all levels and functions within the business; in order that they are consulted in the development, planning, implementation, performance evaluation and actions on implementing the IMS, with particular regard to the health & safety systems.

To enable this, the company has implemented various forums where health & safety forms and integral part of the process.

- Health & Safety Committee meetings with worker representatives, following set agenda.
- Site based health & safety meetings with worker and subcontractor representation, following set agenda.
- Site based daily briefings, weekly TBTs and TBRA development.

Related documented information:

- **H&S040 SITE H&S MEETING AGENDA**
- **H&S040A H&S COMMITTEE MEETING AGENDA**

3.0 Planning

3.1 Risks & Opportunities

Where uncertainty can exist in our operations the controls required to manage the risks or to develop opportunities for improvement are determined.

Risks are situations that have a negative impact on the process.

Opportunities are situations that have a beneficial outcome on the process.

Our senior management ensures that the health & safety risks and opportunities related to all those potentially affected by our acts or omissions are understood and adequately addressed. Priority is given to those determined to be significant risks or the most beneficial opportunities and suitable actions taken as required. This process aims to continually improve health & safety performance.

Where health & safety risk is identified, this will be eliminated or reduced to the lowest level reasonably practicable.

Our senior management ensures that the quality risks and opportunities related to our services are understood and adequately addressed. Priority is given to those determined to be significant risks or the most beneficial opportunities and suitable actions taken as required. This process aims to continually improve customer satisfaction.

Our senior management ensures that the environmental aspects of our activities, products and services (aspects we can control and those we can influence) and the related environmental impacts are determined.

The aspects that are known to have or could potentially have a significant environmental impact are determined against an established and documented criteria.

Our senior management ensures that the environmental risks (adverse effects) and opportunities (beneficial effects) associated with our significant environmental aspects are understood and adequately addressed. Priority is given to those determined to be significant risks or most beneficial opportunities. This process aims to continually improve environmental performance.

We take into consideration the identified external and internal influences and needs and expectations of interested parties, including compliance obligations as well as potential emergency situations when determining what risks and opportunities need to be addressed.

Related documented information:

- **MS03 PROCESS PLANNING (RISKS & OPPORTUNITIES)**
- **EP01 ENVIRONMENTAL ASPECTS & IMPACTS**
- **SP01 RISK ASSESSMENT**
- **SP13 UNDERGROUND SERVICES**
- Records of positive and negative impacts and outcomes

Our Internal Audit and Management Review processes focus on these significant areas to ensure compliance.

Our senior management ensures that our quality, health & safety and environmental compliance obligations are determined and their requirements within the Company applied when implementing and improving our IMS System.

Our senior management ensures that risk is used as a preventive measure and required actions are communicated to Company personnel and anyone working on the Company's behalf.

Related documented information:

- **MP06 COMMUNICATION**
- Communication records

Our senior management ensures that suitable actions are taken to address the significant aspects, our compliance obligations and the identified risks and opportunities.

We consider the financial, operational and business requirements when planning to integrate and implement the required actions.

Our risks and opportunities, the identified actions and controls and changes are periodically reviewed for adequacy and compliance, see paragraph 6.3 Management Review.

3.2 Objectives

Our objectives are based on significant environmental aspects, significant risks and opportunities, legal requirements, compliance obligations, our operational performance and other improvement needs.

Each of our key processes has at least one objective with a target established to measure its performance.

Related documented information:

- **MS01 PROCESS OBJECTIVES**
- **MP08 SETTING OUT OBJECTIVES**
- Health & Safety objective records
- Environmental objective records

Our objectives are communicated to Company personnel and anyone working on the Company's behalf and this communication information is retained.

Related documented information:

- **MP06 COMMUNICATION**
- Communication records

The actions required to achieve these objectives are reviewed to determine performance and improvement, see paragraph 6.3 Management Review.

3.3 Managing change

Our senior management ensures that adequate understanding and planning is undertaken to maintain control within our activities and processes during the need for changes to the IMS System.

The actions required to achieve 'change' are reviewed for effectiveness and lessons learnt, see paragraph 6.3 Management Review.

4.0 Support

4.1 Resources

Our senior management ensures that adequate resources are available (internal and external) to establish, implement, maintain and continually improve our IMS System and our operational processes.

We have available personnel with adequate skills and training in suitable numbers. The infrastructure and working environment are organised so as not to constrain our ability to deliver our services and to meet the needs and expectations of interested parties.

Suitable monitoring/measuring resources are available where the accurate verification of services is required, see also paragraph 6.1 Monitoring, measuring, analysis and evaluation. Documented information is retained on the fitness for purpose of resources used and the basis for calibration is recorded where no standard exists. Traceability is maintained and the results obtained are retained as documented information.

Related documented information:

- **OP04 MONITORING, MEASURING AND INSPECTION**
- **EP02 WASTE MANAGEMENT**
- **WI-004 EQUIPMENT MAINTENANCE AND CALIBRATION**
- External calibration certificates
- Maintenance records

Our senior management ensures that the knowledge base for the Company's operations is understood and maintained and suitable actions are taken to guard against a potential loss of knowledge.

4.2 Competence and awareness

Our senior management ensures that the people doing our work are competent in their jobs and can articulate a suitable understanding of our IMS System (policy, objectives, etc) and related issues.

We have available competent personnel with adequate skills and training to effectively implement our IMS System.

Related documented information:

- **MP05 LEARNING AND DEVELOPMENT**
- Induction training records
- Human resource records

Personnel are made aware of their contribution to the effectiveness of our IMS System, the benefits of improved health & safety and environmental performance and the implications of not conforming to the requirements.

4.3 Communication

Our senior management has determined our external and internal communication requirements (policy, objective, etc), with whom to communicate (interested parties) and when and how this occurs.

Related documented information:

- **MP06 COMMUNICATION**
- Emails, letters and any other form of saved communication

Internal communication uses (as appropriate):

- corrective and preventive action processes to report nonconformities or suggestions for improvement
- the results of analysis of data
- meetings (periodic, scheduled and/or unscheduled) to discuss the Management System
- the results of internal audits
- regular company meetings with all employees
- internal emails or memos
- an "open door" policy for employees to access our senior management for discussion on improving the Management System

4.4 Documented information

Our senior management ensures that our documented information is maintained and retained as required by ourselves, the ISO/BS standards & other interested parties.

Maintained information is a document subject to version and retention control

Retained information comprises the managed record system, data and other stored information

We ensure the correct version of documented information is in use and is controlled.

Related documented information:

- **MP03 CONTROL OF DOCUMENTED INFORMATION**
- **WI-013 IT BUSINESS CONTINUITY**
- Document control records

When we are supplied with documented information by our customers we ensure they are identified, checked and protected from loss or damage.

The status of our IMS System documentation and records are reviewed, see paragraph 6.3 Management Review.

5.0 Operational Processes

5.1 Planning

Our senior management ensures that our operational activities and processes are planned, implemented and controlled to achieve our intended outcomes and to

manage our risks and opportunities. This applies equally to in-house and outsourced processes.

We can demonstrate the type and extent of health & safety and environmental controls (or influences) for:

- consideration during our purchasing activities
- communicating considerations to external providers
- information relevant to products and service transportation, delivery, use, end-of-life and final disposal away from our Company

5.2 Health & Safety and Environmental emergency situations

Our senior management ensures that the processes required to prepare for and respond to potential health & safety and environmental emergency situations are planned, implemented and maintained. We have taken into consideration our risks and opportunities and significant health & safety and environmental aspects when establishing our emergency response.

Related documented information:

- **SP07 EMERGENCY PREPAREDNESS AND RESPONSE**
- **H&S.064 HSE INCIDENT RESPONSE FLOW DIAGRAM**
- Health & Safety and environmental accident/incident/emergency records

Our senior management ensures that adequate emergency information and training is given to relevant interested parties.

The **HSE INCIDENT RESPONSE FLOW DIAGRAM** is periodically reviewed and revised as necessary, see paragraph 6.3 Management Review.

5.3 Product & service requirements

Our senior management ensures that adequate communication is maintained with our customers to manage all transactions effectively.

We ensure the requirements for our services can meet our own claims as well as statutory & regulatory requirements.

Related documented information:

- **OP01 TENDERING**
- **OP03 PROJECT DELIVERY**
- **OP06 REMEDIATION DESIGN**
- **MP07 LEGISLATION, STANDARDS AND COMPLIANCE EVALUATION**
- Enquiry, quotation & contract/project records

Our senior management ensures that a review is undertaken prior to a commitment to supply products and services.

5.4 Design and development

Our senior management ensures that our design and development process is capable of delivering the requirements for our services.

Related documented information:

- **OP06 REMEDIATION DESIGN**

- **WI-005 TREATMENT SYSTEM CHANGE**
- **WI-006a DESIGN DRAWINGS AND SPECIFICATION (INTERNAL)**
- **WI-006b DRAWING SPECIFICATION (CLIENT)**
- Design control records

5.5 Externally provided processes, products and services

Our senior management ensures that suitable control is maintained over the selection and approval of external providers as well as the products and services they provide.

Related documented information:

- **OP02 COMMERCIAL**
- **OP04 MONITORING, MEASURING AND INSPECTION**
- **WI-007 PROJECT DOCUMENTATION REQUIREMENTS**
- **WI-016 APPROVING SUBCONTRACTORS AND SUPPLIERS**
- Supplier evaluation, approval and control records
- Purchasing & goods receipt records

5.6 Service provision

Our senior management ensures that suitable control is maintained over the services we provide.

Related documented information:

- **OP03 PROJECT DELIVERY**
- Works/project scheduling & control records
- Inspection, testing and non-conformance records

5.7 Service closure

Our senior management ensures that suitable inspection and verification stages are implemented to maintain control of our services.

Related documented information:

- **OP03 PROJECT DELIVERY**
- **OP04 MONITORING, MEASURING AND INSPECTION**
- **WI-010 REMEDIATION, VALIDATION AND REGULATORY SIGN-OFF**
- Project control records

5.8 Non-conforming outputs

Our senior management ensures that service outputs that do not conform to intended requirements are identified and controlled and that suitable actions (including any concessions) are approved and taken.

Related documented information:

- **MP04 NONCONFORMITY, CORRECTIVE ACTION & IMPROVEMENT**
- Nonconformance records

- Customer communications, etc

The findings and consequences of corrective actions taken are reviewed for effectiveness and lessons learnt, see paragraph 6.3 Management Review.

6.0 Performance

6.1 Monitoring, measuring, inspection, analysis and evaluation

Our senior management ensures that our IMS processes are monitored, measured, analysed and evaluated as required to verify that our intended outcomes are achieved.

Our senior management ensures that the customer's perception of our ability to meet their needs and expectations is monitored.

Related documented information:

- **MP04 NONCONFORMITY, CORRECTIVE ACTION & IMPROVEMENT**
- Customer survey records
- General customer feedback, emails, recommendations, complaints, compliments etc

The feedback received and consequences of actions taken are reviewed for effectiveness and lessons learnt, see paragraph 6.3 Management Review.

We have defined what environmental conditions are to be monitored/measured and how, the criteria for acceptance (or not) and how the results are assessed. We control the calibrated or inspected equipment used to perform monitoring/measuring activities.

We have defined the inspection criteria for health & safety performance which is monitored and measured and reviewed for effectiveness and lessons learnt.

Related documented information:

- **EP02 WASTE MANAGEMENT**
- **OP04 MONITORING, MEASURING AND INSPECTION**
- **WI-004 EQUIPMENT MAINTENANCE AND CALIBRATION**
- **WI-019 ENVIRONMENTAL INSPECTIONS**
- **H&S.005 SITE INSPECTION SHEET (H&S MANAGER)**

We communicate the outcomes and performance of both health & safety and environmental monitoring/measuring, see paragraph 4.3 Communication.

Our senior management ensures that our compliance obligations are periodically evaluated to maintain knowledge and understanding of our compliance status.

Related documented information:

- **MP07 LEGISLATION, STANDARDS AND COMPLIANCE EVALUATION**
- **WI-012 PROJECT LEGAL COMPLIANCE AND INSPECTION**
- Nonconformance records
- Customer and third party audit and inspection reports

6.2 Internal Audit

Our senior management ensures that internal audits of our key processes are planned and effective.

Related documented information:

- **MP02 INTERNAL AUDITS**
- Audit programme and reporting records

The audit plans and the findings are reviewed for effectiveness and lessons learnt, see paragraph 6.3 Management Review.

6.3 Management Review

Our senior management ensures that reviews of our IMS System are taken by the senior management at planned intervals.

Related documented information:

- **MP01 MANAGEMENT REVIEW**
- Management review records

7.0 Improvement

7.1 Opportunities for improvement

Our senior management ensures that we identify and select appropriate opportunities for the improvement of:

- our services,
- health & safety performance
- environmental performance
- customer satisfaction, and
- of the Management System

Our aim will be to correct or prevent or reduce undesired outcomes.

7.2 Non-conformity and corrective action

Our senior management ensures that we react appropriately to complaints and other sources of non-conformance. We control and correct non-conformances and their consequences as well as identifying and taking action to eliminate the causes.

Related documented information:

- **MP04 NONCONFORMITY, CORRECTIVE ACTION AND IMPROVEMENT**
- Nonconformance records

The findings and consequences of corrective actions taken are reviewed for effectiveness and lessons learnt, see paragraph 6.3 Management Review.

7.3 Continual improvement

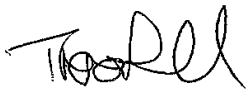
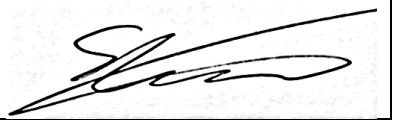
Our senior management ensures that we continually improve the suitability, adequacy and effectiveness of the Management System.

END

MANUAL CROSS REFERENCE TO ISO STANDARDS:

	ISO 9001 2015	ISO 14001 2015	ISO 45001 2018
1.1 Management System processes	4.4	4.4	4.4
1.2 The business context	4.1 & 4.2	4.1 & 4.2	4.1 & 4.2
1.3 Scope of our Management System	4.3	4.3	4.3
1.4 Justified exclusions and non-applicability	4.3	n/a	n/a
2.1 Leadership and commitment	5.1	5.1	5.1
2.2 Policy	5.2	5.2	5.2
2.3 Roles, responsibilities and authorities	5.3	5.3	5.3
2.4 Consultation and participation of workers	n/a	n/a	5.4
3.1 Risks & Opportunities	6.1	6.1	6.1
3.2 Objectives	6.2	6.2	6.2
3.3 Managing change	6.3	n/a	n/a
4.1 Resources	7.1	7.1	7.1
4.2 Competence and awareness	7.2 & 7.3	7.2 & 7.3	7.2 & 7.3
4.3 Communication	7.4	7.4	7.4
4.4 Documented information	7.5	7.5	7.5
5.1 Planning	8.1	8.1	8.1
5.2 Emergency response	n/a	8.2	8.2
5.3 Product & service requirements	8.2	n/a	n/a
5.4 Design and development	8.3	n/a	n/a
5.5 Externally provided processes, products and services	8.4	n/a	n/a
5.6 Production and service provision	8.5	n/a	n/a
5.7 Production and service release	8.6	n/a	n/a
5.8 Non-conforming outputs	8.7	n/a	n/a
6.1 Monitoring, measuring, analysis and evaluation	9.1	9.1	9.1
6.2 Internal Audit	9.2	9.2	9.2
6.3 Management Review	9.3	9.3	9.3
7.1 Opportunities for improvement	10.1	10.1	10.1
7.2 Non-conformity and corrective action	10.2	10.2	10.2
7.3 Continual improvement	10.3	10.3	10.3

REVISIONS LIST

REVISON NO.	ISSUE DATE	DESCRIPTION	AUTHD. BY
01	18.08.2017	First issue under integrated Management System to ISO9001:2015, BS 18001:2007 and ISO14001:2015	
02	14.12.2017	Amendments following desk top assessment and ensuring compliance to new ISO standards	
03	23.03.2018	Amendments to align the document with ISO 45001 and new section 2.4	
04	01.06.2018	Amendments as per external assessors comments	
05	25.05.2021	SP13 Underground Services added	

Our Policy:
Safety Health Environment Quality

VertaseFLI is a leading brownfield and contaminated land remediation, enabling and environmental contractor. Our overarching vision is to be recognised as a leader in the industry, respected for both our technical innovation and our ability to deliver. We recognise that the health, safety and welfare of everyone who works for us or is affected by our activities and preventing adverse environmental impact, is critical to the success of our business. We achieve this is by operating an Integrated Management System (IMS) in accordance with ISO 9001, ISO 14001 and ISO 45001. This policy is published and approved by the board of directors to support and promote the company's strategic objectives and targets.

Our **Ambitions** to focus on as a business are:

Zero accidents
Continually increase repeat business
No loss making projects
Delivering all projects on programme
Making this a Great Company to work for
Achieve consistently High service standards

Our **Core Behaviours & Values** as a business are:

Collaborate Together we achieve more
Innovate We aspire to be the best at what we do
Customer Focused We keep our promises
Personal Ownership It starts with you
Value Our People We encourage and support individual growth and happiness

The Company is committed to:

- Satisfying all applicable legal, customer and business requirements and fulfilling its environmental compliance obligations;
- Promoting continual improvement of our IMS and to enhance its customer satisfaction, OH&S and environmental performance;
- Protecting the environment, including the prevention of pollution and injury/ill health to our workforce including organisations working on our behalf.
- Providing information, instruction and training for all employees (including subcontractors/agency staff where necessary as part of the site works). This will be detailed within task specific work instructions/safe systems of work/plan of works developed for each project.
- Communicating to all employees and organisations working for or on our behalf. Those individuals shall cooperate and assist in the implementation of this policy, whilst ensuring their own work, so far as reasonably practicable is carried without risk to themselves, others, or the environment is expected;
- Reviewing this policy annually or in the event of significant change, amending and re-issuing where necessary;
- Making this policy available to interested parties on the Company Website.

We Shall:

- Take accountability for the effectiveness of the IMS;
- Ensure the SHEQ policy and objectives are established and are compatible with the context and strategic direction of the Company and taking into consideration our risks and opportunities. IMS objectives have been set and are maintained as part of the IMS internal auditing, monitoring and management review process;
- Promote the use of a process approach and risk-based thinking;
- Ensure that the resources needed for the IMS are available;
- Communicate the importance of an effective IMS and to ensure that the IMS achieves its intended results;
- Engage, direct and support our people to contribute to the effectiveness of the IMS through various forums;
- Promote continual improvement;
- Support other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility.

Signed on behalf of
The Board of Directors



Steve Edgar
May 2022
Managing Director
VertaseFLI Limited

QuayAudit

Registration Certificate

This certificate confirms that the management systems of

Vertase FLI Limited

at

Number One, Middle Bridge Business Park, Bristol Road, Portishead, Bristol. BS20 6PN & 19 Napier Court Barlborough Links, Barlborough, Sheffield. S43 4PZ

have been audited and approved by Quay Audit UK Ltd to the following management standard(s):

BS EN ISO 9001:2015

The approved management systems apply to the following scope:

Specialising in Brown Field and Contaminated Land Remediation, Enabling and Environmental Contracting Services

This certificate is restricted to those scopes of business activity described in the internationally recognised NACE Codes listed below:

3900

Original Approval: 1 May 2018

Current Certificate: 1 May 2021

Certificate Expiry: 1 May 2024

Certificate Number: 4156401

On behalf of **Quay Audit UK Limited**

REGISTERED MANAGEMENT SYSTEMS BS EN ISO 9001:2015 QUAY AUDIT UK LTD

SCB A (E) ASCB(E) Accrediting Certifying Bodies

QUAY AUDIT UK Ltd

Grove House 8 St. Julian's Friars Shrewsbury Shropshire SY1 1XL | (44)1743 351677 | post@quayaudit.co.uk | www.quayaudit.co.uk

This certificate is authorised for issue by Accreditation Service for Certifying Bodies (Europe) Limited who have assessed Quay Audit UK Limited as a System Assessment Body for compliance with ISO 17021:2015 'Conformity Assessment - Requirements for bodies providing audit and certification of management systems' under a unilateral arrangement with participants. This certificate remains valid while the holder maintains their management systems in accordance with the standards and guidelines stated which will be audited by Quay Audit UK Limited. This certificate is only valid when confirmed by the register listed in the International Register of Quality Assessed Organisations: www.irqao.com

QuayAudit

Registration Certificate

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Vertase FLI Limited

at

Number One, Middle Bridge Business Park, Bristol Road, Portishead, Bristol. BS20 6PN & 19 Napier Court Barlborough Links, Barlborough, Sheffield. S43 4PZ

have been audited and approved by Quay Audit UK Ltd to the following management standard(s):

BS EN ISO 14001:2015

The approved management systems apply to the following scope:

Specialising in Brown Field and Contaminated Land Remediation, Enabling and Environmental Contracting Services

This certificate is restricted to those scopes of business activity described in the internationally recognised NACE Codes listed below:

3900

Original Approval: 1 May 2018

Current Certificate: 1 May 2021

Certificate Expiry: 1 May 2024

Certificate Number: 4156402

REGISTERED MANAGEMENT SYSTEMS BS EN ISO 14001:2015 QUAY AUDIT UK LTD

SCB A (E) ASCB(E) Accrediting Certifying Bodies

On behalf of **Quay Audit UK Limited**

QUAY AUDIT UK Ltd

Grove House 8 St. Julian's Friars Shrewsbury Shropshire SY1 1XL | (44)1743 351677 | post@quayaudit.co.uk | www.quayaudit.co.uk

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QuayAudit

Registration Certificate

This certificate confirms that the management systems of

Vertase FLI Limited

at

Number One, Middle Bridge Business Park, Bristol Road, Portishead, Bristol. BS20 6PN & 19 Napier Court Barlborough Links, Barlborough, Sheffield. S43 4PZ

have been audited and approved by Quay Audit UK Ltd to the following management standard(s):

BS EN ISO 45001:2018

The approved management systems apply to the following scope:

Specialising in Brown Field and Contaminated Land Remediation, Enabling and Environmental Contracting Services

This certificate is restricted to those scopes of business activity described in the internationally recognised NACE Codes listed below:

3900

Original Approval: 1 May 2018

Current Certificate: 1 May 2021

Certificate Expiry: 1 May 2024

Certificate Number: 4156403

REGISTERED MANAGEMENT SYSTEMS BS EN ISO 45001:2018 QUAY AUDIT UK LTD

SCB A (E) ASCB(E) Accrediting Certifying Bodies

On behalf of **Quay Audit UK Limited**

QUAY AUDIT UK Ltd

Grove House 8 St. Julian's Friars Shrewsbury Shropshire SY1 1XL | (44)1743 351677 | post@quayaudit.co.uk | www.quayaudit.co.uk

This certificate is authorised for issue by Accreditation Service for Certifying Bodies (Europe) Limited who have assessed Quay Audit UK Limited as a System Assessment Body for compliance with ISO 17021:2015 'Conformity Assessment - Requirements for bodies providing audit and certification of management systems' under a unilateral arrangement with participants. This certificate remains valid while the holder maintains their management systems in accordance with the standards and guidelines stated which will be audited by Quay Audit UK Limited. This certificate is only valid when confirmed by the register listed in the International Register of Quality Assessed Organisations: www.irqao.com

Appendix B

Air Quality Statement, Noise & Vibration Statement

Wardell Armstrong
41-50 Futura Park, Aspinall Way, Middlebrook, Bolton, BL6 6SU, United Kingdom
Telephone: +44 (0)1942 260101 www.wardell-armstrong.com

Our ref: LD10162/SKL/MTW/AQA-001 *Date*: 7th January 2021
Your ref:

Keiron Moore
Your Housing Group
Apex House
266 Moseley Road
Manchester
M19 2LH

Dear Keiron,

Ten Acres Lane, Newton Heath Remediation Phase – Air Quality Statement

Wardell Armstrong LLP has been instructed to provide an air quality statement for the remediation phase of the proposed development site situated off Ten Acres Lane, Newton Heath. To the north, the site is bound by the Leeds-Liverpool Canal with industrial premises and residential dwellings beyond. To the east, the site is bound by residential dwellings. To the south and west, the site is bound by residential dwellings, Briscoe Lane Academy School, Ten Acres Lane Sports Complex and Ten Acres Lane.

This air quality statement discusses the potential for air quality impacts during the remediation phase of the proposed development site. Specifically, the statement considers pollutant emissions from (i) vehicles travelling to and from the site to support the remediation works and (ii) the remediation activities themselves.

Emissions from Supporting Traffic
The Institute of Air Quality Management (IAQM) has published indicative screening criteria for when an air quality assessment may be required[1]. Given that the proposed development site is situated close to the Greater Manchester Air Quality Management Area, declared for exceedance of the annual air quality objective, the relevant criteria for the remediation phase of the proposed development are as follows:

- A change of ≥100 LDV (vehicles less than 3.5 tonnes in weight) AADT; or
- A change of ≥25 HDV (vehicles greater than 3.5 tonnes in weight) AADT.

A review of the Transport Statement for the remediation phase of the proposed development site has been undertaken. With regard to traffic generation, the Transport Statement provides the following worst-case scenario breakdown for peak daily vehicle movements associated with the remediation phase:

[1] Institute of Air Quality Management, Land-Use Planning and Development Control: Planning for Air Quality, January 2017

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UK Offices: Stoke-on-Trent, Birmingham, Cardiff, Carlisle, Edinburgh, Glasgow, Greater Manchester, Central Manchester, London, Newcastle upon Tyne, Sheffield, and Truro. International Offices: Almaty and Moscow.

ENERGY AND CLIMATE CHANGE
ENVIRONMENT AND SUSTAINABILITY
INFRASTRUCTURE AND UTILITIES
LAND AND PROPERTY
MINING AND MINERAL PROCESSING
MINERAL ESTATES
WASTE RESOURCE MANAGEMENT

Peak Daily Remediation Trips – All Vehicles		
Vehicle/Delivery Description	**Arrivals**	**Departures**
HGV Low Loaders & Hiab Trucks	5	5
HGV Stone Deliveries	2	2
Contractor Car Trips	15	15
Total	**22**	**22**
	44	

* Table taken from the Transport Statement prepared by Vectos (report ref. VN201804)

The peak daily trip data outlined in the table above indicates that the traffic generated throughout the remediation phase will fall below the aforementioned IAQM air quality assessment screening criteria. Therefore, it is considered that any potential impacts on local air quality will be not significant.

Emissions from the Remediation Activities

It is considered that the required risk assessment for the remediation strategy, to be completed by the appointed remediation contractor, will comprise the primary method by which the potential risks associated with dust and pollutant emissions to air during the remediation phase will be determined. In addition, the risk assessment should determine where appropriate mitigation is required. It is considered that detailed approval of the remediation strategy, and associated risk assessment, will be secured by way of a condition.

Example dust suppression measures[2], which could be included within the remediation strategy (subject to the approval of the appointed remediation contractor), are as follows:

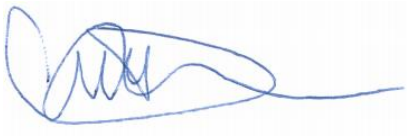
- Protection of surfaces and exposed material from winds until disturbed areas are sealed and stable;
- Avoidance of activities that generate large amounts of dust during windy conditions;
- Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper to be in use continuously;
- Ensure vehicles entering and leaving the site are covered to prevent escape of materials during transport;
- Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable);
- Minimisation of vehicle movements and limitation of vehicle speeds – the slower the vehicle speeds, the lower the dust generation;
- Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever the site size and layout permits; and
- Access gates to be located at least 10m from receptors, where possible.

[2] Institute of Air Quality Management, Guidance on the Assessment of Dust from Demolition and Construction, June 2016

All dust and air quality complaints should be recorded and appropriate measures be taken to identify causes, and reduce emissions, in a timely manner. Exceptional incidents which cause dust and/or emissions, and the action taken to resolve the situation, should be recorded in a logbook and made available to Manchester City Council on request.

Yours sincerely
for Wardell Armstrong LLP





DR STEVEN LEES
Associate Director (Air Quality)
slees@wardell-armstrong.com

PP **MALCOLM WALTON**
Technical Director
mwalton@wardell-armstrong.com

Wardell Armstrong
41-50 Futura Park, Aspinall Way, Middlebrook, Bolton, BL6 6SU, United Kingdom
Telephone: +44 (0)1942 260101 www.wardell-armstrong.com

Our ref: LD10162/RC/CMD/AQA-002 *Date*: 18th December 2020
Your ref:

Mr Kieron Moore
Your Housing Group
Apex House
266 Moseley Road
Manchester
M19 2LH

Dear Kieron,

Ten Acres Lane, Newton Heath Remediation Phase – Noise and Vibration Statement

Wardell Armstrong LLP has been instructed to provide this statement in relation to the potential noise and vibration impact of remediation works required on the former Jacksons Brickworks Site, situated off Ten Acres Lane, Newton Heath.

The site is intended to be redeveloped for residential use, however it is understood that the site has previously been used for a variety of purposes and contains some ground contamination which must be remediated before the site can be developed for residential use.

This statement discusses the potential for noise and vibration impacts during the remediation phase of the proposed development. Specifically, this statement considers noise and vibration emissions from.

- Vehicles travelling to and from the site to support the remediation works.
- The remediation activities themselves.

To the north, the site is bound by the Leeds-Liverpool Canal with industrial premises and residential dwellings beyond. To the east, the site is bound by residential dwellings. To the south and west, the site is bound by residential dwellings, Briscoe Lane Academy School, Ten Acres Lane Sports Complex and Ten Acres Lane.

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MINERAL ESTATES
WASTE RESOURCE MANAGEMENT

Noise from Road Traffic Associated with the Remediation Phase

Vehicle movements to and from the proposed development site have the potential to generate noise at sensitive receptors in the immediate vicinity of the local road network.

Construction road traffic will access the site via Ten Acres Lane and is likely to head northwards onto the A62 Oldham Road. Ten Acres Lane is a main road with significant existing traffic flows and is fronted by a small number of existing dwellings. The A62, Oldham Road, is a busy main road with high existing flows.

Because of the large existing traffic flows on the major roads near to the site, the number of vehicles associated with the remediation stage is not likely to be significant. It is therefore considered that the level of road traffic noise at sensitive receptor locations will not change perceptibly with the inclusion of vehicles associated with the remediation stage. Noise from construction traffic has not, therefore, been considered further.

Noise and Vibration Emissions from the Remediation Activities

Guidance on the assessment of noise and vibration from development sites is given in British Standard 5228:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites – Parts 1 and 2.

The activities associated with the remediation phase of the development have the potential to generate noise and vibration and create an impact at sensitive locations in the surrounding area. Noise and vibration during the remediation phase can have disturbing effects on the surrounding neighbourhood. The effects are varied and are complicated further by the nature of the site works, which will be characterised by noise and vibration sources which will change location throughout the remediation works. The duration of the remediation works is also an important consideration. Higher noise and vibration levels may be acceptable if it is known that the levels will occur only for a limited period.

Detailed information regarding the nature and timescales of activities which are likely to take place during the remediation works are not known at this stage. However, activities on the site that could give rise to construction related noise and vibration impacts include (but are not limited to) the following.

- Ground excavation.
- Levelling of ground.
- Treatment and screening of excavated material.
- Unloading and levelling of material and compacting filling.

The nearest existing noise sensitive receptors to the proposed development will vary depending on the works being undertaken. Given the distances between the remediation activities and residential dwellings, noise and vibration levels at the existing noise sensitive receptors may occasionally cause an adverse impact.

Therefore, mitigation measures are recommended to reduce noise and vibration, at receptors, from the remediation stage.

To reduce noise emissions during the remediation stage we recommend that the following measure are implemented.

- Construction works should be restricted to daytime hours to between 0700 and 1800 hours Monday to Friday and between 0700 and 1300 hours on a Saturday, with no noisy work permitted on Sundays or Bank Holidays.
- When works are taking place close to the sensitive receptors identified, the screening of noise sources via the erection of temporary screens will be employed.
- All machinery will be regularly maintained to control noise emissions, with particular emphasis on lubrication of bearings and the integrity of silencers.
- Site staff will be made aware that they are working adjacent to a sensitive area and avoid all unnecessary noise due to misuse of tools and equipment, unnecessary shouting, and radios.
- As far as possible, the avoidance of two noisy operations occurring simultaneously in close proximity to the same sensitive receptor.
- Ensure engines are turned off when possible.

It is not realistically possible to mitigate vibration emissions from an open site. Therefore, it is important to examine the proposed working method to ascertain what, if any, operations might cause unacceptable levels of vibration at nearby sensitive locations. Where this is likely to occur, prior warning to residents and/or alternative methods of working should be considered.

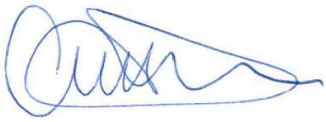
We recommend that a Construction Environmental Management Plan (CEMP), including a noise management plan, is prepared to set out the methods of control of noise and vibration emissions from the site.

We trust that the information contained in this letter is clear, however, please do not hesitate to contact me should you require anything further

Yours sincerely

for Wardell Armstrong LLP





RICHARD CALVERT
Associate Director (Acoustics)
rcalvert@wardell-armstrong.com

MARK DAWSON
Technical Director
mdawson@wardell-armstrong.com

Appendix C

Learning & Development Policy

LEARNING & DEVELOPMENT POLICY

Policy
The learning and development of all employees forms a critical part of VertaseFLI's (hereafter referred to as the Company) success, enhancing performance and the provision of a quality service/ product. The Company provides a platform which enables employees to realise their full potential, encouraging personal development to those who show a willingness to learn and take on new roles and responsibilities. Appropriately qualified employees are paramount to the success of the business. This is achieved via the natural process of recruitment, induction, performance management and review, and learning and development.

Development opportunities are available to all employees on a fair and equal basis, no employee receives less favourable treatment or consideration on the grounds of disability, race, colour, religion, religious belief, nationality, ethnic origin, sex, sexual orientation, age or marital status.

Induction
Induction of new employees is vital, not only does it ensure that new employees are welcomed into the business, but also ensures that they gain a better understanding of the nature of the business and their contribution to it. During the induction process vital aspects of the business are highlighted:

- Employee Handbook and general company policies and procedures.
- Integrated Management System (IMS) including Health and Safety processes and procedures.

As part of the induction process, we will identify any immediate training/learning requirements.

Development Review
An employee development review is undertaken annually. The process is very much two way; to assist the company to manage development of employees. Specific learning/training requirements will be established at each development review for the coming year using a development plan which is monitored throughout the year. The company encourages regular follow up reviews between Managers and employees to review their Development Plans and discuss ongoing performance.

Learning and Development
Learning and development can be achieved via many different methods including but not restricted to:

- external training courses and seminars;
- internal training courses and seminars;
- further academic studies and qualifications which may be sponsored by the company;
- membership of professional bodies;
- access to technical literature;
- coaching and mentoring either by Managers or other colleagues in the Company; and

- job changes.

Any learning and development opportunities/ requests should be discussed with the People & Culture Director in the first instance.

The HR team manages a learning and development database detailing all employees qualifications.

Fees
Please note, where the company has paid all or a proportion of an employee's college, examination training or subscription fees or payments similar to these, and the employee's employment ends within 1 year of payment of such fees, the Company may recover from the employee the amounts it has paid within that 1 year period. The Company will seek reimbursement of the costs in line with the Training Agreement. Further details are available from the HR team.

Signed on behalf of VertaseFLI Limited



Trevor Snell, FLI Group Managing Director
Reviewed: January 2022

Appendix D

IMS Site File Example

SITE OPERATION FILE INDEX

Contract Title: ..... Contract Number: .....

Site Address: ..... Post Code: .....

Client: .....

Section		File No
1.	Remediation Method Statement	File 1
2.	Correspondence (Client & Agents)	File 1
3.	Regulatory Correspondence	File 1
4.	CPP	File 2
5.	Meetings – Minutes and Notes	File 3
6.	Drawings	File 4
7.	Supplier & Subcontractor (quotes, rates & orders, delivery notes)	File 5
8.	Communication with Utilities, Stakeholders & General Public	File 6
9.	Additional Site Investigation and Testing	File 7
10.	Health and Safety	
	10.1 RAMS and COSHH	File 8
	10.2 Plant	File 9
	10.3 Induction	File 10
	10.4 Accident / Incident Records	File 11
	10.5 LOLER / PUWER	File 12
	10.6 Inspections / Fire RA & Checks	File 13
	10.7 Temporary Works	File 14
	10.8 Asbestos (If Applicable)	File 15
	10.9 Daily Briefing / TBT's / Attendance records	File 16
11.	Environmental Records	File 17
12.	Site Diary Records	File 18
13.	Other (expand file index as necessary	

Note: Should the project be a short term or small then the files should be merged and indexed as appropriate.

SITE OPERATION FILE INDEX

Section

1. Remediation Method statement

1.1 Remediation Method / Strategy
1.2 Clients Specification
1.3 Remediation Strategy Approval

2. Correspondence (Client / Agent)

2.1 Project Personnel Contact details
2.2 Incoming Mail
2.3 Outgoing Mail
2.4 Client to/from
2.5 Engineer to/from

3. Regulatory Documentation

3.1 Environmental Permit / Deployment form
3.2 Landfill tax exemption
3.3 Discharge consent
3.4 Demolition Consent / Section 80 Notice / Asbestos Survey
3.5 EA Hazardous Waste Registration (for sites in Wales only)
3.6 Fire Petroleum Officer

4. CPP (Construction Phase Plan)

4.1 Construction Phase Plan
4.2 CDM 2015
4.3 F10
4.4 Project Programme / Site Layout Drawings / Utility Drawings
4.5 Design Risk Assessment and Planning Information
4.6 List of Appointed Sub-contractors
4.7 H&S-0000 (Site H&S Forms List)
4.8 Site Rules and Emergency Procedures
4.9 STMP (Site Traffic Management Plan)
4.10 Insurance Certificate

5. Meeting Minutes and Notes

5.1 Client
5.2 Regulator
5.3 Progress Meeting
5.4 Site H&S Meeting

6. Drawings

6.1 Drawing Register
6.2 Contract Drawings / Sketches
6.3 VertaseFLI Drawings / Sketches
6.4 Dilapidation Report & Drawings
6.5 OGL Survey & Drawings

7. Supplier / Sub-contractor (Quotes / Rates / Orders / Delivery Notes

8. Communication

8.1 Utility Providers
8.2 Stakeholders
8.3 General Public

9. Additional Site Investigation and Testing

9.1 Site Investigation Data
9.2 Validation Data
9.3 Environmental Monitoring
9.3.1 Groundwater Results
9.3.2 Gas Monitoring Results

10.Health & Safety

10.1 RAMS and COSHH
10.2 Plant Register and Certifications
10.3 Induction Register and Records
10.4 Accident / Incident Records
10.5 LOLER / PUWER Register and records
10.6 Inspections (SM / Excavation / Fire / First Aid)
10.7 Temporary Works (Register / Design / RAMS / Permits)
10.8 Asbestos Records (If Applicable)
10.9 Daily Briefing / TBT's / Attendance Records

11.Environmental Records

11.1 Inert Waste
11.2 Non-hazardous Waste
11.3 Hazardous Waste
11.4 Discharge Consent Records

12. Site Daily Diary Records completed by Site Manager

13.Other

Appendix E

Monitoring Protocols

SOP 002 - STANDARD OPERATING PROCEDURES
WATER QUALITY MONITORING KIT

PURPOSE / BACKGROUND

This standard operating procedure (SOP) covers monitoring of groundwater quality parameters using a Hanna Dissolved Oxygen , pH/ORP/Conductivity/TDS Meters.

These pieces of equipment enables in-field real time analysis of groundwater for a range of parameters including temperature, electrical conductivity, dissolved oxygen, pH and oxidation-reduction potential (commonly abbreviated to Eh or ORP). These parameters are displayed on the screens in several different units.

Analysis is undertaken by either submerging the probes below groundwater in the monitoring well, or more commonly by submerging the probe below purged water contained in a bucket or a apparatus called a flow-through cell. Flow through cells reduce introduction of oxygen into the water and ensure readings are taken from freshly purged groundwater whilst ensuring the continuous flow of water past the sensors.

Recorded parameters may be used to indicate whether biochemical processes are likely to be occurring in the groundwater by determining whether the water is aerobic (generally considered to be >0.5mg/l dissolved oxygen) or anaerobic (<0.5mg/l DO) and whether conditions are reducing or oxidising (low or high ORP). The spatial variation of these parameters along with the variation in temperature and pH can be used to map organic (e.g. TPH and solvent) contaminant plumes in aquifers if biodegradation processes are occurring. Electrical conductivity may be used to determine whether purged water from different monitoring wells is being abstracted from the same aquifer unit and salinity can be used to map freshwater / saline water interfaces and characteristics.

GENERAL INSTRUCTIONS

1. This SOP provides sequential instructions which should be undertaken in the correct order.
2. The method of purging (i.e. down hole, in bucket at surface, using flow-through cell, using submersible pump or Waterra tubing etc) and any visual and olfactory evidence (e.g. methanogenic odour, free product) should be noted.
3. Monitoring undertaken by placing the probe directly down the well is considered less favourable to purging the groundwater to the surface due to the potential for cross contamination (use of decontamination detergents on sensors are likely to lead to erroneous readings) and the likelihood of exposing the probe above groundwater level when water is purged from the well.

TOOLS, MATERIALS AND EQUIPMENT

- Groundwater purging equipment (e.g. submersible or peristaltic pump and tubing, battery).
- Bucket or flow-through cell.
- Water monitoring kit
- PPE appropriate for groundwater monitoring - disposable gloves, safety boots, high visibility jacket and overalls as a minimum.
- Data record sheet and/or pre-set datalogger.



LIMITATIONS OF METHOD	
1.	The units require regular calibration. Dissolved oxygen must be calibrated by the operator in the field on a daily basis and this process can be affected by changes in temperature and pressure.
2.	The sensors on the probes can be affected by a build up of sediment, algae or free product (LNAPL) which can lead to inaccurate readings. The membrane on the DO meter may be damaged easily.
3.	Readings may be affected by the introduction of oxygen into the water and associated changes in chemistry at the surface when the water is exposed to the atmosphere.
4.	Readings should be recorded when water is flowing past the sensors which is not always possible if the well is purged dry due to the rate of purging relative to the rate of recharge in the monitoring well.

PREPARATION	
1.	The equipment should be checked prior to each visit to site to ensure that it is in a good state of repair, fully operational and that calibration certificates will be valid at the time of monitoring. Sensors on the probes should be clean.
2.	The dissolved oxygen meter membrane should be changed if the unit has not been used for approximately one month by unscrewing the plastic dissolved oxygen (DO) cap, gently sanding the silver electrode until shiny with 'wet and dry' paper and rinsing the electrode with KCl electrolyte solution. A new plastic membrane cap is then filled up to the screw thread with electrolyte solution and the cap is placed back over the silver electrode and screwed finger tight.
3.	DO must be calibrated in the field daily as per the manufactures instruction. This is generally by placing a few millimetres of water into the plastic calibration cup, removing the metal probe sensor guard and placing the probe over the calibration cup loosely or with one screw thread engaged and left for at least 20 minutes with the unit turned on. Water in the calibration cup must not be covering any of the probe sensors. The probe should ideally be calibrated at a similar temperature to the groundwater (i.e. in a cool place if possible). The main display screen is should display the DO% which should not be fluctuating significantly (up to say 0.2% is usual) when the probe and calibration cup are gently agitated (ensuring humid air inside the container is not allowed to escape and fresh less humid air is not accidentally allowed to enter). Follow the manufacturer's unit operational system to 'Calibrate' the DO reading changes to 99.9%. If this value fluctuates significantly whilst the probe remains in the calibration cup and is gently agitated then the procedure should be repeated. . Several attempts at calibration may be required before readings do not fluctuate significantly. Once the unit is calibrated, screw the metal probe sensor guard onto the probe head.
4.	Calibration of the pH meter should be undertaken weekly if the kit is used regularly during the week or upon each use if the kit is used infrequently. Follow manufactures instruction calibration can be a 1 or 2 point calibration. .
5.	Calibration of the conductivity meter should be undertaken weekly if the kit is used regularly during the week or upon each use if the kit is used infrequently. Follow manufactures instruction and use calibration solution reflective of the conductivity anticipated on the water to be tested to give the highest accuracy for the site conditions e.g. Saline or brackish water use a high concentration calibration solution.
6.	If sensors are left open to the atmosphere for long periods of time then they can dry and become damaged. The probe head should therefore be submerged in water if it is not going to be used for several hours or the calibration cup should be screwed onto the probe with a damp piece of tissue in the bottom.

PROCEDURE

1. Ideally the probes will be used with a flow through cell and low flow pump for more information see *SOP007*.
2. Assuming water is being purged into a bucket, place the probe into the bucket and start purging the water. Purging should ideally be done using a high flow pump (e.g. submersible or peristaltic pump) and the outflow tubing should be placed in the base of the bucket below water level (to avoid introduction of oxygen into the water) and so that it is flowing through the sensor guard past the sensors. The sensors on the probe must remain below the water level. Allow the water to flow out of the bucket into another receptacle if necessary to ensure readings are taken from water which is representative of that within the aquifer.
3. Observe the change in readings on the display and when they settle out, either record the values using the instrument datalogger (this can be set to record readings at regular intervals if desired) or manually. It typically takes around five minutes for values to settle out although the ORP and DO are typically less stable and will continue to fluctuate to some extent. Readings should ideally be recorded when water is flowing past the probe and air bubbles should not be flowing in to the purged water (e.g. due to a hole in the pipe). If the well is purged dry then the probe should be agitated gently or slowly stirred in the purged water, ensuring the sensors remain below the water level and avoiding introduction of air bubbles into the water. This is because the DO sensor utilises oxygen so will reduce the concentration of DO in the water immediately surrounding the sensor. It should be noted on the record sheet if values were recorded using standing water as results are likely to be less accurate.
4. When monitoring is completed, unscrew any probe guards and clean the glass bulbs on the pH / ORP sensors using a damp tissue or cloth to remove any sediment. The temperature, salinity and electrical conductivity sensor should be cleaned. Contact with the DO sensor is likely to lead to damage of the plastic membrane and should therefore be avoided. The DO membrane should be replaced if it appears damaged or soiled.
5. Place a damp piece of tissue or cloth into the probe caps/covers to prevent the sensors from drying out.

RECORDS AND DOCUMENTATION

1. Monitoring results to be recorded on standardised form (or field notebook). If a data logger is used then readings should also be recorded manually.
2. Date and time of attendance on site.
3. Method of purging (e.g. bucket and submersible pump) should be recorded.
4. Any visual and olfactory evidence should be noted along with any additional information such as whether the well was purged dry and whether readings had to be recorded when water was not flowing past the sensors (in standing water).

SOP 005 - STANDARD OPERATING PROCEDURE GROUNDWATER SAMPLING

PURPOSE

This standard operating procedure (SOP) covers the standard procedure for sampling groundwater monitoring wells.

This can include the use of depth samplers (bailers), submersible pumps, and peristaltic (surface) pumps, for simple and short-term sampling.

It does not include specialist sampling methods for complex groundwater contamination scenarios (e.g. free product sampling, dissolved gas sampling, long term monitoring, natural attenuation studies and remediation validation). Specialist advice should be sought in such circumstances.

GENERAL INSTRUCTIONS

1. This SOP provides sequential instructions which should be undertaken in the correct order.
2. If the sequence of instructions can not be completed as described, the Vertase FLI Project Lead should be informed so that amendments can be made or steps can be clarified.

TOOLS, MATERIALS AND EQUIPMENT

- Borehole Location Plan
- Tools for opening installation covers (Bring a wide variety)
- Dipmeter or interface probe where appropriate
- Water sampling devices:
  - Bailers – (clean bailers and bailer cable (dedicated for each well)
  - Battery to power pump
  - Peristaltic pump (dedicated silicone & plastic tubing in correct diameter)
  - Submersible pump – (Whale Pump or Bladder Pump)
- Multi-parameter probes and flow-thru cells if required
- Gas analyser if required
- Notebook to record dip, parameters and observations
- Appropriate water sample containers
- Stickers to label containers without lab labels
- Fine marker pen to label samples.
- Cool boxes (with ice packs)
- Bubble wrap and parcel tape
- Chain of custody forms
- Paper to label coolbox
- PPE - disposable gloves, safety boots, safety glasses & high vis jacket as a minimum

PREPARATION

1. Access to site should be agreed in advance with relevant people (site owners, client etc).
2. Site Engineers should have received site specific H&S induction by Site Managers.
3. Permits to Work should be obtained in advance, where required (to be advised by Site Manager).
4. Ground water conditions should be assessed prior to attending site to determine the type of pump required / length of tubing. It is advisable to look at borehole logs to determine expected depth to groundwater, geology, slotted pipe placement and depth to base.
5. The aforementioned equipment should be checked prior to each visit to site to ensure that it is in a good state of repair and fully operational. Any faults should be reported promptly to the equipment supervisor.

PROCEDURE

1. Do a last minute risk assessment/TBRA that it is safe to work prior to each borehole location. Use cones to mark your working area if required. Place all equipment in a tidy manner to avoid trips.
2. If specific gas monitoring readings are required these are to be obtained before removing the bung for groundwater sampling. Close the gas valve after taking a reading.
3. Where there is cause for concern over volatile organic compounds (VOCs) an initial organic vapour reading can be taken using a Photo Ionisation Detector (PID) prior to removal of the gas valve;
4. Prior to groundwater sampling, preferably following completion of the well installation, each groundwater monitoring installation should be cleaned and developed to settle packing materials, and to allow free flow of liquids to and through the well screen, in addition to removing any fluids which may have been introduced into the borehole during drilling. This can be achieved by removing 3 well volumes of water. This may also be required prior to routine sampling, particularly if there is a long interval between installation and sampling.
5. If specific gas monitoring readings are required these are to be obtained before removing the bung. Close the valve in the bung after the reading has been taken.
6. Where there is cause for concern over volatile organic compounds (VOCs) an initial organic vapour reading can be taken via the gas valve using a Photo Ionisation Detector (PID) prior to removal of the bung.
7. Prior to purging water from the well, the depth to the surface of the groundwater / free product should be measured using a dip meter / interface probe. Measure depth to base. State if the measurement is from ground level, top of riser (north edge) or top of casing. Best practice to record all three.
8. Where the presence of free product is suspected an oil / water interface probe should be used to determine its thickness as detailed in the appropriate method statement. Where encountered obtain a sample of free product using a bailer lowered gently into the water column.
9. Calculate the volume of water in the well using the formula:

   $\square$ x (borehole radius)^2 x groundwater thickness = $\square r^2 h$
10. Once the volume of the water standing in the borehole has been calculated the well may be purged. This entails removing a minimum of three water well volumes using pumps or bailers as appropriate. Best practice is to use a low flow pump and monitor in-situ parameters. Sample when parameters stabilise. Minimum of one purged well volume.
11. The amount of water to be purged is ultimately dependent upon the well yield. If it is not possible to continuously pump, or the well is bailed dry, then the well will be allowed to recover for approximately 1 hour, and a sample recovered using a bailer.
12. Purged volumes should be measured by placing the discharged groundwater into a container. (It is recommended that this water is retained until a water sample from the purged well has been recovered - an unpurged sample is better than no sample).
13. Purged groundwater should be disposed of in a manner agreed with the landowner and appropriate for any known / suspected contamination. A water container will be needed to collect purged water within buildings. Direct discharge of purge water onto outdoors ground surface may be permissible dependent on chemistry of groundwater and soil.

RECORDS AND DOCUMENTATION

1. Date and time of attendance of site.
2. All monitoring data should be clearly recorded, together with the date and reference to the project number in a field notebook. Comments on any odour, sheens, colours, silt content etc should also be recorded.
3. During purging, a record of the field parameters should also be kept.
4. All samples should be clearly and unambiguously labelled with job number, sample location, client, date etc.
5. Chain of custody (COC) forms must be completed for all samples. Each suite of analysis should be entered onto the COC form.
6. If sending a consignment of more than one box, each box must have it's own COC form
7. Any H&S related incidents (slips, trips, falls etc).
8. Permits to Work and site inductions, where applicable.
9. All operatives associated with the work are to be given a tool box talk to describe the content of this SOP and related documentation and sign a register to acknowledge that they have received such instruction and understand the method and health and safety issues related to the task.

SOP 006 - STANDARD OPERATING PROCEDURE
GROUNDWATER LEVEL MONITORING

PURPOSE

This standard operating procedure (SOP) covers water level monitoring using an electrical contact dip meter.

It is used to determine groundwater levels in boreholes within monitoring installations.

GENERAL INSTRUCTIONS

1. This SOP provides sequential instructions which should be undertaken in the correct order.
2. If the sequence of instructions can not be completed as described, the Vertase FLI Project Lead should be informed so that amendments can be made or steps can be clarified.
3. This SOP should be read in conjunction with any other SOP's that are applicable to the works being undertaken.

TOOLS, MATERIALS AND EQUIPMENT

- Borehole Location Plan.
- Tools for opening installation covers.
- Electrical contact dip meter / interface probe



- PPE - disposable gloves, safety boots and overalls as a minimum.

LIMITATIONS OF METHOD

Although most new dip meters will contain a metal cord throughout their length to prevent stretching, it should be noted that many older dip meters will not. Careless use and storage of a dip meter can lead to stretching of the measuring tape and result in inaccurate measurements. It is always best to use the same dip meter for each monitoring visit to a particular site to ensure that all measurements for that site are relative and consistent. It is difficult to calibrate the tape on a dip meter as any stretching could have occurred at any point on the tape. As a rough guide a metal rule could be used to calibrate short lengths along the tape, but if stretching is suspected then the dip meter should be replaced.

Always ensure the tape starts at zero as tapes could have been 'repaired' resulting in a shortened tape.

PREPARATION

1. Access to site should be agreed in advance with relevant people (site owners, client etc).
2. Site Engineers should have received site specific H&S induction by Site Managers.
3. Permits to Work should be obtained in advance, where required (to be advised by Site Manager).
4. Ground water conditions should be assessed prior to attending site to determine the type of pump required / length of tubing. It is advisable to look at borehole logs to determine expected depth to groundwater, geology, slotted pipe placement and depth to base.
5. The aforementioned equipment should be checked prior to each visit to site to ensure that it is in a good state of repair and fully operational. Any faults should be reported promptly to the equipment supervisor.
6. The equipment supervisor is responsible for the aforementioned equipment which should be checked prior to each site visit to ensure that it is in a good state of repair, fully operational (i.e. fully charged) and that calibration certificates, where appropriate, will be valid at the time of monitoring.

PROCEDURE

1. Gain access to the borehole and identify the datum. The datum is the point from which water levels are measured from, it could be ground level, the top of the borehole liner, the top of borehole headworks or something else. If you don't know where the datum is, measure the differences between all possible datums to allow the correct dip to be calculated once back in the office.
2. Lower the probe until it reaches the water surface, which is indicated as a continuous alarm sound and/or a light signal. Move the probe slightly up and down until it is located exactly in the air/water interface, the depth to the interface is then read from the tape at the datum and recorded in a notebook.
3. Dip the base of the monitoring point. Lower the dipper to the base (tape goes slack), slowly raise the dipper. The dipper is measuring the depth to base at the instant the tape loses its slackness upon removal.
4. Check the measurements against previous monitoring (if any) and repeat the measurement in case of major differences.
5. When retrieving the probe, check for any indication of contamination such as smearing of the probe or odours.

RECORDS AND DOCUMENTATION

1. Monitoring results to be recorded in field note book or on standardised form.
2. Date and time of attendance of site.
3. Any H&S related incidents (slips, trips, falls etc).
4. Permits to Work and site inductions, where applicable.
5. All operatives associated with the work are to be given a tool box talk to describe the content of this SOP and related documentation, and sign a register to acknowledge that they have received such instruction and understand the method and health and safety issues related to the task.

SOP 018 - STANDARD OPERATING PROCEDURES FOR DUST MONITORING USING ADHESIVE STRIPS

PURPOSE

This standard operating procedure (SOP) covers the standard procedure for dust monitoring using adhesive strips.

Dust is monitored for both environmental purposes and health and safety.

The most popular soling rate measurement method is the Sticky Pad system which measures the soiling of a white adhesive surface over a known period and gives a measurement of the deposition (as percentage Effective Area Coverage (%EAC) per day) using a reflectometer. The prevailing dust source direction can also be assessed.

GENERAL INSTRUCTIONS

1. This SOP provides sequential instructions which should be undertaken in the correct order.
2. If the sequence of instructions can not be completed as described, the Vertase FLI Project Lead should be informed so that amendments can be made or steps can be clarified.

TOOLS, MATERIALS AND EQUIPMENT

- Compass (to ensure north is marked correctly on the gauge)
- Tripod to fix the adhesive strip to.
- Electrical tape to attach adhesive strip to tripod.
- Adhesive strips (20cm x 5cm)
- Zip lock bags
- Temporary fencing (eg: road pegs and netlon)

LIMITATIONS OF METHOD

The primary purpose of the adhesive dust strips is to assess the nuisance from deposited or wind-blown dust particles.

The method is susceptible to losing dust in heavy rain. This is precisely what happens to cars, window sills, etc in similar situations, it can be regarded as an acceptable method of assessing perceived dust nuisance.

If the sticky pad is exposed for too long it can become saturated with dust, since new dust will not stick on top of dust already trapped. Suitable exposure periods are usually between 2 and 7 days.

The adhesive strip is often attached to a frizbee gauge which collects dust on a disk and is washed into a container via rainwater. Seasons will determine if one or both methods should be used.

PREPARATION

An appropriate number of monitoring positions are required, this number depends on the size of the site and how sensitive the receptors are.

When the locations have been determined, set the tripod up and mark on the adhesive strip the northern direction by cutting a small notch. Wrapping the strip around a cylinder will allow for dust direction to be determined.

PROCEDURE

1. Remove backing paper from the unused adhesive strip and place onto tripod. Ensure the 'v' shaped notch cut in the strip is aligned to the north point on the gauge.
2. Once the determined number of days has passed, remove the adhesive strip from the tripod stand and place backing paper over the adhesive surface to prevent further contamination. Place in zip lock bag and clearly label.
3. Before returning to laboratory for analysis, mark on the back of the adhesive strip:
    - i) sample site
    - ii) sampling location
    - iii) date strip exposed and date strip collected

RECORDS AND DOCUMENTATION

1. Complete pro forma with the following information and send the adhesive strip to the laboratory for analysis:
    - I) sample site
    - II) sampling location
    - III) date strip exposed and date strip collected
2. Note when the adhesive strips need changing.

SOP 020 - STANDARD OPERATING PROCEDURES FOR ODOUR MONITORING USING OLFACTORY METHODS

PURPOSE

This standard operating procedure (SOP) covers the standard procedure for odour monitoring using olfactory methods and is aligned to the Environment Agency's H4 Guidance.

Odour is monitored for both environmental monitoring purposes and health and safety.

GENERAL INSTRUCTIONS

1. This SOP provides sequential instructions which should be undertaken in the correct order.
2. If the sequence of instructions can not be completed as described, the Vertase FLI Project Lead should be informed so that amendments can be made or steps can be clarified.
3. This SOP should be read in conjunction with any other SOP's that are applicable to the works being undertaken.

TOOLS, MATERIALS AND EQUIPMENT

- Access to weather monitoring programme data.
- Site drawing of monitoring locations marked.
- *VFLI ENV.006-Odour Assessment Form* – Issue 1.
- Clipboard.
- Pencil.

ODOUR DESCRIPTION – INTENSITY CATEGORIES

1. An appropriate number of monitoring positions are required this number depends on the size of the site and the sensitivity of the receptors.
2. To ensure monitoring locations stay constant a marker should be placed where possible to indicate the exact monitoring location.
3. Consider all information required to complete the odour assessment form and complete the appropriate sections before entering the field.

ONSITE RECORDED DATA – ATMOSPHERIC STABILITY CATEGORIES

Category	Stability	Dispersion	Occurrence (% time in the year)	Wind Speed (km/hr)	Time of Day	Sunshine or cloud cover
A	Very unstable	Very good	<1	<5	Day time only	Strong sunshine. Most common in the summer.
B	Unstable	Good	5 – 10	7 to 18	Day time only	Slight to moderate sunshine

C	Slightly unstable	Moderate	20	>7	Mainly day time	Moderate sunshine
D	Neutral	Moderate	45 - 60	7 to 29	Day or Night	Sight sunshine or overcast
E	Stable	Poor	5 – 10	7 to 18	Night time only	Clear or overcast
F	Very Stable	Very Poor	10	<11	Night time only	Clear or overcast

ODOUR DESCRIPTION – INTENSITY CATEGORIES	
0	No detectable odour
1	Very faint odour
2	Faint odour (barely detectable, need to stand still and inhale while facing into the wind)
3	Distinct odour (odour easily detectable while walking and breathing normally, possibly offensive)
4	Strong odour (bearable, but offensive odour)
5	Very strong odour (unbearable)
6	Extremely strong odour (likely to induce vomiting due to strength)

ODOUR DESCRIPTION – EXTENT CATEGORIES	
1	Local and non-persistent (only detectable during brief periods when wind drops or blows)
2	Non-persistent as above, but detected away from the site boundary
3	Persistent, but fairly localised
4	Persistent and pervasive up to 50m from the site boundary
5	Persistent and widespread (odour detected >50m from site boundary)

ODOUR DESCRIPTION – SENSITIVITY CATEGORIES	
1	Remote (no housing, commercial/industrial premises or public area within 500m)
2	Low sensitivity (no housing etc within 100m of location)
3	Moderate sensitivity (housing etc within 100m of location)
4	High sensitivity (housing etc within area affected by odour)
5	Extra sensitive (complaints arising from residents within area affected by odour)

PROCEDURE

1.Prior to completing the odour assessment the initial fields must be completed:

- Date
- Name and initials of engineer undertaking assessment
- Start time

2.On site recorded data

- Weather conditions
- General air quality
- Ground condition
- % cloud cover
- General air stability

3. Weather station data

- Temperature
- Wind strength and direction
- Barometric pressure

4.Odour classification by human perception using the following classifications:

- Odour intensity
- Odour extent
- Location sensitivity

5.Once the assessment is complete the following fields must be completed

- Finish time

RECORDS AND DOCUMENTATION

1. Once the assessment is completed the engineer should print and sign *ENV.006 Odour Assessment Form* to indicate that the assessment has been undertaken and the information is complete.

PURPOSE

This standard operating procedure (SOP) covers the standard procedure for noise monitoring. Noise is monitored for both environmental monitoring purposes and health and safety.

GENERAL INSTRUCTIONS

This SOP provides sequential instructions which should be undertaken in the correct order.

If the sequence of instructions cannot be completed as described, the Vertase FLI Project Lead should be informed so that amendments can be made or steps can be clarified.

This SOP should be read in conjunction with any other SOP's that are applicable to the works being undertaken.

TOOLS, MATERIALS AND EQUIPMENT

- Noise monitor and required peripherals
- Notebook
- Plan of site
- PPE – as a minimum hard hat, safety boots and hi vis jacket



PREPARATION

1. Access to site should be agreed in advance with relevant people (site owners, clients etc).
2. Site engineers should have received site specific H&S induction by Project Lead.
3. Permits to work should be obtained in advance, where required (to be advised by Site Manager/Project Lead)
4. The aforementioned equipment needs to be booked out by the equipment supervisor and on completion of the monitoring booked back in. Any faults should be reported promptly to the equipment supervisor.
5. The equipment supervisor is responsible for the aforementioned equipment which should be checked prior to each site visit to ensure that it is in a good state of repair, fully operational (i.e. fully charged) and that calibration certificates, where appropriate, will be valid at the time of monitoring.
6. If the site engineer suspects that the unit is faulty, advice should be sought from the equipment supervisor.

PROCEDURE

1. Background readings will be required out of operating hours.
2. The user manual for equipment used should be read in conjunction with this SOP to provide more detailed explanation of specific operating procedures.
3. The sound monitor may require calibration prior to daily monitoring (refer to user manual for instructions)
4. Ensure if the equipment is not fully waterproof it doesn't get exposed to excessive quantities of water, as this will affect the quality of results and the performance of the equipment.
5. Turn instrument on, ensuring all necessary peripherals are attached and working correctly.
6. Walk around the site and along the site boundary, monitoring and recording the sound in decibels at regular intervals. Monitoring locations should be targeted to ensure all possible sources of noise are included, especially those in sensitive areas of the site such as close to the site boundary.
7. If noise exceeds 85 dBA, appropriate ear protection is required for site workers. If noise exceeds 85dBA at the site boundary, remedial actions will be required including the installation of silencers on machines, the creation of a noise bund or activity ceased if no other possible action is appropriate.

RECORDS AND DOCUMENTATION

1. Monitoring results to be recorded in field notebook or on standardised form *ENV-005 Noise Monitoring Form*.
2. Date and time of attendance of site should be recorded as well as activities being undertaken at the time. Monitoring should be recorded at different times of the day to allow for variation.
3. Any H&S related incidents (slips, trips and falls etc).
4. Permits to work and site inductions, where applicable.
5. All operatives associated with the work are to be given a tool box talk to describe the content of this SOP and related documentation and sign a register to acknowledge that they have received such instruction and understand the method and health and safety issues related to the task.

SOP023 - DUST MONITORING NEPHELOMETER

PURPOSE

This standard operating procedure (SOP) covers the standard procedure for dust monitoring using a Nephelometer.

A nephelometer is an instrument for measuring concentration of suspended particulates in a liquid or gas colloid. A nephelometer measures suspended particulates by employing a light beam (source beam) and a light detector set to one side (often 90°) of the source beam.

Dust is monitored for both environmental monitoring purposes and health and safety.

GENERAL INSTRUCTIONS

This SOP provides sequential instructions which should be undertaken in the correct order.

If the sequence of instructions cannot be completed as described, the Vertase FLI Project Lead should be informed so that amendments can be made or steps can be clarified.

This SOP should be read in conjunction with any other SOP's that are applicable to the works being undertaken.

TOOLS, MATERIALS AND EQUIPMENT

- Dust monitor e.g. DustMate and required peripherals
- Notebook
- Plan of site
- PPE – as a minimum hard hat, safety boots and hi vis jacket



LIMITATIONS OF METHOD

1. The accuracy of the instrument is heavily impacted by moist conditions including damp and foggy weather conditions, providing falsely high readings.

PREPARATION

1. Access to site should be agreed in advance with relevant people (site owners, clients etc).
2. Site engineers should have received site specific H&S induction by Site Manager/Project Lead.
3. Permits to work should be obtained in advance, where required (to be advised by Site Manager/Project Lead)
4. The aforementioned equipment needs to be booked out by the equipment supervisor and on completion of the monitoring booked back in. Any faults should be reported promptly to the equipment supervisor.
5. The equipment supervisor is responsible for the aforementioned equipment which should be checked prior to each site visit to ensure that it is in a good state of repair, fully operational (i.e. fully charged) and that calibration certificates, where appropriate, will be valid at the time of monitoring.
6. If the site engineer suspects that the unit is faulty, advice should be sought from the equipment supervisor.

PROCEDURE

1. Background readings will be required out of operating hours.
2. The user manual for equipment used should be read in conjunction with this SOP to provide more detailed explanation of specific operating procedures.
3. The dust monitor may require calibration prior to daily monitoring (refer to user manual for instructions)
4. Ensure if the equipment is not fully waterproof it doesn't get exposed to excessive quantities of water, as this will affect the quality of results and the performance of the equipment.
5. Turn instrument on, ensuring all necessary peripherals are attached and working correctly.
6. Walk around the site ensuring all identified sources of dust are included with the monitoring visit.
7. Record the level of dust at regular intervals around the site, including activities being undertaken where appropriate and the sensitivity of the location. Particular attention should be paid to recording levels of dust in more sensitive locations, for example at site boundaries or in proximity to residential areas.
8. If leaving the monitor unmanned for any period of time, ensure it is secure and will not cause a health and safety issue such as a trip hazard or blocking necessary access.

RECORDS AND DOCUMENTATION

1. Monitoring results to be recorded in field notebook or on standardised form.
2. Date and time of attendance of site should be recorded as well as activities being undertaken at the time. Monitoring should be recorded at different times of the day to allow for variation.
3. Any H&S related incidents (slips, trips and falls etc).
4. Permits to work and site inductions, where applicable.
5. All operatives associated with the work are to be given a tool box talk to describe the content of this SOP and related documentation and sign a register to acknowledge that they have received such instruction and understand the method and health and safety issues related to the task.

Site:		**Contract Ref:**		**Organisation:**	
Date:		**Site Manager:**		**Assessor name:**	
Daily activity:					

		ODOUR								DUST		NOISE	HOUSEKEEPING			
Location	**Time**	**Detectability**	**Intensity**	**Quality**	**Hedonic tone**	**Odour frequency**	**Location sensivity**	**Odour source**	**PID reading**	**Odour Control Inspection**	**Visual**	**PM10**	**Average**	**Litter**	**Pests**	**COMPLAINTS**	**ACTIONS REQUIRED**
	Start	(Y/N)	(0 to 6)	(Description)	(-4 to + 4)	(1-5)	(H/M/L)	(1 to 5)	(ppm)	On/Off	Y/N	(ug/m3)	(dBa)	(Y/N)	(Y/N)		(Description)

Meteorological and environmental conditions						**General Notes**
Wind speed	**Wind Direction**	**Temp**	**Weather description**	**Cloud cover**	**Ground conditions**	**Barometric Pressure**
(mph)	(e.g. N, SW)	(^{0}C)	(e.g. rain, sun, wet, dry)	(0 to 8)	(e.g. wet, dry)	mbar

Assessors Signature.....

Assessors Signature.....

ODOUR MEASUR

Detectability
Yes or no. If "no",

Intensity
1.Barely traceable
2.Faint/weak
3.Moderate
4.Strong
5.Intense/unbeara

Quality
Describe.

Hedonic Tone
3. Very pleasant
2. pleasant
1. slightly pleasan
0. Neutral
-1. slightly unplea
-2. unpleasant
-3. Very unpleasa

Frequency
1.Local and infreq
2.Infrequent as al
3. More widesprea
4.Frequent and wi
5.Persistent and w

Location sensitiv
Low – e.g. footpat
Medium – e.g. cor
High – e.g. Housir

Odour Source
1. 100% of the oc
2. 75% of the odc
3. 50% of the odc
4. 75% of the odc
5. 100% of the oc

METEOROLOGIC

Wind Speed

1. Calm, still
2. Light breeze (a
3. Moderate breez
4. Strong breeze (
5. Gale (Twigs bre
6. Storm (Trees u

Wind direction

Where the wind o

Cloud Cover

0.No cloud
1.13% cloud
2.25% cloud
3.38% cloud
4.50% cloud
5.63% cloud
6.75% cloud
7.88% cloud
8.Full cloud cover

EMENT

proceed to meteorological and environmental conditions.

able

t

sant

nt / offensive

uent (only detectable when the wind drops)
ove, but detected away from site boundary
d and fairly frequent
idespread(up to 50m from the site boundary)
videspread (odour detected >50m from site boundary

vity
th road field
mmercial buildings, industrial premises
g, public amenities, public open space.

lour detected is from external source (non site)
ur detected is from external source, 25% from site source.
ur detected is from external source, 50% from site source.
ur detected is from site source, 25% from external source.
lour detected is from a site source.

:AL CONDITIONS

ir movement just felt on face, leaves rustle)
:e (Raises dust, leaves, paper in constant motion)
(as above plus large branches in motion, difficulty using umbrellas)
eak from trees, difficult to walk or remain still)
prooted, property damaged)

riginates based on the eight compass points (e.g. N, SW etc).

ENV-003 MATERIALS MANAGEMENT SOIL WATER AUDIT - Issue 1
Materials Audit

Project Ref:			Project Name:				Client:				Project Engineer:				
Materials Origin					Initial Characterization (Chemical/ Geotechnical)				Treatment		Reinstatement			Off-Site Disposal Record Ref	Comments
Grid Square	Depth	Geological Description / Classification	Date Generated	Volume (m3)	No. Samples	Testing Ref	Stockpile Ref	Destination (Treatment/ Reinstatment/ Disposal)	Processing / Treatment Type	Location Ref	Grid Square/Location Ref	Depth	Date		

ENV-003 MATERIALS MANAGEMENT SOIL WATER AUDIT - Issue 1
Off-site Disposal Record

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
2	**VFLI Disposal Ref**	**Haulage Company**	**Waste Carriers Licence Number**	**Disposal Site**	**Disposal Site Permit Number**	**Waste Description**	**European Waste Code**	**Purchase Order**	**Quantity**	**Date**	**VFLI Ticket No**	**Haulage Company Ticket No.**	**Tonnage**	**Tipping Ref.**
3														
4														
5														
6														
7														
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Discharge Water

Project Ref:		Project Name:			Client:		Project Engineer:	
Origin	**Storage Location**	**Treatment Activity**	**Visual Classification**	**Volume(m3)**	**No. Samples Tested**	**Test Report No.**	**Result PASS/FAIL**	**Discharge/Disposal**

DUST MONITORING

Contract Title: ..... Contract Number: .....

Date: ..... Weather: .....

Time: ..... Measurement: .....

Ref	Max Reading	TWA	Location

Influences / Comments

Sketch

Taken by:	**Instrument:** Microdust

Note: All measurements in mg/m³

NOISE MONITORING

Contract Title: ..... Contract Number: .....

Date: ..... Weather: .....

Ref	Max	LPeak	LEQ	L10	L90	Location

Influences / Comments

Sketch

Taken by:	**Instrument:** CEL

Note: All measurements in dBA

ODOUR ASSESSMENT FORM

Contract Title: ..... Contract Number: ..... MPL.Number: EAWML

Date: ..... Site Manager: ..... Type of Treatment: .....

Taken By: ..... Start Time: ..... Finish Time: .....

Complaint Received	YES/NO	Date	
Location of Complaint Area		Grid Reference (where not a property)	

Weather		Wind (strength and direction)	
Temperature (deg. C)		Bar Pressure (mbar) (rising/falling)	
% Cloud Cover		General Air Stability	
General Air Quality		Ground Condition	

Plan attached showing location and extent of odour Yes/No

Additional Comments

Action Required

Reported to on site:

Signature:

ODOUR ASSESSMENT FORM

Location	Odour Intensity	Odour Extent	Location Sensitivity	Odour Description	External Sources Of Odour	Waste Sources of Odour

GROUNDWATER MONITORING

Site Location:				Job Number:
Date:				Operator:
Weather Conditions/ATM Pressure Trend:				Ground Conditions:
Borehole Ref	**Depth to Product (mBTM)**	**Depth to GW (mBTM)**	**Depth to Base of Well (mBTM)**	**Samples collected for laboratory analysis:**
Comments				

LNAPL RECHARGE MONITORING

Site Location:		**Job Number:**	
Borehole Ref:	**Date:**	**Time:**	**Operator:**
Weather Conditions/ATM Pressure Trend:		**Ground Conditions:**	
PID (ppm):		**Total LNAPL volume removed from well (litre):**	
Product description:			

Time	**Depth to Product (mBTM)**	**Depth to GW (mBTM)**	**Depth to Base of Well (mBTM)**	**Samples collected for laboratory analysis:**

Comments

CHAIN OF CUSTODY SHEET – DUST ANALYSIS (STICKY PAD)

Client:	Project Reference:	Sampler:
Vertase Contact:	Tel:	

Laboratory:		Report to:	testingbristol@vertasefli.co.uk
Adresss		Address:	VertaseFLI
			Number One
			Middle Bridge Business Park
			Bristol Road
Contact Number:			Portishead, Bristol
			BS20 6PN

Dust Monitor Point	Start		Finish		Exposure	
	Date	Time	Date	Time	Hours	Minutes

Samples Relinquished By

Name:

Signed:

Date:

Samples Received By

Name:

Signed:

Date:

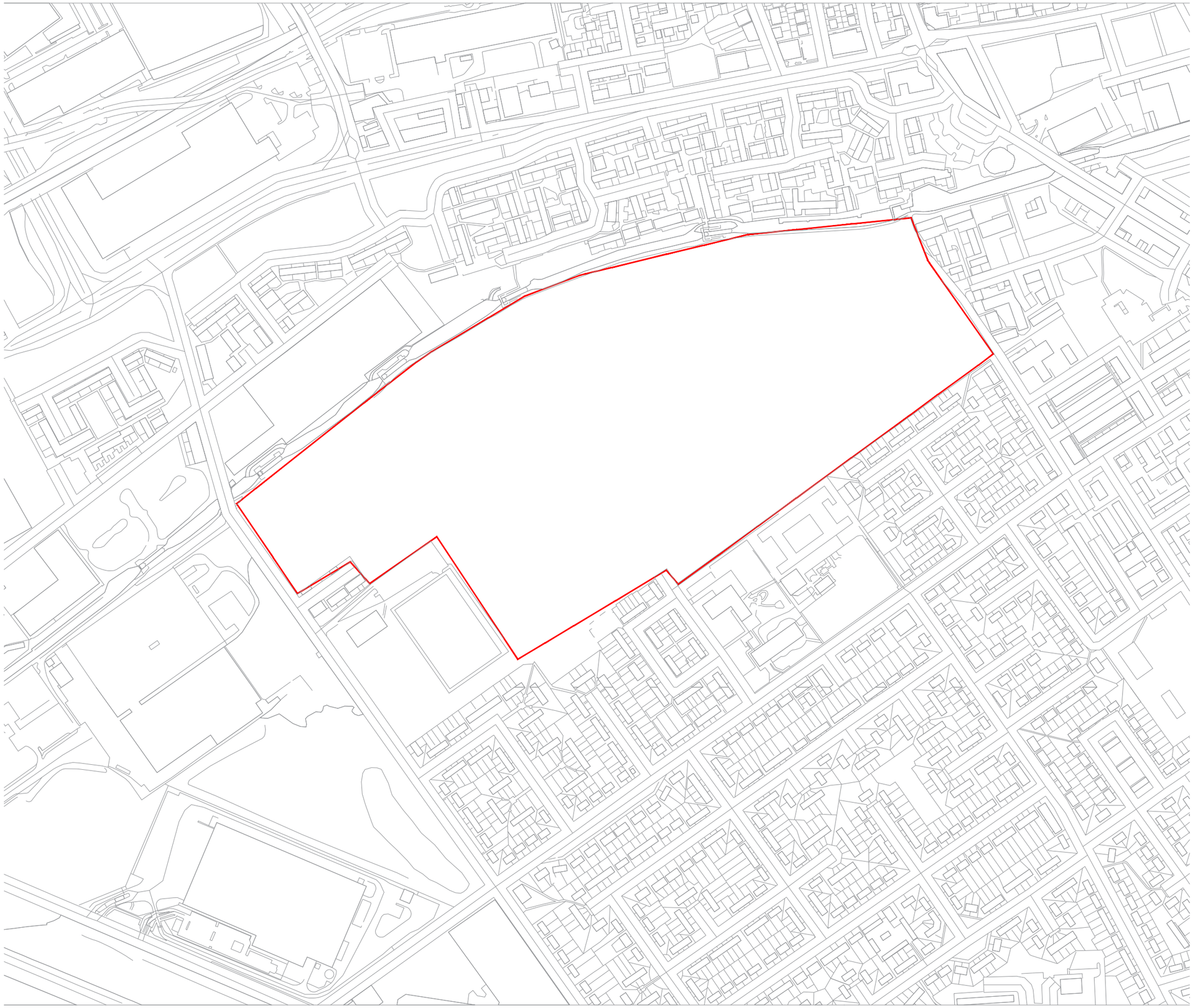
GROUND WATER PRODUCT MONITORING DATA

Project Ref: **Project Name:** **Engineer Name:**

Date	Time	Location	Depth to Product (mBGL)	Depth to GW (mBGL)	Depth to Base of Well (mBGL)	Thickness of product (m)	Type of Product	Colour	Viscosity (High - Honey - 10) (Low - Water - 1)	Monitored with:	PID (ppm)	Assessor	Comments

Appendix F

Drawings



Key:

Site Boundary

A3

Rev.	Description	Revised By	Date
	FIRST ISSUE		11-08-2023

Vertase FLI

Contaminated Land,
Brownfield & Environmental
Contracting Specialists

email: info@vertasefli.co.uk
www.vertasefli.co.uk

Bristol Head Office: Tel: 01275 397600 Fax: 01275 397601

Sheffield Office: Tel: 01246 813289 Fax: 01246 812963

Rev:

Site Address:

Ten Acres Lane
Manchester
M40 2SP

Title: Site Location Plan

Client: Your Housing Group Ltd

Drawn: JGL	Checked: RW	Approved: RW
Dwg: D1932_20	Contract: 1932YOU	Scale: 1:4000



A3

Key:

- Site Boundary
- Site Lighting
- Internal Haul Road
- Site Welfare & Compound
- Visitor & Contractor Parking
- Treatment Area
- Lorry Turning Area

Rev.	Description	Revised By	Date
A	Parking Area Added	MRG	07-11-23
	FIRST ISSUE		18-09-23

Vertase FLI

Contaminated Land, Brownfield & Environmental Contracting Specialists

email: info@vertasefli.co.uk
www.vertasefli.co.uk

Bristol Head Office: Tel: 01275 397600 Fax: 01275 397601

Sheffield Office: Tel: 01246 813289 Fax: 01246 812963

Site Address:

Ten Acres Lane
Manchester
M40 2SP

Rev: A

Title: Site Access & Compound

Client: Your Housing Group Ltd

Drawn: MRG	Checked: AD	Approved: MA
Dwg: D1932_22	Contract: 1932YOU	Scale: 1:4000



Key:

- Site Boundary
- Noise & Air Quality Monitoring Locations

A3

Rev.	Description	Revised By	Date
	FIRST ISSUE		18-09-23

Vertase FLI

Contaminated Land, Brownfield & Environmental Contracting Specialists

email: info@vertasefli.co.uk
www.vertasefli.co.uk

Bristol Head Office: Tel: 01275 397600 Fax: 01275 397601

Sheffield Office: Tel: 01246 813289 Fax: 01246 812963

Rev:

Site Address:

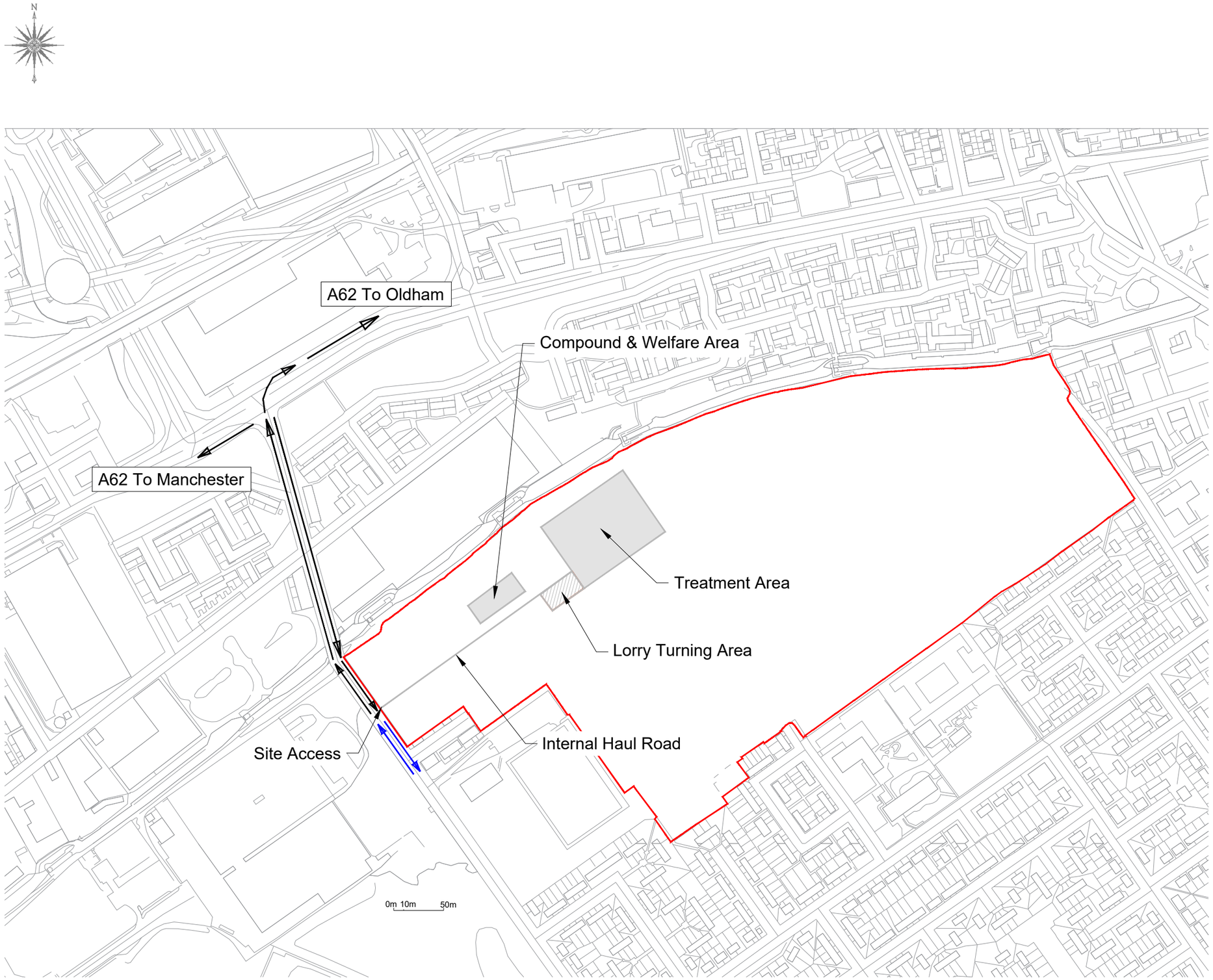
Ten Acres Lane
Manchester
M40 2SP

Title: Air Quality & Noise Monitoring

Client: Your Housing Group Ltd

Drawn: MRG	Checked: AD	Approved: MA
Dwg: D1932_23	Contract: 1932YOU	Scale: 1:4000

A3



Key:

- Site Boundary
- HGV & Other Vehicle Route to A62 Avoiding Low Bridges
- Light Vehicle / Car Route with Low Bridges. Not Suitable for HGV's

Rev.	Description	Revised By	Date
	FIRST ISSUE		18-09-23

Vertase FLI

Contaminated Land, Brownfield & Environmental Contracting Specialists

email: info@vertasefli.co.uk
www.vertasefli.co.uk

Bristol Head Office: Tel: 01275 397600 Fax: 01275 397601

Sheffield Office: Tel: 01246 813289 Fax: 01246 812963

Rev:

Site Address:

Ten Acres Lane
Manchester
M40 2SP

Title: Traffic Routes to & from Site

Client: Your Housing Group Ltd

Drawn: MRG	Checked: AD	Approved: MA
Dwg: D1932_24	Contract: 1932YOU	Scale: 1:4000

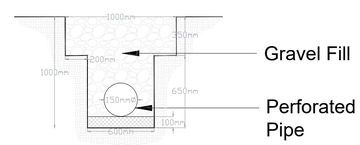
A1



Key

- Spot Level
- Top of Bank
- Bottom of Bank
- As-Built Extent - Surface Water Trench
- Water Treatment Plant
- Proposed Bunds - Circa 1m High
- Surface Water Trench - Extension

Typical Section - Surface Water Collection Trench



Rev.	Description	Revised By	Date
	FIRST ISSUE		03-10-2023

Vertase FLI

Contaminated Land, Brownfield & Environmental Contracting Specialists

email: info@vertasefli.co.uk
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Bristol Head Office: Tel: 01275 397600 Fax: 01275 397601

Sheffield Office: Tel: 01246 813289 Fax: 01246 812963

Site Address:

Ten Acres Lane
Manchester
M40 2SP

Rev:

Title: Surface Water Management Plan

Client: Your Housing Group Ltd

Drawn: JGL	Checked: MA	Approved: MA
Dwg:D1932_25	Contract: 1932YOU	Scale: 1:1250

Appendix G

Emergency Plans

EMERGENCY PLAN
SIGNIFICANT OIL/FUEL SPILL

1. Description of Emergency

Significant spill of any hydrocarbon product (oil, diesel, petrol etc) affecting land and or water. Spills may originate from above or below ground storage tanks, pipelines or vehicles. Significant shall be defined as a volume of product lost too great to be contained or recovered by immediate action utilising available resources.

2. Action Plan

If the site works are being conducted under an Environmental Permit (EP) any control measures contained in the EP and Deployment Form relevant to the emergency should be applied as appropriate. The plan as defined below cannot be expected to allow for all eventualities but should be used as a guide to prioritise actions.

- Secure / seal source of spill.
- If necessary, isolate area to prevent risks to other site users. It may also be necessary to post signs.
- Prevent further contamination or initial contamination of surface water. This may include use of emergency equipment, if available, or collection / isolation of surface water from ditches / ponds etc.
- Prevent further contamination of ground by spreading liquid by using soil bunds, trenches etc.
- If spill poses a fire risk, cover with soil or similar.
- If possible, excavate contaminated soils either remove from site (in accordance with applicable legislation) or store in a manner not likely to cause further environmental impact.
- Emergency equipment such as booms, absorbent granules etc, if not already held on site, can be obtained from stores. Remember to replace used stocks.
- Consideration of potentially explosive materials that may be on site is important. Ensure all personnel are removed from potential explosion zones and emergency services are informed of explosive hazards

3. Reporting / Notification

- All emergencies must be notified to a Director by telephone. They shall then notify all other necessary third parties (Environment Agency, client, etc).
- As soon as possible after the incident, the Site Manager shall complete an accident / incident report (*H&S-001 Form or* H&S-019 Form, as applicable). A copy of the completed form shall then be sent onto either the H&S Manager or the QESH Coordinator.
- If the spill resulted in personal injury or damage to property, the Site Manager may also have to complete other records such as accident book, RIDDOR, etc.

EMERGENCY PLAN
FIRE ON SITE

1. Description of Emergency

Any type of fire is strictly prohibited on any remediation site. Therefore, all fires shall be considered as an emergency.

2. Action Plan

If the site works are being conducted under an Environmental Permit (EP) any control measures contained in the EP and Deployment Form relevant to the emergency should be applied as appropriate. The plan as defined below cannot be expected to allow for all eventualities but should be used as a guide to prioritise actions.

- Upon discovering a fire, raise the alarm and let the Site Manager know.
- Evacuate all persons likely to be affected by the fire.
- Decide if fire can be safely tackled by site staff and available emergency equipment. If it can, carry out such action as necessary. If not, summon emergency services by dialling **999.** Ensure you have the full correct site address available including contact names and telephone numbers. Ensure someone is waiting at the main site entrance to meet the emergency services. This person should direct them to the fire and also inform them of any specific hazards to be aware of.
- If necessary, isolate area to prevent risks to other site users including the removal of combustible items.
- Consider potential environmental impact of emergency actions such as the use of water for firefighting or the release of oil etc., from mobile plant. When isolating the area consider installing trenches around the area as soon as possible.
- Do not disturb the area of the fire after, until authorised by senior management. It may be subject to inspection by third parties i.e. loss adjusters, police, HSE etc.
- The affected area may well be contaminated after a fire. Ensure any waste materials generated as a result of a fire are handled and disposed of correctly.
- Ensure any emergency equipment used such as fire extinguishers are replaced.
- Consideration of potentially explosive materials that may be on site is important. Ensure all personnel are removed from potential explosion zones and emergency services are informed of explosive hazards

3. Reporting / Notification

- All emergencies must be notified to a Director by telephone. They shall then notify all other necessary third parties (Environment Agency, client, etc).
- As soon as possible after the incident, the Site Manager shall complete an accident / incident report (*H&S-001 Form or* H&S-019 Form, as applicable). A copy of the completed form shall then be sent onto either the H&S Manager or the QESH Coordinator.
- If the incident resulted in personal injury or damage to property, the Site Manager may also have to complete other records such as accident book, RIDDOR, etc.

EMERGENCY PLAN
RUPTURE OF MAIN SEWER

1. Description of Emergency

Rupture of live sewer pipe resulting in significant loss of sewage / contaminated water. This emergency plan is also applicable to other similar incidents such as water pipes. It does not however apply to gas pipes (see *EMP04*) or fuel/oil pipes (see *EMP01*).

2. Action Plan

If the site works are being conducted under an Environmental Permit (EP) any control measures contained in the EP and Deployment Form relevant to the emergency should be applied as appropriate. The plan as defined below cannot be expected to allow for all eventualities but should be used as a guide to prioritise actions.

- Attempt to shut off sewer up stream or block pipe at point of break.
- If possible contain any liquids by bunding or construction of trenches / excavations. Particular effort should be made to prevent sewage / contaminated water from entering surface water system.
- If necessary, isolate area to prevent risks to other site users. It may also be necessary to post signs.
- The affected area may well be contaminated after the break. Ensure any waste materials generated as a result of an incident are handled and disposed of correctly in accordance with *EP02 Waste Management*.
- Ensure any emergency equipment used such as booms are replaced.
- Note the potential for release of explosive gases. Remove all personnel from the area and inform emergency services if explosive gases are expected or detected

3. Reporting / Notification

- For this incident you may attempt to call the sewer operator directly although this may be difficult.
- All emergencies must be notified to the H&S Manager or Managing Director immediately by phone. They shall then notify all other necessary third parties (Environment Agency, client, etc).
- As soon as possible after the incident, the Site Manager shall complete an accident / incident report (*H&S-001 Form or H&S-019* Form, as applicable). A copy of the completed form shall then be sent onto either the H&S Manager or the QESH Coordinator.
- If the incident resulted in personal injury or damage to property, the Site Manager may also have to complete other records such as accident book, accident report form *H&S-001* and *H&S.028 Accident Investigation Form.*

EMERGENCY PLAN
RUPTURE OF GAS MAIN

1. Description of Emergency

Rupture of live gas main.

2. Action Plan

If the site works are being conducted under an Environmental Permit (EP) any control measures contained in the EP and Deployment Form relevant to the emergency should be applied as appropriate. The plan as defined below cannot be expected to allow for all eventualities but should be used as a guide to prioritise actions.

- Due to the danger of explosion; **evacuate whole site immediately**. Post sentries to prevent any access to the area.
- Call the emergency services immediately on **999** and contact **National Grid UK on 0800 111999.** Ensure you have the full correct site address available including contact names and telephone numbers. Ensure someone is waiting at the main site entrance to meet the emergency services. This person should direct them to the incident and also inform them of any site specific hazards they should be aware of.
- Do not re-enter site until authorised to do so by **National Grid UK.**
- Ensure any emergency equipment used is replaced.

3. Reporting / Notification

- All emergencies must be reported to the H&S Manager or the Managing Director immediately by phone. They shall then notify all other necessary third parties (Environment Agency, client, etc).
- As soon as possible after the incident, the Site Manager shall complete an accident / incident report (*H&S-001 Form or H&S-019* Form, as applicable). A copy of the completed form shall then be sent onto either the H&S Manager or the QESH Coordinator.
- If the incident resulted in personal injury or damage to property, the Site Manager may also have to complete other records such as accident book, accident report form *H&S-001* and *H&S.028 Accident Investigation Form.*

EMERGENCY PLAN
EXPOSURE TO UNKNOWN SUBSTANCE

1. Description of Emergency

Release of, or exposure to, unknown substance. Substance may be solid, liquid or gas exposed or released by excavation or break to pipes, tanks, etc. It may pose a risk of chemical burns, pollution, fire or explosion. Unless the release or exposure was expected and or you know exactly what it is, it must be treated as an emergency.

2. Action Plan

If the site works are being conducted under an Environmental Permit (EP) any control measures contained in the EP and Deployment Form relevant to the emergency should be applied as appropriate. The plan as defined below cannot be expected to allow for all eventualities but should be used as a guide to prioritise actions.

- **Evacuate the area immediately**. Do not attempt to handle the substance in any way.
- Isolate area to prevent risks to other site users. Post signs and sentries to prevent entry to the danger area.
- Only if it is safe to do so, you may attempt to cover substance with soil so as to minimise significant release of substance especially if it threatens surface or ground water.
- Emergency equipment such as booms, absorbent granules etc., must be used. Remember to replace used stocks.
- Seek advice from senior management before re-entering area.

3. Reporting / Notification

- All emergencies must be notified to the H&S Manager or Managing Director immediately by phone. They shall then notify all other necessary third parties (Environment Agency, client, etc).
- As soon as possible after the incident, the Site Manager shall complete an accident / incident report (*H&S-001 Form or H&S-019* Form, as applicable). A copy of the completed form shall then be sent onto either the H&S Manager or the QESH Coordinator.
- If the incident resulted in personal injury or damage to property, the Site Manager may also have to complete other records such as accident book, accident report form *H&S-001* and *H&S.028 Accident Investigation Form.*

EMERGENCY PLAN
CONTAMINATED WATER RELEASE

1. Description of Emergency

Significant release of contaminated groundwater during excavations where the release threatens clean surface or groundwater. This may also include release of contaminated water / liquor from broken exposed sub-surface tanks, etc. The response should be similar to that for significant oil spill. Significant shall be defined as a volume of product lost too great to be contained or recovered by immediate action utilising available resources.

2. Action Plan

If the site works are being conducted under an Environmental Permit (EP) any control measures contained in the EP and Deployment Form relevant to the emergency should be applied as appropriate. The plan as defined below cannot be expected to allow for all eventualities but should be used as a guide to prioritise actions.

- Secure / seal source of spill if possible.
- Attempt to dam or absorb the water using available soils.
- Prevent further contamination or, initial contamination of surface and or groundwater. This may include use of emergency equipment, if available, especially pumps and storage tanks. Do not allow water to flow into foul sewer unless we have appropriate discharge consent in place.
- Suspend all excavations until you have consulted with the project manager.
- If possible, excavate soils contaminated by the water and isolate them. Ensure any water draining from the stockpile does not contaminate clean areas of water or soil. These stockpiles may require testing prior to re-use or off-site disposal.
- Emergency equipment such as booms, absorbent granules etc., must be used. Remember to replace used stocks.

3. Reporting / Notification

- All emergencies must be notified to the H&S Manager or Managing Director immediately by phone. They shall then notify all other necessary third parties (Environment Agency, client, etc).
- As soon as possible after the incident, the Site Manager shall complete an accident / incident report (*H&S-001 Form or H&S-019* Form, as applicable). A copy of the completed form shall then be sent onto either the H&S Manager or the QESH Coordinator.
- If the incident resulted in personal injury or damage to property, the Site Manager may also have to complete other records such as accident book, accident report form *H&S-001* and *H&S.028 Accident Investigation Form.*

EMERGENCY PLAN
SIGNIFICANT CHEMICAL SPILL

1. Description of Emergency

Significant spill of chemical where the release threatens people, surface/subsurface soil or controlled water.

2. Action Plan

Action plan as defined below cannot be expected to allow for all eventualities but should be used as a guide to prioritise and protect various receptors.

- Suspend all activities until you have consulted with Project Management Team and evaluated the situation.
- Consult COSHH Assessment, to identify correct control measures and emergency response procedures including PPE requirements.
- Using the correct PPE, secure / seal source of spill providing it is safe to do so.
- Prevent further contamination by the use of appropriate emergency response equipment. Do not allow chemicals to enter foul / surface water drains. If practicable use pumps and storage containers.
- If possible, excavate contaminated soils and temporarily store in a manner not likely to cause human health or further environmental impact, until suitable methods of treatment or disposal (in accordance with applicable legislation) are determined.
- Any Emergency equipment such as booms, absorbent granules etc. must be used. Remember to replace used stocks.

3. Reporting / Notification

- All emergencies must be notified to the H&S Manager or Managing Director immediately by phone. They shall then notify all other necessary third parties (Environment Agency, client, etc).
- As soon as possible after the incident, the Site Manager shall complete an accident / incident report (*H&S-001 Form or* H&S-019 Form, as applicable). A copy of the completed form shall then be sent onto either the H&S Manager or the QESH Coordinator.
- If the incident resulted in personal injury or damage to property, the Site Manager may also have to complete other records such as accident book, accident report form *H&S-001* and *H&S.028 Accident Investigation Form.*

EMERGENCY PLAN
UNEXPECTED ASBESTOS

1. Description of Emergency

Generally, when VertaseFLI is contracted to carry out earthworks / remediation; any identified asbestos has been removed from existing buildings by a licensed asbestos contractor and the buildings have been demolished to slab level. Site investigations will also normally include the assessment for asbestos. However, there may still be the possibility of encountering asbestos containing materials (ACMs) in the ground and remains a prominent risk on many sites. For example:

- ACMs were used as sheeting and shuttering below the surface, as well as in redundant below ground services.
- Surplus or waste asbestos was often disposed of below slabs / hardstanding or in below ground structures.
- Degraded ACMs may also be present in made ground.

2. Action Plan

In the event that suspected ACMs are encountered during site works the following procedure must be followed:

1) Immediately cease works - **Do not disturb** the suspected ACMs.

2) Inform your Site Manager immediately.

3) The Site manager in liaison with an Environmental Engineer will inspect the area. Advice may be sought from a VertaseFLI Asbestos Supervisor – if not present on site.

4) If material is deemed to be suspected ACM, then the Environmental Engineer will take a sample for laboratory Identification and Quantification. It will also be necessary to obtain a sample of surrounding soils to check for the presence of asbestos fibres.

5) The area must be cordoned off with a clear suitable and secure barrier and signs placed at all angles of approach warning of the possible presence of Asbestos. If the suspect asbestos is not bound within a matrix, then the area should be covered with clear heavy gauge polythene.

6) Laboratory Identification typically takes between 3-5 working days. During this time no works will be permitted near the area of suspected ACM.

7) In the event that asbestos is positively identified by the laboratory; then a suitable and appropriate plan will be developed in accordance with CAR 2012 for removal and disposal of the ACM. This will also include liaison with the Project Lead and or client to consider commercial implications.

3. Reporting / Notification

- As soon as possible after the incident, the Site Manager shall complete a Hazard Spot / Near Miss report.

- If an individual is exposed to asbestos, then the site manager must complete an accident / incident report (*H&S-001 Form* or H&S-019 Form as applicable), and complete a record in the Accident Book. The Health and Safety Manager must be notified as soon as it is safe to do so, or in his absence, the Managing Director. They will decide on the appropriate course of action and further reporting as required under the regulations.

EMERGENCY PLAN
UNEXPECTED ASBESTOS

Site Name:…… Project Number:……

All site personnel **must** be briefed on this Emergency Plan and **must** sign below as evidence that they have read and understood the procedures and have been afforded the opportunity to ask any questions:

Date	Print Name	Signature

Appendix H

Programme

Bristol
Number One, Middle Bridge Business Park
Bristol Road, Portishead, Bristol, BS20 6PN

Phone +44 (0) 1275 397 600
Email info@vertasefli.co.uk
Web www.vertasefli.co.uk

Sheffield
19 Napier Court, Barlborough Links
Barlborough, Sheffield, S43 4PZ

Phone +44 (0) 1246 813 289
Email info@vertasefli.co.uk
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Wales
Pencoed Technology Centre,
Pencoed,
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Phone +44 (0) 1656 253 345
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Bristol
Number One, Middle Bridge Business Park
Bristol Road, Portishead, Bristol, BS20 6PN

Phone +44 (0) 1275 397 600
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19 Napier Court, Barlborough Links
Barlborough, Sheffield, S43 4PZ

Phone +44 (0) 1246 813 289
Email info@vertasefli.co.uk
Web www.vertasefli.co.uk

Wales
Pencoed Technology Centre,
Pencoed,
CF35 5HZ

Phone +44 (0) 1656 253 345
Email info@vertasefli.co.uk
Web www.vertasefli.co.uk