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Safe System of Work

Remediation

100 & 88 Gray's Inn Road and 127 Clerkenwell Road, London WC1X 8AL

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Prepared By		Erith Co	Erith Contractors Ltd			
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Associated Documents

The list of associated documents below is to be referenced in conjunction with this document and are issued as standalone documents to reduce unnecessary duplication.

Construction Phase Plan

Traffic Management Plan

Emergency Response Plan

Environmental Management Plan

Programme of Works

Fire Risk Assessment

Project Works Information

Site Waste Management Plan

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1. Introduction

Erith Contractors Limited works to an Integrated Management System (IMS). This covers occupational safety and health, the environment and quality assurance. The British Standards Institution accredited the IMS to ISO 9001:2015 (Quality), ISO 14001:2015 (Environment) and ISO 45001 (Health and Safety).

- Occupational safety and health management for the site will be based upon Erith's Construction Phase Plan and the Safe System of Work for the works.
- Environmental management for the site will be based on Erith's Environmental Management Plan for the works.
- 4 Quality management for the site is based on Erith's Quality Plan.

1.1 Scope of Works

This Safe System of Work details the methodology for the completion of the remediation works.

2. Site Particulars

2.1 Hours of Work

📥 Monday – Friday

o 08:00 – 18:00

2.2 <u>Constraints</u>

The majority of constraints relating to the works on site are mainly due to its sensitive urban location and the proximity of nearby structures, residential properties and established urban spaces. Due to the nature of the works some residents and businesses may be temporarily disrupted during working hours. ECL will delegate a specific dedicated public liaison officer to ensure relations with neighbouring parties are maintained positively.

The specific constraints that have been identified are included below:

- High Pedestrian footfall to north and west elevations
- Large vehicle traffic flows on Clerkenwell Road & Gray's Inn Road elevations
- Numerous party walls
- **4** Tight site logistics (including maintaining vehicle and pedestrian access onto the site)
- Existing utilities and services in close proximity to site demise
- Neighbouring residents and commercial premises
- Proximity of adjoining high-profile properties, residents and pedestrian access

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- Numerous trees (with tree protection orders) to Gray's Inn Road & Clerkenwell Road elevations
- 4 Two existing live UKPN substations within site demise.
- 4 UKPN access requirements
- 4 Street furniture (including lamp posts) in proximity to vehicle access points.
- Neighbouring Chimney
- 4 Noise, dust and vibration controls including hoarding along the perimeter of the site.
- The project resides within the Ultra-Low Emissions Zone (ULEZ) and hence, plant and machinery will be compliant with Non-Road Mobile Machinery (NRMM) requirements of the Greater London Authority (GLA) under "LONDON'S 'LOW EMISSION ZONE' FOR NON-ROAD MOBILE MACHINERY"

3. Access / Egress

The site welfare facilities will be set up will to accommodate up to 50 persons, including site office staff and operatives. There will be sufficient canteen and changing facilities for both men and women.

During the demolition of the structure, site welfare facilities will be set up and maintained within the 88 Gray's Inn Road building, using existing facilities wherever practicable. The welfare facilities will be kept in situ for the duration of Erith's site works.

See Traffic Management Plan for full access arrangements.

4. Resources

4.1 Labour

- 🖊 1 No. Site Manager
- 4 1 No. Site Supervisor
- 🖊 1 No. Environmental Scientist
- Excavator operator/s
- 🖊 Roller operator/s
- 🖊 Dumper operator/s
- 🖊 Banksman
- 🖊 Operatives

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4.2 <u>Plant</u>

- 4 2 No. Excavator/s with buckets and attachments.
- 📥 1 No. Roller/s
- 🖊 1 No. Dumper/s

4.3 Equipment and Materials

- ♣ Disc cutter/road saw
- 🖊 Foam chief
- Line marker paint
- 4 CAT and Genny
- 🖊 Mobile phone
- 🖊 Two-way radios
- 🖊 Water treatment plant including submersible pumps and pipework.
- 🖊 Wooden stakes
- 4 Assorted hand tools including insulated shovels.
- Sampling equipment.
- 4 Access stairway systems
- 🖊 Red & white interlocking plastic vehicle barriers
- 🖊 Pedestrian barriers

5. Methodology

All works are to be undertaken in accordance with the Site Rules and HSE Regulations which are highlighted during the site induction and with signage around the site. All plant is to be operated by fully trained and competent persons only. All plant is to be checked in accordance with the LOLER and PUWER regulations and daily checklists are to be adhered to. All works will be supervised by the Site Supervisor.

The following methodology details the sequence and method of work to be adopted to complete the designated activities. The information detailed below should be briefed out to ALL PERSONS involved within the activity to ensure they understand their roles and the controls to be adopted.

Stop work if activity differs from this Safe System of Work. No work shall be carried out if unplanned. Contact the Site Manager if any changes are required to the working method.

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5.1 <u>Service Location</u>

- Pre-works will be carried out under the guidance of Erith document SOP 27 Services and Utilities and HSE document HSG 47 - Avoiding danger from Underground Services.
- Where excavation is to be undertaken, the type and location of underground services/utilities must be identified before works are undertaken.
- 🖊 A PAS 128 (B) survey will be completed prior to excavation.
 - This survey will be issued with the Permit to Break Ground.
- The Project Manager will liaise with the utility company, supply owner or infrastructure owner, as well as any previous knowledge to explore the possibility of having the service/utility made 'dead' before works commence.
 - Where this is not possible, Erith will source and obtain any necessary drawings and previous knowledge of the site containing details of potential underground services.
- Regardless of the above, a survey will be carried out by an individual with sufficient experience and technical knowledge.
- Physical identification of the services will take place. Any potential services detected will be identified using a CAT scan with associated signal generator (Genny).
- 4 See Figure 1 for the sweep path method.
- Operatives will verify services by carrying out trial pits as per the Erith Standard Operating Procedure and by marking out the type and location of the services onsite.
 - A Permit to Break Ground will be issued prior to any excavation work.
 - The engineer will survey any unrecorded services.
 - If required, drawings shall be updated with any further services identified.
- If any services are located where works are to be carried out, they must be isolated or redirected prior to breaking ground.
- Digging can be carried out to within two meters of the expected location on the service until they have been isolated, and certificates have been obtained.
- The Site Engineer will set out the location of the earthworks in conjunction with the relevant drawings.
- 4 Driven steel pins are not to be used.

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Sketch detailing known services in relation to excavation areas.

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5.1.1 <u>Use of CAT</u>

- 4 The full machine manual should be read in conjunction with the below.
- A calibrated cable avoidance tool (CAT) will be used to assist in locating services before and during excavation.
- 4 The trained operator will mark out any identified services on the ground.
- The CAT will be used as per the manufacturer's guidance. The following steps are to be noted:
 - o Obtain plans and walk the site to check for obvious signs of utilities.
 - Use the CAT upright Never swing it.
 - Use Power, Radio, Genny to sweep the whole area.
 - Use the sensitivity control correctly to pinpoint the conductor.
 - Use the CAT again in the trench/hole once you have excavated approximately 0.6 m to locate deeper or smaller services not locatable from the surface. Repeating the above and below procedure on each occasion.
 - Remember the CAT alone cannot always locate every conductor including small services and street lighting use the Genny.
 - Remember the CAT will only trace metallic conductors and not plastic pipes or fibre optic cables for example.
 - Maintain your CAT and Genny regularly to ensure continued trouble-free performance.



Figure 1 – Sweep Path

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5.2 <u>Clean and Dirty Protocols</u>

- 4 The site will be divided into two areas during the works.
 - Clean and dirty areas will be segregated by fencing. Signage will clearly show when passing between the two areas.
- 4 For all site personnel, access to the dirty area of site is only possible via segregated area.
 - Personnel will change from their clean clothes into the required PPE before entering the dirty area.
 - Personnel will exit the dirty area via the segregated area.
- Before exiting the dirty area, all site personnel are required to use the boot wash facility to clean all boots.

5.2.1 PPE for Dirty Area

- All operatives will be in possession of a mandatory hard hat, Class 3 fluorescent jackets/hi-vis, gloves, eye protection, safety footwear and coveralls.
 - These will be always worn when working on site (including plant operators when exiting machines).
- Any additional PPE that is deemed necessary (ear defenders, RPE, etc.) will be issued as required.
 - This will be assessed by the Site Manager and detailed in the Safe System of Work.

5.2.2 PPE for Clean Area

- All operatives will be in possession of a mandatory hard hat, Class 3 fluorescent jackets/hi-vis, gloves, eye protection and safety footwear.
 - These will be always worn when working on site (including plant operators when exiting machines).
- Any additional PPE that is deemed necessary (ear defenders, RPE, etc.) will be issued as required.
 - This will be assessed by the Site Manager and detailed in the Safe System of Work.
- ♣ PPE is not required in green areas of site.
 - These areas will be detailed in the Site Induction and demarcated by signage.

5.3 <u>Concrete Breakout</u>

- The location of work will be checked for services before and during the works (see 5.1.1 Use of CAT).
- 4 All services will be marked, and exclusion zones erected.
 - These will be in the form of fencing, physical barriers, and signage.

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- All attachments will be thoroughly inspected by the operators prior to first usage and at each subsequent use thereafter for any defects or damages (any defects will be reported to the Site Supervisor and recorded on the daily plant check sheet).
- 4 Dust suppression systems will be deployed to dampen down the working area.
- **4** Real-time vibration monitoring will be undertaken when breaking concrete.
 - The monitor will be placed over the nearest adjacent gas main. In the event of excessive vibration, the monitor will trigger an electronic alert and the works will be stopped by the Site Supervisor.
- When breaking, a hearing protection zone will need to be established and operators will be required to wear hearing protection.
- A 360-excavator fitted with a pneumatic breaker and/or muncher will be used to break out concrete.
 - The loose material will be cleared by the machine as works progress.
 - A safe distance will be maintained between the machine body and the attachment when working.
 - Breaking will be completed in a manner that prevents the ejection of materials.
 - When breaking, the operator will have clear sight of the breaking point.
 - The wall will be broken into pieces of suitable size for pulverisation.
- The excavator will remove the concrete structures in a logical sequence working progressively in a typewriter fashion.

Where the excavator operator encounters reinforcing bar within the concrete, a pulveriser attachment will be used to separate the concrete and metal.

- The hydraulic jaws will be used to break the concrete.
- The pulveriser will only be used in the manner in which it was designed.
- The metal rebar and concrete will be stockpiled separately.
 - The separated metal will be segregated and stored within a dedicated bin prior to disposal.
 - The concrete will be stockpiled once pulverised for potential reuse during the later phase of remediation works.
- After breaking, concrete obstructions will be loaded by excavator into a dumper and transported to the stockpiling area ready for disposal/crushing.
- The Banksman will use two-way radios to communicate with the excavator operators throughout the works as necessary.

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5.4 <u>Excavation</u>

Zone /Area	Description	Area of impact (m²)	Excavation depth (m bgl)	Volume (m³)
1				
2				
3				

- During excavation, material will be visually inspected for indications of unexpected material e.g. discolouration/objects etc.
- The final depth and therefore volume of material removed from each zone is initially dictated from the site investigation data.
- Excavations will be undertaken using battered/stepped sides, typically at 1:1 minimum batter angle unless the temporary works design specifies otherwise.
 - Where temporary works are required the Designated Individual (DI) shall appoint a Temporary Works Coordinator for the project, to plan, manage and monitor any temporary works.
 - A Temporary Works Supervisor will be appointed to undertake site inspections as required.
- Edge protection must be provided to prevent falls into an excavation or that the excavation is adequately 'covered' with trench covers or road plates.
- Where fixed edge protection is not possible, all excavations shall be protected with double clipped Heras fencing/continuous pedestrian barriers (weighted with sandbags where required) situated a minimum of 2 m (space permitting) from the excavation edge.
 - Warning signs shall be fixed to indicating "Danger Deep Excavation".
 - For all excavation activities, adequate safety barriers, sign boards, advance warning signs will be used.
- Materials, including excavated material (soil) should not be stockpiled within 2 m or a distance equal to the excavation's depth (whichever is greater) from the edge of an excavation.
- 4 All excavation works will follow a discovery strategy.
- The maximum depth of excavation and breakout across the site will be 10 m from the existing ground surface.
- Throughout the operation Banksman shall supervise the excavation and bank all dumper movements.
- Visual monitoring for dust will be carried out by site staff during excavations as well as passive dust monitoring stations and real time monitoring equipment around the site.
 - Dust suppression by water sprays/hoses will be used in working areas if visible dust is observed or dust is anticipated during excavation.

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- Dust suppression will be managed using dust suppression techniques. Should the dust levels remain too high, operations will temporarily be halted until a suitable and effective suppression technique can be deployed.
- All excavations will be assessed daily by the Temporary Works Supervisor before work commences and recorded.
- Vibration monitoring must be undertaken at the locations detailed within the project Noise, dust and vibration monitoring plan for each excavation.

5.4.1 Odours/VOCs

- The Banksman and machine operators involved in the excavation of contaminated material will carry a PID calibrated to respond to VOCs exceeding 1 ppm.
 - o If the PID alarm sounds, work to cease and the area vacated to allow for ventilation.
 - \circ The foam chief will be deployed, and the area saturated with foam to reduce VOCs.
 - Further monitoring to be undertaken at 30-minute intervals until the level falls below 1 ppm, when work can recommence.
- The foam chief will also be deployed if nuisance odours are encountered or are expected during the works.

5.4.2 <u>Working with Excavators</u>

- Operatives working near an excavator are to observe the exclusion and danger zones depicted below.
- If an operative wishes to approach the excavator, they must make positive confirmation with the driver which is to include eye contact and a 'thumbs up' response.
- **4** Two-way radios are also to be used in communication between driver and Banksman.
- The driver is then to ground his bucket and place the safety lockout lever in the parked position before the operative approaches.



Figure 2 - Excavator Zones

Yellow Zone – ZONE 3

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The Banksman must remain within this zone to be able to direct the plant operator. All personnel approaching operating plant must do so from this zone to gain visual contact with the plant operator and authorisation from the Banksman.

Amber Zone – ZONE 1

Entry prohibited until positive visual contact is confirmed by the plant operator (e.g. thumbs up) / authorisation from the Banksman, when entering the dipper arm is grounded and the machine is immobilised using the safety lever.

Where work in the amber zone is unavoidable a robust, task specific, safe system of work must be produced which minimises the time spent within the zone and includes detailed controls for communication between the machine operator, Banksman and person(s) undertaking the task.

Red Zone – ZONE 2

Entry prohibited unless the machine is completely isolated with the engine is switched off. A specific safe system of work is in place that prevents the machine being operated either inadvertently or deliberately.

Hatched Zone

Denotes typical sight lines of the plant operator.

5.4.3 Excavation Access and Egress

Personal Access

- The excavation sides have previously been cut to a 45° batter during remediation works to prevent any collapse.
- Access to the excavations for personal will be via staircases or via suitable ramps installed and clearly demarcated as a designated walkway.
- + There shall always be two points of access and egress during validation/backfilling works.
- All deep excavations are to be Heras fenced (double clipped) with warning signage displayed.
 - All fencing to be installed as per manufacturer's installation design.
- Daily excavation checks are to be carried out and recorded and permit to enter issued prior to any operatives entering any excavation.

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Figure 3 - Excavation Access and Egress

Plant Access

+ Plant access into excavations shall be via dedicated ramps of suitable gradient.

o Ramps shall be clearly demarcated as plant access.

🖊 Pedestrian walkways may be integrated into the ramp.

Red and white barriers are to be placed either side of the ramp segregating plant from pedestrians.

5.4.4 Hand Excavation

- 4 Excavate alongside the service rather than directly above it.
- Final exposure of the service by horizontal digging is recommended, as the force applied to hand tools can be controlled more effectively.
- **4** Regular use of CAT (every 200 mm to 300 mm excavation) and Genny.
- 4 Insulated tools should be used when hand digging near electric cables.
- Spades and shovels (preferably those with curved edges) should be used rather than other tools.
 - They should not be thrown or spiked into the ground but eased in with gentle foot pressure.
- Picks, pins, or forks may be used with care to free lumps of stone etc, and to break up hard layers e.g., chalk or sandstone.
 - Picks should not be used in soft clay or other soft soils near to underground services.
- Hake frequent and repeated use of locators during the work.
 - Service location is likely to become more accurate as cover is removed.

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Once exposed, services may need to be supported and should never be used as handholds or footholds for climbing out of excavations.

5.4.5 Vacuum Excavation

4 Trial pits within certain areas will be completed with a vacuum excavator.

- The vacuum excavation unit generates a large amount of air flow and vacuum suction through the generators.
- This allows for the removal of the soil, whilst safely exposing any live utilities and services with little risk of damage or personal injury.
- A permit to dig will be issued before any excavation works commence with detailed information on each trial hole provided.
 - Permits will be issued in line with Erith SOP 28.
 - All service drawings will be issued to site operatives during morning briefings and in the *Permit to Break Ground*.
- An exclusion zone will be implemented in the form of physical barriers. These will consist of crowd barrier fencing. Fencing will be a minimum of 2 metres away from the excavation with appropriate signage installed on the barriers.
- All arisings removed from the excavation will be deposited in an approved location until required for backfilling.
 - Arisings may be stockpiled for testing prior to backfilling if required.

5.4.6 Excavation of Soils Containing Asbestos

- Asbestos containing materials (ACMs) may not be easily detectable by eye in the soil if fragmented into small pieces.
 - Free fibres are even harder to spot and may require the use of a microscope to detect them.
- **4** Existing site investigatory data will be reviewed prior to excavation.
 - Should site investigation data indicate that asbestos maybe present, the risks to workers should be controlled in accordance with the provisions of the *Control of* Asbestos Regulations relating to work with asbestos.
- Signage and fencing will be erected in area of suspected ACM if deemed required by the Site Manager.
- Soils will be kept damp during excavation to prevent potential asbestos fibres from becoming airborne.
- Care should be taken to avoid over-wetting materials which could cause asbestoscontaminated surface water run-off or ponding of asbestos-contaminated water.
- Wetted, fine and cohesive soils may dry out at the surface, especially in warm weather and these may require additional wetting in order to reduce fibre levels.

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- Loose, granular material that is dry, or which has a tendency to dry out rapidly at the surface, may require ongoing and repeated wetting in order to ensure a satisfactory degree of fibre suppression.
- Air sampling shall be completed as required, including reassurance monitoring and background monitoring.
- 4 Decontamination equipment will be available during the works.
 - Clean and dirty protocols to be followed.
- 4 Stockpiles will be covered if left for an extended period of time.
- 4 Excavations will be backfilled as soon as is practicable.
- In the event of encountering suspected Asbestos Containing Materials (ACM) during work operations, take the following actions:
 - Stop work and contact the Site Manager or Site Supervisor.
 - Keep people out of the area where there is suspected ACM.
 - Avoid touching any suspected ACM.
 - Begin wetting down materials.
 - Avoid inhaling any dust particles, put on RPE if possible.
 - Remove any contaminated clothing and decontaminate yourself.
 - Put contaminated clothing in a plastic bag and dispose of as asbestos waste.

5.4.7 <u>Unexpected Asbestos Discovery / Sampling</u>

- 4 Works will stop if asbestos containing material is detected during excavation.
- 4 The Site Manager must be informed immediately confirming the location of discovery.
- 4 Operatives will prevent further access to the area.
- 4 A material sample will be collected and sent to an accredited laboratory for analysis.
- The asbestos will be dampened using water prior to sampling to limit any the likelihood of fibre release.
- 4 Disposable gloves and a FFP3 half mask will be worn during sampling.
- The sample will be double bagged, labelled, and placed into a container as per the requirements of the laboratory.
- The area will be cordoned off and materials covered to minimise further disturbance by weather.
 - Fibre suppressant to be applied to immediate area.

5.5 <u>Dewatering and Management of Groundwater</u>

The remedial targeted excavations are expected to encounter groundwater below ground level, requiring dewatering.

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- Water removed from the excavation shall be stored in an appropriate holding tank, tested, and treated as necessary before being removed from site under appropriate Duty of Care.
- 4 Submersible pumps will be used to dewater the excavations.
 - The low weight of the pumps means they can be carried by one person.
- **Water will be pumped to the water treatment plant through appropriate pipework.**
 - Pipework clips to be wire/cable tied to avoid accidental opening.
- Suspended solids in the water will be removed by the settlement unit and oil and sediment separators, the filter of which will be regularly monitored by the Site Supervisor and the filter media will be refreshed when necessary.
 - \circ $\,$ It will then pass through additional sand filters and aerators to aerate the water.
- Should any oil/hydrocarbons in liquid form and/or non-aqueous phase liquid be recovered in the dewatering process, this will be removed by the oil and water separator within the interceptor where it will be held securely bunded until it can be pumped out using vacuum tanker and sent for recovery at a permitted facility off site.
- Water will be discharged to the Discharge Point under the conditions of a Consent to Discharge agreement with Thames Water.
 - The conditions of the Consent to Discharge must always be observed in regard to criteria and flow rate.
 - The water will be treated to comply with the parameters in the Consent to Discharge.
- The treatment plant used will consist of an oil water separator (OWS), activated carbon filters, a venturi aerator, sand filters and a digital flow meter.
- The water treatment bund will have a submersible pump complete with a float switch that activates if the bund begins to fill with water.
 - This could be due to either excessive rainfall or leakage.
- 4 A certified digital flow meter will be used.
 - The flow meter will be calibrated, and the calibration certificate will be available for inspection.
- 4 All treated water discharged will pass through the flow meter.
 - Readings will be recorded daily on site.
- **Water sampling will be undertaken at the approved frequency.**

5.6 Stockpiling of Material

- 4 Erith will identify and establish a stockpiling area prior to the commencement of the works.
- Stockpiled material will be suitably managed following onsite visual assessment at the excavation face to segregate materials during the excavation works and prior to either direct disposal or being sent to stockpile.
- Materials may be screened with a Allu screening bucket to segregate fines from rubble/oversized.

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- The source of each stockpile shall be recorded and appropriate validation testing for the proposed re-use or potential off-site disposal shall be undertaken as required.
- Depending on the nature of the material the potential for dust or generation of ACMs will be mitigated by dampening down and covering as required.
- 4 Material will be segregated by type and source.
- Stockpiles of potentially non-hazardous materials shall generally be no more than 500 m³ in volume.
- 4 Stockpiles containing potentially hazardous material shall be no more than 250 m³.
- Stockpiles will be less than 3 m in height.
- 4 A bund of clean material shall be placed around the stockpile to contain leachate.
- An impermeable geotechnical membrane shall be used to prevent the finer materials/leachate from contaminating underlying materials if required. Materials stored on concrete base should be exempt.
- Further details of recording and tracking the source and destination of materials on site will be maintained.

5.7 <u>Chemical and Geotechnical Testing</u>

5.7.1 <u>Stockpiles</u>

- The procedure for stockpile sampling assumes that stockpiled materials have been subject to source segregation, either by design or by site management processes, such that physically and/or chemically different materials are excavated and stockpiled separately and that stockpiles are as homogeneous as practically possible.
- The following requirements for stockpile sampling shall be applied to all stockpiled materials including material for re-use, treatment, and disposal.
- In addition, sampling shall comply with the requirements of the project's Materials Management Plan and the Site Waste Management Plan.
- The methodology for stockpile sampling set-out below is based on a maximum stockpile size of 200 m³. If, for any reason, this size limit is increased, then the number of test samples required to provide a representative sample shall be increased accordingly.

5.7.2 Validation Testing (WAC Testing)

- Chemical testing of soils at formation level (base and sides of remedial excavations) is to be undertaken to confirm remediation depths.
- Once the sampling frequency has been agreed, each individual verification area (verification sample location) within the excavation should be divided into five theoretical subsections.
- One subsample of approximately 2kg of material is to be collected from each subsection of the verification area.

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- Once all five subsamples have been obtained, they should be mixed using a clean stainlesssteel spade or hand trowel.
 - Mixing should continue until a homogenous mix has been obtained.
- ➡ For the sides of excavations, the sampling frequency should be based on the same sample grid as used for the base. However, it will be necessary to collect samples from each distinct geological horizon present in the sides of the excavation e.g. the sides of the excavation may comprise made ground at surface underlain by some natural soils, separate composite samples must be obtained from both horizons.
 - Composite samples from the sides of excavations are to be formed from 2kg subsamples taken along the length of each distinct horizon. Subsamples should be taken from equally spaced locations along the length of each horizon.

5.7.3 <u>Sampling Preparation</u>

Once all subsamples have been obtained, they should be placed on the mixing board (fitted with a fresh section of disposable plastic sheeting) and mixed using a clean stainless-steel spade or hand trowel.

- Mixing should continue until a homogenous mix has been obtained.
- Upon completion of the homogenisation process the sample is to be placed into the appropriate sample containers and sent for laboratory analysis.
- Residual material is to be returned to the stockpile/excavation of origin.
- If samples are required for the analysis of volatile components, then the above subsampling technique is not appropriate, and an alternative must be agreed. As a minimum, the methodology for volatiles sampling will comprise the following:
 - At the time of collecting each subsample the visible and olfactory evidence of contamination at each location will be noted.
- Prior to the bulk mixing of subsamples, the material for volatiles sampling will be selected from that subsample.

A sample will be extracted for volatiles analysis from within the undisturbed mass of the selected subsample.

- Material from the outer surfaces of the subsample should be avoided as potentially volatile components may have already been lost.
- The sample should be placed into the appropriate sample containers and sent for laboratory analysis.
- Where sampling lags significantly behind the excavation works it is likely that volatile components will have been lost from the material on the exposed surface of the excavation prior to the collection of the validation samples.
 - In these cases the upper 0.2 m of material should be removed from the location of each sample/subsample and placed to one side.
 - The freshly exposed face should then be sampled.

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5.8 <u>Backfilling</u>

- Backfilling works will commence once excavation is complete, and any validation sampling has been undertaken.
- Exclusion zones will be in affect when works are being undertaken with strictly no unauthorised access in place.
- 4 A Permit to Enter Excavation will be issued before entering/working in any excavation.
 - Specific excavation details to be included.
- Excavation inspection to be completed and recorded daily by Site Supervisor prior to any personal entering any excavation.
- Backfilling of trenches and other excavations will be undertaken before nightfall, or a ramp will be left to allow any animals to easily exit. All excavations and trenches will be checked each morning throughout the construction period and prior to infilling for any animals that may have entered during the night.
- **4** Banksman to control plant movements with radios.
- All plant operators shall be trained, competent and hold the relevant qualifications held in site file.
- 4 Geotechnical membranes and/or markers shall be installed as per the specification.
- 🖊 Backfill material will be loaded into a dumper by an excavator.
- The material will be transported using dedicated haul roads to the required location to tip to an awaiting excavator.
- 4 All required plant will be controlled with:
 - o Banksman/s.
 - Two-way radios.
- 🖊 Backfill will be installed in layers by an excavator.
 - Each layer will be levelled and compacted.
- When backfilling works are being undertaken exclusion zones will be established and controlled with fencing and marshals.
- Once the working area has been completed, it will be protected by demarcation barriers to prevent access and subsequent damage to the surface.
 - Briefings will be given instructing site personal that there is no access permitted unless permission is given under instruction by Site Supervisor.
 - Appropriate signage will be placed and if needed Heras fencing will be erected as per manufacturer's installation design.
- Ensure that the finished level doesn't create additional hazards e.g. trip hazard, human health hazard.

5.8.1 <u>Backfill Material</u>

4 Backfill materials require verification against risk based chemical criteria.

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Materials for backfilling will be validated in accordance with the risk based chemical criteria contained within the Project Works Information.

Excavations will be capped as soon as reasonably practicable to provide protection to the formation before backfilling begins.

5.8.2 <u>Compaction</u>

The infill material will compacted using a vibrating drum roller as per the Core Specification and Project Works Information.

- WBV operating times will be calculated using the HSE's Whole-Body Vibration Calculator prior to works starting.
 - Operating times will not exceed the daily exposure limit value.
 - Operating times will be recorded.

A roller will be selected once geotechnical samples have been analysed and compared to compaction rates.

- A trained and competent operator will give the required number of passes to each layer of fill material. This shall be supervised and controlled.
- Care must be taken with the compaction of material when compacting adjacent to existing structures or near any assets.

5.8.3 Dressing Layers of Excavations

4 Once the excavation has been backfilled and compacted a dressing layer will be installed.

- This is to be installed to match the pre-existing ground level.
- Here Backfill material will be loaded into a dumper by an excavator.
- The material will be transported using dedicated haul roads to the required location to tip to an awaiting excavator.
- 4 All required plant will be controlled with:
 - o Banksman.
 - Two-way radios.

5.8.4 Backfilling Around Services

Services found need to be surveyed by the site engineer prior to backfill. Photographs will also be taken.

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- 4 Sand will be placed around the service to protect it from damage.
- Marker tape will be installed at least 75 mm above the crown (top) of the service during the backfill process.
- 4 Compact the layers of backfill material by hand until you have achieved this depth of cover.
- 4 Place material into excavation in layers and compact.
 - Depth of layers will be dependent on compaction equipment used and information regarding this will be briefed by the Site Manager.

5.9 Offsite Material Movements

5.9.1 <u>Import</u>

- When the lorries arrive to site, they will be met by a Banksman who will be positioned at the site entrance gate.
- The Site Rules and Traffic Management Plan will be issued along with a signing in sheet to show that the drivers understand and are aware of the procedures they must follow.
 - The Banksman will confirm the hand signals to be used whilst on site.
- The designated tipping point will change as works progress. This will be at the Site Manager's discretion.
- Recycled aggregates will be imported to site via 8 wheeled tipper lorries.
- The designated route stated in the Traffic Management Plan is to be followed by the lorry driver.
- The existing site access will allow for the lorries to drive forwards into the site and manoeuvre to the designated tipping area under the guidance of the Banksman.
- 4 Stop blocks will be positioned where required.
- 🖊 A Banksman will control the movement of lorries.
 - Lorries must not maneuverer without a Banksman present.
- Once the lorry is stopped at the designated tipping point, the driver will unlock the automatic tailgate latch from the cab. The lorry will tip its load.
 - If the tipper lorry is fitted with a manual release, the tipper lorry driver will release the latch.
 - The lorry driver will wear full PPE when exiting the lorry.
- After the load has been fully emptied, the driver will check and ensure the tailgate of the lorry is securely closed.
- After the load has been fully emptied, the driver will pull forwards to a safe location to allow the driver to check and ensure the tailgate of the lorry is securely closed.
- The driver will then follow the designated route back to the entrance gate and the Conveyance Note will then be signed before the lorry can leave site.
 - The Site Manager will make routine checks of the Conveyance Notes to ensure compliance.

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4 Wheel washing equipment and a road sweeper will be deployed as required.

5.9.2 <u>Disposal</u>

- When the lorries arrive to site, they will be met by a Banksman who will be positioned at the site entrance gate.
- The Site Rules and Traffic Management Plan will be issued along with a signing in sheet to show that the drivers understand and are aware of the procedures they must follow.
 - The Banksman will confirm the hand signals to be used whilst on site.
- 🖊 The designated loading point will change as works progress.
 - Loading may be undertaken in the stockpiling area or at the point of dig.
 - The loading area will be level and have suitable ground conditions.
- 4 8 wheeled tipper lorries will be used for the disposal of material.
- The designated route stated in the Traffic Management Plan is to be followed by the lorry driver.
- The existing site access will allow for the lorries to drive forwards into the site and manoeuvre to the designated loading point under the guidance of the Banksman.
- 4 Stop blocks will be positioned where required.
- 🖊 A Banksman will control the movement of lorries at all times.
 - Lorries must not maneuverer without a Banksman present.
- 4 An exclusion zone around the loading operation will be enforced by the Banksman.
- 4 The tipper lorry must sheet its load before leaving site.
- The Banksman will ensure that there is no loose material on the tipper lorry that may become dislodged during transit.
- Wheel washing equipment and a road sweeper will be deployed as required.

6. PPE

PPE is the last line of defence against the hazards identified. The following items will be used during all operations as a minimum.

The following PPE / RPE is required to be used as identified below:

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Standard PPE items:	
Hard Hat (BS EN 397)	Θ
Hi-Viz (BS EN 471)	
Safety Boots (EN ISO 20345)	
Gloves (BS EN 388)	
Glasses (BS EN 166)	

Additional PPE	items:	Required	Activity	Туре
Hearing Protection		X	Breaking, vacuum excavation, disc cutting.	Over ear defenders.
Goggles		X	Disc cutting.	BS EN 166 goggles.
Coveralls	K	X	Remediation works.	Coveralls.
Harness	F			
RPE		X	As per Safe System of Work.	FFP3 half mask.
Hand Protection		\boxtimes	Sampling works.	Nitrile gloves.

All required PPE / RPE shall be in accordance with relevant BS EN / ISO standards.

7. Competency / Supervision

Given the works to be completed the following competencies and supervision will be required onsite, all requirements stated below are in addition to the prerequisite CSCS / CCDO card. Copies of training shall be issued during site induction and retained onsite.

Role / Task	Competency
Site Manager	SMSTS / First Aid
Site Supervisor	SSSTS / First Aid
Operatives	Demolition / Asbestos Awareness
Excavator drivers	CPCS / NPORS
Banksman	Banksman / traffic marshal training

7.1 <u>Supervision</u>

The following table details any tasks that require direct works supervision and the names of the appointed supervisors:

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Activity	Supervisor Name	Date Appointed
Remediation Works	ТВС	

8. Permits

As part of Erith's risk control strategy permits are used for all high-risk activities, identified below are the permits applicable to these works and the duration for which the permits will be issued:

Permit	Applicable
001 – Hot Works	\boxtimes
002 – Harness Use	
003 – Ladder Use	
004 – Lifting Operations	\boxtimes
005 – Confined Space Entry	
007 – Break Ground	\boxtimes
008 – Enter Excavations	\boxtimes

9. Emergency Arrangements

Erith Emergency Response Plans (ERPs) are contained within the Emergency Response Plan document and displayed in welfare areas. Identified below are the relevant ERPs to the works being undertaken.

ERP Ref / Name	Applicable
ERP 001 – Accident / Incident	\boxtimes
ERP 002 – Fire	\boxtimes
ERP 003 – Asbestos Disturbance	\boxtimes
ERP 004 – Service Strike	\boxtimes
ERP 005 – Work at Height	
ERP 006 – Excavation	\boxtimes
ERP 007 – Confined Space	
ERP 008 – Spill of Hazardous Liquid(s)	\boxtimes
ERP 009 – Structural Collapse	\boxtimes

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ERP 010 – Security Breach	\boxtimes
ERP 011 – Unexploded Ordnance Discovery	\boxtimes

Please see Emergency Response Plan document for Erith's Emergency Response Plans.

10. Environmental Considerations

The following environmental considerations need to be applied when undertaking the works, the controls detailed below will ensure that the environmental risk factors are properly managed.

ltem	Control Method(s)	Applicable
Diesel/HVO Bund	Drip tray	\boxtimes
	Spill kit	\boxtimes
	Fire extinguisher	\boxtimes
COSHH Items	COSHH store	\boxtimes
products, etc.)	Fire extinguisher	\boxtimes
Fuel Barrels	Bund	\boxtimes
	Spill kit	\boxtimes
	Fire extinguisher	\boxtimes
LPG / Oxygen Cylinders	Locked cage	
	Fire extinguisher	
Demolition Dust	Water suppressant (dust boss / fire hoses etc)	\boxtimes
	Dust masks	\boxtimes
	Dust monitoring	\boxtimes
Noise	Section 60/61 working hours	
	Hearing protection zone	\boxtimes
	Ear protection	\boxtimes
	Noise monitoring	\boxtimes

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11. Risk Assessment

The table below is to be used to identify the major activity risks associated with the defined task, each identified risk activity has an associated activity risk assessment which details the site-specific controls to be adopted. Assessments identified below are reviewed and revised by site management.

USE OF 360 EXCAVATOR WITH ATTACHMENT	28
USE OF DUMPER	31
USE OF ROLLER	33
USE OF VACUUM EXCAVATOR	34
UNDERTAKING OF EXCAVATIONS	35
WORKING AROUND CONTAMINATED MATERIAL	37
WORKING NEAR UNDERGROUND SERVICES	37
ODOUROUS ACTIVITIES	39
WORKING AROUND SOILS CONTAINING ASBESTOS	39
STOCKPILE MANAGEMENT	40
EXPOSURE TO ASBESTOS	41
EXPOSURE TO LEAD	42
EXPOSURE TO DUST	43
EXPOSURE TO NOISE	44
EXPOSURE TO VIBRATION	45
MANUAL HANDLING	46
ZOONOSIS (INC. LEPTOSPIROSIS, PSITTACOSIS, ASPERGILLUS AND LYME DISEASE)	47
TRAFFIC MANAGEMENT ONSITE	48
ABRASIVE WHEELS AND ASSOCIATED EQUIPMENT	50

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HAND DIGGING AROUND SERVICES	.53

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	LIKELIHOOD				
SEVERITY	1 Very Unlikely (No known history)	2 Unlikely (Unlikely sequence of events)	3 Possible (Foreseeable)	4 Likely (Easily foreseeable – similar incident may have occurred)	5 Very Likely (Common occurrence – aware of incidents)
1 Negligible (No visible injury – no pain)	Low 1	Low 2	Low 3	Low 4	Low 5
2 Slight (Minor cuts, bruises – no long-term effects)	Low 2	Low 4	Low 6	Medium 8	Medium 10
3 Moderate (Heavy bruising, deep flesh wound. Lost time accident/property damage)	Low 3	Low 6	Medium 9	High 12	High 15
4 Severe/Major (Major injury/health issue)	Low 4	Medium 8	High 12	High 16	High 20
5 Very Severe (Long term disability of death)	Low 5	Medium 10	High 15	High 20	High 25
Risk Score	Priority Assessment Chart				
High 12 - 25	Additional control measures MUST be in place before the activity can proceed.				
Medium 8 - 10	Additional control measures are likely to be required.				
Low 1 - 6	May be considered acceptable (although action may still be possible to reduce the risk even further).				

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1. Hazards 2. At Risk Groups Hydraulic leak Ejected materials Erith employees Contractors Uncontrolled collapse Faling debris Visitors The public Striking Overloading shears Vulnerable groups Migrant workers Machine overfuming Jamming shears Implementation Severity Risk Level Before controls 5 5 25 State Site management to ensure operators are competent to CPCS/ NPORS standard. Prestart dynamic assessment of the working area to be carried out. Changes to ground conditions, weather, structure type, etc. should be checked and reported to the site manager if posing previously unassessed risks. Attend doily briefing and ensure working party are aware of activity and associated risks. Excavator to be fitted with FOPS/ ROPS and to be demolition specification. Undertake works as detailed in the demolition methodology. If it becomes necessary to deviate from the methodology the Site Manager must be informed, and the RAMS updated. An exclusion zone must be established around the area of work as per the requirements of BS4187. This exclusion zone may be smaller if a physical barrier exists to prevent any ejected material from traveling outside of the exclusion zone. Unauthorised persons are not to enter the exclusion zone when the machine is working, or if the structure has been left in an unsafe condition.	062	Activity	USE OF 360 EXCAVAT	ORS WITH ATTACHMEN	ī l
Hydraulic leak Ejected materials Erith employees Contractors Uncontrolled collapse Falling debris Visitors The public Striking Overloading shears Vulnerable groups Migrant workers Machine overturning Jamming shears Nigrant workers 3. Risk Rating Likellhood Severity Risk Level 8. Bits Rating Likellhood Severity Risk Level 9. Site management to ensure operators are competent to CPCS/ NPORS standard. Prestart dynamic assessment of the working area to be carried out. Changes to ground conditions, weather, structure type, etc. should be checked and reported to the site manager if posing previously unassessed risk. Attend daily briefing and ensure working party are aware of activity and associated risk. 4. Attend daily briefing and ensure working party are aware of activity and associated risk. Excavator to be fitted with FOPS/ ROPS and to be demolition specification. 4. Undertake works as detailed in the demolition methodology. If it becomes necessary to deviate from the methodology the Site Manager must be informed, and the RAMS updated. 4. An exclusion zone must be established around the area of work as per the requirements of BS6187. This exclusion zone may be smaller if a physical barrier exists to prevent any ejected material from traveling outside of the exclusion zone. 4. Unauthorised persons are not	1. Hazards 2. At Risk Groups				
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Machine overturning Jamming shears 3. Risk Rating Likelihood Severity Risk Level (Before controls) 5 5 25 4. Control Measures Site management to ensure operators are competent to CPCS/ NPORS standard. Prestart dynamic assessment of the working area to be carried out. Changes to ground conditions, weather, structure type, etc. should be checked and reported to the site manager if posing previously unassessed risks. A Attend doily briefing and ensure working party are aware of activity and associated risks. Excavator to be fitted with FOPS/ ROPS and to be demolition specification. Undertake works as detailed in the demolition methodology. If it becomes necessary to deviate from the methodology the Site Manager must be informed, and the RAMS updated. An exclusion zone must be established around the area of work as per the requirements of BS6187. This exclusion zone may be smaller if a physical barrier exists to prevent any ejected material from traveling outside of the exclusion zone. Unauthorised persons are not to enter the exclusion zone when the machine is working, or if the structure has been left in an unsafe condition. Two-way radio communication should be maintained between the bank's person and the machine operator. When fifting or changing the attachment the manufacturer's instructions are to be strictly adhered to. All pins and pin retaining systems are to be located and secured within the corresponding locking systems. Changeovers should be carried out on fi	Stri objects	king /people	Overloading shears	Vulnerable groups	Migrant workers
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(Before controls) 5 25 4. Control Measures 4. Site management to ensure operators are competent to CPCS/ NPORS standard. Prestart dynamic assessment of the working area to be carried out. Changes to ground conditions, weather, structure type, etc. should be checked and reported to the site manager if posing previously unassessed risks. Attend daily briefing and ensure working party are aware of activity and associated risks. Excavator to be fitted with FOPS/ ROPS and to be demolition specification. Undertake works as detailed in the demolition methodology. If it becomes necessary to deviate from the methodology the Site Manager must be informed, and the RAMS updated. A nexclusion zone must be established around the area of work as per the requirements of BS6187. This exclusion zone may be smaller if a physical barrier exists to prevent any ejected material from traveling outside of the exclusion zone. Unauthorised persons are not to enter the exclusion zone when the machine is working, or if the structure has been left in an unsafe condition. Two-way radio communication should be maintained between the bank's person and the machine operator. When fitting or changing the attachment the manufacturer's instructions are to be strictly adhered to. All pins and pin retaining systems are to be located and secured within the corresponding locking systems. Changeovers should be carried out on firm and level ground. When not in use, drip trays or plant nappies must be placed under hydraulic hoses and attachments when not in use. If a hydraulic leak is noticed the machine is to	3. Risk	Rating	Likelihood	Severity	Risk Level
 4. Control Measures Site management to ensure operators are competent to CPCS/ NPORS standard. Prestart dynamic assessment of the working area to be carried out. Changes to ground conditions, weather, structure type, etc. should be checked and reported to the site manager if posing previously unassessed risks. Attend daily briefing and ensure working party are aware of activity and associated risks. Excavator to be fitted with FOPS/ ROPS and to be demolition specification. Undertake works as detailed in the demolition methodology. If it becomes necessary to deviate from the methodology the Site Manager must be informed, and the RAMS updated. A nexclusion zone must be established around the area of work as per the requirements of BS6187. This exclusion zone may be smaller if a physical barrier exists to prevent any ejected material from traveling outside of the exclusion zone. Unauthorised persons are not to enter the exclusion zone when the machine is working, or if the structure has been left in an unsafe condition. Two-way radio communication should be maintained between the bank's person and the machine operator. When fitting or changing the attachment the manufacturer's instructions are to be strictly adhered to. All pins and pin retaining systems are to be located and secured within the corresponding locking systems. Changeovers should be carried out on firm and level ground. When not in use the shears should be stowed in a safe place in accordance with the manufacturer's instructions. When fitting to changing the datachment is to be shut down. Serious injury could result from contact with hot oil under pressure as well as ground/water contamination. All work is to be halted until such concerns have been addressed. Operator should operate the controls in a smooth and steady manner and avoid sharp or sudden movements that could affect the stability of the machine. A safe distance should be ma	(Before	controls)	5	5	25
 Site management to ensure operators are competent to CPCS/ NPORS standard. Prestart dynamic assessment of the working area to be carried out. Changes to ground conditions, weather, structure type, etc. should be checked and reported to the site manager if posing previously unassessed risks. Attend doily briefing and ensure working party are aware of activity and associated risks. Excavator to be fitted with FOPS/ ROPS and to be demolition specification. Undertake works as detailed in the demolition methodology. If it becomes necessary to deviate from the methodology the Site Manager must be informed, and the RAMS updated. An exclusion zone must be established around the area of work as per the requirements of BS6187. This exclusion zone may be smaller if a physical barrier exists to prevent any ejected material from traveling outside of the exclusion zone. Unauthorised persons are not to enter the exclusion zone when the machine is working, or if the structure has been left in an unsafe condition. Two-way radio communication should be maintained between the bank's person and the machine operator. When fitting or changing the attachment the manufacturer's instructions are to be strictly adhered to. All pins and pin retaining systems are to be located and secured within the corresponding locking systems. Changeovers should be carried out on firm and level ground. When not in use, the shears should be stowed in a safe place in accordance with the manufacturer's instructions. When not in use, drip trays or plant nappies must be placed under hydraulic hoses and attachments when not in use. If a hydraulic leak is noticed the machine is to be shut down. Serious injury could result from contact with hot oil under pressure as well as ground/water contamination. All work is to be holted until such concerns have been addressed. Operators should be reaited the comotions in a smooth and steady manner and avoid sharp o			4. Conti	rol Measures	
 and the keys removed. The operator should never attempt to apply unapproved upgrades or modifications to attachments. 	 Site n Presta cond mana Atter Excar Unde devia upda An ex of BSa eject Unau if the Two-v the n Wher adhe corre grour the n Wher attac If a h from is to k Oper or suc A saf wher The a weigh mach The a and f 	nanagement art dynamic litions, weath ager if posing daily briefi vator to be fi vator should data movem e distance should data movem e dis	to ensure operators are assessment of the workin er, structure type, etc. sh g previously unassessed ri ng and ensure working p tted with FOPS/ ROPS and as detailed in the demoli methodology the Site Mo e must be established ard clusion zone may be smo from traveling outside of sons are not to enter the s been left in an unsafe of mmunication should be rator. anging the attachment is and pin retaining syste cking systems. Changeow t in use the shears should 's instructions. drip trays or plant nappie n not in use. is noticed the machine is hot oil under pressure as til such concerns have be operate the controls in o nents that could affect the nould be maintained bet when the the shears should affect the nould be maintained bet and be aware of the weig and be aware of the aware of the weig and be aware of the	competent to CPCS/ NP g area to be carried out. hould be checked and re- sks. party are aware of activit d to be demolition speci- tion methodology. If it be anager must be informed ound the area of work as aller if a physical barrier e- the exclusion zone. exclusion zone when the condition. maintained between the the manufacturer's instru- ers should be carried out be stowed in a safe place as must be placed under the stowed in a safe place as most be shut down. Seriou as well as ground/water complete as a specific the machine body the stowed in a safe place as most be as a specific the machine body as a specific t	ORS standard. Changes to ground ported to the site y and associated risks. fication. comes necessary to , and the RAMS per the requirements xists to prevent any machine is working, or e bank's person and ctions are to be strictly d secured within the ton firm and level ce in accordance with hydraulic hoses and is injury could result ontamination. All work oner and avoid sharp e. and the attachment d the approximate ed the SWL of the ed in debris. ne must be shut down is or modifications to

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Operators should keep windows and doors closed during shearing. Any damaged glazing should be replaced as soon as is practical.			
Attachment Type: Bucket			
 Buckets to be free from damage. When discharging the material from bucket, ensure t Select the correct bucket for the task being carried of Only transport one bucket at a time, not placing buc Use of bucket changing area for storage 	he area is free from persons. out, e.g. toothed or ditching bucket. ckets within buckets.		
Operator Signature:	Date:		
Operator Signature:	Date:		
Attachment Type: Shear			
 Shears to be maintained and prestart checks to be a machine is marked with unique ID and SWL The shears are only to be used in the manner in which be used as a bludgeon to break or weaken a structure When undertaking demolition with the shear it is recar positioned in line with the tracks and over the front id maximum stability The shear should not be used in line with the boom a boom and strike the cab. The shears should be angles seen by the operator. Shear attachments are never to be operated if the orthey are damaged or have excessive wear. Shear attachments should be sharp, as blunt shears we can cause the shears to jam shut. Shear attachments are never to be operated beyon 	carried out to excavator ensuring h they were designed and should not ire. ommended that the tool be llers (drive sprockets to the rear) for s debris could roll/slide down the ed downwards so as to be clearly operator is aware or concerned that will fold rather than cut metal. This d their design limits. Date:		
Operator Sianature:	Date:		
Attachment Type: Pulveriser (Muncher)			
 Works to be completed at an open / exposed face. When working avoid having pulveriser facing upward Allow the hydraulic jaws to break the concrete / reborn through moving the machines arm. Only cut rebar that is of suitable size for the attachmed Pulveriser to be maintained and prestart checks to be machine is marked with unique ID and SWL 	ds ar – avoid pulling at the structure ent. e carried out to excavator ensuring		

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Pulveriser only to be used in the manner in which they used as a bludgeon to break or weaken a structure.	were designed and should not be
 Localised wetting down will be required when removin Concrete debris shall be periodically removed from flo overloading. 	or plates to minimise the risk of
Operator shall remove over hanging debris prior allowi	ing others to enter exclusion zone.
Operator Signature:	Date:
Operator Signature:	Date:
Attachment Type: Universal Processors	
 When working avoid having processors facing upward Allow the hydraulic jaws to break the concrete / rebar through moving the machines arm. Only cut rebar that is of suitable size for the attachmer Pulveriser to be maintained and prestart checks to be machine is marked with unique ID and SWL Pulveriser only to be used in the manner in which they used as a bludgeon to break or weaken a structure. Localised wetting down will be required when breaking 	ls - avoid pulling at the structure nt. carried out to excavator ensuring were designed and should not be g concrete.
Operator Signature:	Date:
Operator Signature:	Date:
Attachment Type: Selector Grab	
 Predominantly used for soft strip and materials process Grab should not be overloaded, and loose materials stated in the second of the state of the second of	ing hould be removed before slewing. vithin the attachment as when his will cause deformation / n cause damage.
Operator Signature:	Date:
Operator Signature:	Date:
Attachment Type: Breaker	
Operator to be aware of the weight of the breaker ag	ainst the SWL of the rig.

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 When breaking hearing protection zone will need to be established and operators will be required to wear hearing protection Wetting down will be continuously required. Local restrictions on breaking times (section 60/61) may apply. Breaking should be completed downwards to prevent ejection of materials. When breaking operator should have clear sight of breaking point "Dry stroking" to be avoided – breaker only to be operated when in contact with breaking medium (e.g. floor slab) Operator to be aware of size of breaker as when crowning the attachment could impact the cab of the excavator. Regular checks on chisel point to ensure optimal operation is achieved. 					
Operator Signature:	Operator Signature: Date:				
Operator Signature:	Operator Signature: Date:				
Lifting Operations with	<u>n Attachments (e.g. Wher</u>	<u>n using Magnet, Grab)</u>			
 Works will be completed in accordance with LOLER reg. 8: Planning - details of attachments to be used and capacity stated in SSoW / approximation of weight of items to be referenced in SSoW. Supervision - plant operator to hold valid CPSC lifting ops endorsement / or be supervised by trained slinger. Completed safely - Works area to be segregated and suitable loading/ lay down areas to be used. No person presents within slew radius and no overhead lifting. Plant will be equipped with required alarms and have load chart within the cab (magnet use only) If traveling with load, ensure ground conditions are suitable. 					
Operator Signature:		Date:			
Operator Signature:		Date:			
	4a. Additional Site-Speci	fic Controls / Informatior	1		
5. Risk Ratina	Likelihood	Severity	Risk Level		
(With controls)	1	5	5		
	6. Furthe	er Guidance			
 NFDC Demolition Guidance Notes LOLER BS474 Earth Movi 	n Attachment ng Machinery	 BS6187 Code of BS7121 Code of cranes CPA Guide CIG 	Practice for demolition Practice for safe use of 0801		
067 Activity					

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1. Hazards		2. At Risk Groups		
Vehicle overturning	Exhaust emissions	Erith employees	Contractors	
Collisions	Loading / unloading	Visitors	The public	
Crushing injuries	Excavations	Vulnerable groups	Migrant workers	
3. Risk Rating	Likelihood	Severity	Risk Level	
(Before controls)	3	5	15	
	4. Contr	ol Measures		
If used on public	highway - compliance v	vith the Road Vehicles (C	C&U) regulations.	
	ient plan to be always up	naerstood and adhered	10. ion ar convine due data	
	Prover Protection System (ROPS) must be fitted to the plant			
 Rollover Holech Dumper shall be 	marked with a unique ID	e nneu to the plant. I number and safe workir	na load (SWL)	
	d to perform tasks as inte	anded as per manufactu	rer's instructions	
 Dumper fitted with 	th an amber flashing bea	ncon and a reversing wa	rning system	
 Dumber fitted with 	th full operational seatbe	elts and areen flashing be		
Dumber fitted w	ith mirrors / CCTV to sa	tisfy 1 metre high at 1	metre distance visibility	
criteria.			,	
븆 Dumber fitted wi	th a fire extinguisher fitte	d in cab.		
🖊 Planned Prevent	ative Maintenance (PPM) to be scheduled by ma	anagement.	
Dumper shall be	inspected weekly by a co	ompetent person as requ	ired under PUWER 1998.	
📥 Stop blocks to be	e used to protect against	falling into excavations/	ítrenches.	
📥 Sufficient light t	o be provided for wor	k area, traffic routes c	and lights fitted to be	
operational.				
📥 Task-specific risk	assessment shall be com	pleted for 1 tonne (or un	der) high lift dumpers.	
🕂 Under no circum	stances shall passengers	be carried.		
🕂 Under no circum	stances shall mobile pho	nes be used while driving] .	
	ents completed and und	erstood before refuelling	or adding hydraulic oil.	
Spill kits and plan	it nappies to be used wh	en refuelling.		
Keys to be remov	ved from dumper when a	driver not in seat.		
Operator not to	drive across gradients we	ere tipping/rolling is likely.		
Operators shall	Operators shall carry out daily pre-start-up checks using the Erith Daily Plant Check			
Document. Operators to ensure tyres are to the correct prossure.				
 Operators shall u 	 Operators shall use the seat belt restraint and any other device fitted for sefe exerction 			
 Operators shall a 	 Operators shall always observe site speed limits 			
Operators are to	remove themselves co	mpletely from any non-c	cabbed dumpers when	
being loaded.	being loaded.			
Operators to ensure load does not obscure view.				
🔸 Operators to ens	ure all mirrors are suitably	positioned and undame	aged.	
Trained/competer	Trained/competent Banksman shall be provided for reversing and complex manoeuvres.			
🔸 Only be operate	Only be operated by trained/competent operatives wearing the correct PPE.			
🔸 Use all supplied f	븆 Use all supplied footholds / steps with three points of contact when climbing in and out of			
the cab.				
4	4a. Additional Site-Speci	tic Controls / Information		
5 Pick Pating	likelihood	Severity	Risk Loval	
	1	F		
	1	3	3	
	6. Furthe	er Guidance		

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📥 Manufact	urer's g	guidance / manual.	📥 HSG144 – Safe Us	se of Vehicles on
	ant Inte	erface Guidance		
	R Regu	liations	COSHH Assessme COSHH Assessme	ents
	– Safe	diions Use of Site Dumpers		315
068 Ac	tivitv			
	1 +	lazards	2 At R	lisk Groups
Vehicle overtur	nina	Exhaust emissions	Erith employees	Contractors
Collisions		Equipment failure	Visitors	The public
Crushing injur	ies	Excavations	Vulnerable groups	Migrant workers
3. Risk Ratin	g	Likelihood	Severity	Risk Level
(Before contro	ols)	3	5	15
		4. Cont	ol Measures	
Rollers are	e to be	operated by operatives	who are CPCS/NPORS t	rained and certificated
in its use.				
🔸 Roller's ce	ertificat	e of conformity is to remo	ain on site.	
🔸 If used on	public	highway - compliance v	vith Road Vehicles (C&U)) regulations.
A clear sa	itety zo	ne around the operating	areas.	
Irattic ma	inagem	nent plan to be in place	and signed onto by Ope	ratives.
	rotocti	nar inspection and stater	nent of nours to next served fitted to the plant	vice of service due date
		o perform tasks as intend	e inteu to the plunt. Jed as per mapufacturer	's instructions
Roller fitte	d with	an amber flashina heac	and a reversing warni	na system
Roller fitte	d with	full operational seatbelts		ng system.
Roller fitte	d with	mirrors / CCTV to satisfy 1	metre high at 1 metre d	istance visibility criteria
Roller fitte	d with	a fire extinguisher in the a	cab.	
Reversing	alarm	to be fitted, working and	audible.	
🖊 Planned F	Prevent	ative Maintenance (PPN) to be scheduled by ma	anagement.
📥 A compe ⁻	tent pe	rson shall inspect the Rol	ler weekly as required ur	nder PUWER 1998.
📥 Stop bloc	ks to be	e used to protect agains	falling into excavations,	(trenches.
🖊 Sufficient	light t	o be provided for wo	k area, traffic routes o	and lights fitted to be
operation	al.			
Under no	circum	stances shall passengers	be carried.	
	CIrcum	stances shall mobile pho	nes be used while driving).
	ssessme	ents completed and und	erstood before refuelling	or adding hydraulic oli.
	iu piui	ved from Poller when driv	ernetin seat	
 Reys 10 De Operator 	not to a	drive across aradients we	ere tinning/rolling is likely	
Caution is	to be	taken when Roller is to be	e driven up/down steel r	amps as may skid/slide
Operators	s shall	carry out daily pre-star	t-up checks using the I	Frith Daily Plant Check
Documen	nt.	, , , ,		,
Operators	s to ens	ure tyres are to the corre	ct pressure.	
📥 Operators	s shall u	se the seat belt restraint	and any other device fit	ted for safe operation.
🔸 Operators	s shall a	Ilways observe site speed	d limits.	
Operators	s to ens	ure all mirrors are suitably	positioned and undame	aged.
Trained/c	ompete	ent Banksman shall be pi	ovided for reversing and	I complex manoeuvres.
Only be o	perate	a by trained/competent	operatives wearing the	CORRECT PPE.
		4a. Additional Sife-Spec	inc Controls / Information	1

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*				
5. Risk Rating	Likelihood	Severity	Risk Level	
(With controls)	1	5	5	
-	6. Furthe	er Guidance		
🖊 Manufacturer's g	juidance / manual.	📥 INDG 175 – Vibra	tion	
PUWER Regulation	ins 1998		ents	
HSG144 – Sate Us	e of venicles on			
207 Activity		AVATOR		
1. H	lazards	2. At F	Risk Groups	
Sticking underground	Fumes	Erith employees	Contractors	
services		. ,		
Overnedd service	Collision	Migrant workers		
Ealling/injected				
materials	Excavator overturning			
Burst/leaking	. ,			
hydraulic hoses	Access/egress			
3. Risk Rating	Likelihood	Severity	Risk Level	
(Before controls)	3	5	15	
	4. Contr	ol Measures		
 The inferior of all controls and safety devices should be checked by the vacuum excavator operator for correct working before excavating commences. The correct function of the emergency stop buttons needs to be proven by testing following manufacturer's instructions. The emergency stop buttons should not be used to stop the machine in normal conditions but only in emergencies. All protective guarding and shielding should be in place and non-essential persons kept away from the danger zones of the excavator such as air intake or exhaust areas. If the excavator is to be positioned near to a trench or slope, a minimum distance needs to be kept. If the vacuum excavator has to be left unattended, the operation of the boom and excavator must be isolated, and keys retained by the operator. The maximum length of hose to be directly suspended from the end of a boom is specified by the manufacturer and must not be exceeded. Vacuum excavator operators shall be trained and competent to CPCS standard or equivalent. Vacuum excavator shall be checked/maintained/serviced by a competent persons at regular intervals as per regulation. Vacuum excavator shall be marked with a unique ID number. The excavator shall be positioned to allow work to be undertaken with sufficient hose reach, with minimal or no re-movement of the machine. Operator shall carry out daily inspections to accurately reflect the condition of the vacuum excavator. Any defects are to be reported to management immediately. Plant to be quarantined until repaired. 				

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- 4 A trained Banksman shall be provided to oversee the movement of vacuum excavator.
- A CAT scan shall be carried out of the area to be excavated prior to work commencing.
 Dust suppression systems to be utilised during works.
- Operators are to ensure all pedestrians are at a safe distance/location before commencing work.
- 4 The vacuum excavator operating area is to display warning signs and an exclusion zone.
- 4 Stop blocks are to be provided when operating near deep excavations.
- Operators to ensure vacuum excavators are left in a position that allows for their safe access/egress to the plant.
- Operators to wear mandatory site PPE during transit to and from the plant.
- 4 Vacuum excavator operator to follow routes defined in the Traffic Management Plan.
 - Operators shall always observe site speed limit.
 - If a truck-mounted vacuum excavator has to be moved on site, the boom must always be folded to the travelling position.
- 4 Suitable lighting for work areas/traffic routes and plant headlights to be operational.

4a. Additional Site-Specific Controls / Information

Axle weights and below ground services will be considered when moving the vacuum excavator onsite.

5. Risk Rating	Likelihood	Severity	Risk Level	
(With controls)	1	5	5	
6. Further Guidance				
🖊 Manufacturer's r	nanual/guidance	📥 Relevant COSHH	Assessments	
🖕 PUWER / LOLER		븆 Traffic Management Plan		
븆 SSoW for the task		📥 HSG144 – Safe Us	e of Vehicles on	

Construction Sites

028	Activity	LUNDERTAKING OF EXCAVATIONS			
1. Hazards2. At Risk Groups					
Collap excav	ose of ration	Ingress of water	Erith employees	Contractors	
Underm struc ⁻	ining of tures	Equipment and materials falling in excavations	Visitors	The public	
Undergrour	nd services	Falls from height			
Temporo	iry works	Dangerous atmospheres	Vulnerable groups	Migrant workers	
3. Risk	Rating	Likelihood	Severity	Risk Level	
(Before d	controls)	4	5	20	
4. Control Measures					

All excavations carried out in line with HSG47 – Avoiding danger from underground services. Services drawings are to be obtained and issued to the supervisor and all involved in the work.

- All excavations risk assessments must be completed in conjunction with the Risk Assessment – 029 Working Near Underground Services.
- Ground conditions must be understood (via boreholes) / surveys so excavation can be planned in terms of support (e.g., temporary works / battered / benched)
- Where there is risk of collapse the excavation must have a temporary works design for chosen support technique adopted – this includes design for batter / benching in terms of angle of repose for each soil type / condition (wet/ dry)

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- A Permit to break ground is to be issued by the site manager and all control measures followed.
- 4 A SSoW will be developed and must include:
 - Depth of the excavation
 - Soil types / zone of interest
 - Type of support (e.g., shoring, batter, benching etc)
 - The type of work involved, e.g. at the side of the road, in built-up areas, laying pipes etc.
 - The use of mechanical equipment, e.g. the types being used.
 - How close the excavation is to roads, water courses or structures.
 - Edge protection / access
 - Emergency arrangements
- 4 Never excavate next to an adjacent structure without authorisation.
- Ensure an Emergency Escape / Recovery must be provided as identified in the project Emergency Response Plan (ERP)
- Ensure an exclusion zone is in place around the works area. Barriers must be used to prevent access to the work area, segregate vehicles from the work area, and use edge protection.
- 4 Store spoil and materials away from the edge of the excavation minimum 2m away
- Where required use secured ladders to gain access / egress and never throw items to someone in an excavation.
- Trench support must be monitored continuously and at the start of every shift by a competent person, and results must be recorded.
- 🖊 All structures likely to be affected must be adequately supported.
- 4 All exposed underground apparatus must be adequately supported.
- 4 Adequate plant and equipment to undertake de-watering activities where required.
- Excavations to be backfilled as soon as works are completed.
- Emergency recovery equipment be in place for all ladder access excavations.
- Gas monitoring required in deep excavations where there is a risk of dangerous atmospheres forming.
- Check ground for contaminants prior to undertaking the works.
- Ensure that excavation is protected with fixed barriers to ensure persons cannot fall in. This is required out of hours in addition to during works.
- Excavation to be checked daily and no person to enter excavation following poor weather until they have been assessed.
- Dewatering to be established to ensure ground water is controlled.

🖊 All temporary works are to be checked by competent person weekly

4a. Additional Site-Specific Controls / Information

5. Risk Rating	Likelihood	Severity	Risk Level		
(With controls)	2	5	10		
6. Further Guidance					
HSG47 – Avoiding underground ser	g danger from vices.	 Erith SOP 013 – Temporary Works Erith SOP 028 – Permit to Work 			
 HSG150 – Health and safety in construction CIS64 – Excavation 		 Erith SOP 029 – C Erith SOP 027 – Se Erith SOP 033 – Ex 	onfined Spaces ervices / Utilities cavation		

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205	205 Activity _WORKING AROUND CONTAMINATED MATERIAL				
	1. Hazards 2. At Risk Groups				
TPH/ VOC	exposure	Manual handling	Erith employees	Contractors	
Lead po	bisoning		Migrant workers		
3. Risk	Rating	Likelihood	Severity	Risk Level	
(Before d	controls)	5	5	25	
	4. Control Measures				
↓ If co ↓ All co ↓ All co ↓ Air m ↓ Hygii ↓ No e ↓ Clec ↓ VOC ↓ Defir o	 If contaminated material is discovered during the works PPE shall include: Boiler suit-type disposable overalls. All contaminated PPE shall be disposed of in separate skip or container. Air monitoring shall be completed as required. Hygiene Unit will be available during the works. No eating, smoking, or drinking in designated works area. Clean and dirty protocols to be followed. VOC air monitoring to be carried out during works. If alarm sounds area to be evacuated and a new methodology developed. Defined stockpile areas to be stablished prior to works commencing (if required). Differing material types to stockpiled separately to avoid spread of contamination/dilution. 				
5. Risk	Rating	Likelihood	od Severity Risk Level		
(With c	ontrols)	1	5 5		
		6. Furthe	er Guidance		
📥 Erith	Manual Har	ndling Risk Assessment	+		
029	Activity	WORKING NEAR UND	ERGROUND SERVICES		
	1. 1	lazards	2. At R	isk Groups	
Contact electric telecom	with gas, , water, is utilities	Unchartered services	Erith employees	Contractors	
Risks of explo	fire and osion	Electric shock	Visitors	The public	
Loss of	service		Vulnerable groups	Migrant workers	
3. Risk	Rating	Likelihood	Severity	Risk Level	
(Betore d	controls)	4	5	20	
 Obto Com Use of to id Cab Servi Mining GPS 	ain utility dra oplete linesed Cable Avoid entify the loc le Avoidanc ces. mum standa recording.	4. Confi wings and they must alw archb4udig search - Ensu ance Tool (CAT) to locat cation of services within t ce Tool (CAT) must not rd for CAT is CAT4+ or Ezic	rays remain on site. No pl re you have the results of e services in conjunction he working area and mo be used without the G cat 750i – all CAT's used w	ans, no digging. The Linesearch checks. with the utility drawings ark up as you go. enny to locate buried will have date logging /	

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- All services will be marked physically onsite, specific no dig zones will be identified and demarcated onsite / on plans.
- Insulated tools will be used when hand digging.
- 4 Safe digging techniques will be used as per SOP and industry guides.
- Use safe digging techniques, hand dig trial pits to locate the position and depth of any known services and use the CAT every 300mm as you dig.
- 4 Mechanical plant and equipment must not be used within 500mm of any known services.
- 4 Do not handle or attempt to alter the position of an exposed service.
- Services must not be used to aid access into and out of excavations exposed services must be supported / protected.
- 🖊 Report any damage to services immediately and enact ERP.
- 4 Do not touch damaged electricity cables or look at the end of fibre optic cables.
- Flame retardant and ARC protective clothing must be worn in addition to all other standard PPE.
- If you suspect that a service has been damaged, the excavation must be evacuated immediately and made safe, do not allow anyone access, and make the site safe.
- If reporting a smell of gas or damage to the gas utility, the user should immediately call the National Gas Incident Line after the site has been made safe and secure.
- Use of road pins not permitted in areas of known services use of road pins must be authorised by senior management.
- If services can't be isolated, then working near them will require a SSoW and contact with the service / asset owner.
- Contact details for the asset owner to be held in the site office in case of accidental damage
 Ag. Additional Site Specific Controls / Information

a. Additional site-specific Controls / montation					
•					
5. Risk Rating	Likelihood	Severity	Risk Level		
(With controls)	1	5	5		
6. Further Guidance					
HSG47 - Avoiding danger from underground service		📥 Electricity at Wor	k Regulations 1989		

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201	Activity		:S				
	1. Hazards 2. At Risk Groups						
Odour r	nuisance	Breathing in odour	Erith staff / site operatives	Members of the public			
Oil remo	val works	Sludge removal works	Visitors (inc. client)	Migrant workers			
Plant / exh	naust fumes	Odour neutraliser					
3. Risk	c Rating	Likelihood	Severity	Risk Level			
(Before	(Before controls) 3 3 9						
 Envir EA n Cob active COS COS<	 Environmental Management Plan to be adhered to. EA mobile treatment licence obtained and are to be notified prior to works commencing. Cobra Hydro or similar odour suppressant installed and operational prior to odorous activities. Encircling the source will prevent wind taking the odour away from the neutraliser. COSHH Assessment for odour neutraliser. Daily Olfactory Odour monitoring to be undertaken at regular intervals and recorded. 24-hour VOC monitoring to be undertaken (real-time). Trigger levels to be agreed and set following background monitoring. Real-time monitoring in place; weekly environmental monitoring reports (summary) to be generated for issue to relevant third parties. Wind direction to be taken into consideration prior to odorous activities. Works to hold if a complaint is received, method to be reviewed. 						
4			,				
5. Risk	Rating	Likelihood	Severity	Risk Level			
(With c	controls)	1	3	3			
🔸 Erith Mar	Guidance – nagement ar	6. Furthe Including Site Waste ad Environmental Plan.	er Guidance				
206	Activity	WORKING AROUND S	206 Activity WORKING AROUND SOILS CONTAINING ASBESTOS				
	208 ACTIVITY _WORKING AROUND SOILS CONTAINING ASBESTOS						
Airbourne ashestos		Hazards	2. At R	isk Groups			
Airbourne	asbestos	Hazards	2. At R Erith employees	isk Groups Contractors			
Airbourne	asbestos	Hazards	2. At R Erith employees Visitors	isk Groups Contractors Members of the public			
Airbourne	asbestos	Hazards	2. At R Erith employees Visitors Young persons	isk Groups Contractors Members of the public Vulnerable groups			
Airbourne	A sbestos	Hazards Likelihood	2. At R Erith employees Visitors Young persons Migrant workers Severity	isk Groups Contractors Members of the public Vulnerable groups Risk Level			
Airbourne 3. Risk (Before	c Rating	Hazards Likelihood 5	2. At R Erith employees Visitors Young persons Migrant workers Severity 5	isk Groups Contractors Members of the public Vulnerable groups Risk Level 25			
Airbourne 3. Risk (Before	controls)	Hazards Likelihood 5 <u>4. Contr</u>	2. At R Erith employees Visitors Young persons Migrant workers Severity 5 ol Measures	isk Groups Contractors Members of the public Vulnerable groups Risk Level 25			

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- Excavations will be backfilled as soon as is practicable.
 - Existing site investigatory data to be reviewed prior to excavation.
 - Air sampling to be employed if required.
 - In the event of encountering suspected Asbestos Containing Materials (ACM) during work operations, take the following actions:
 - \circ $\,$ Stop work and contact the site manager or supervisor.
 - Keep people out of the area where there is suspected ACM.
 - Avoid touching any suspected ACM.
 - Begin wetting down materials.
 - Avoid inhaling any dust particles, put on RPE if possible.
 - Remove any contaminated clothing and decontaminate yourself.

Put contaminated clothing in a plastic bag and dispose of as asbestos waste. 4a. Additional Site-Specific Controls / Information -Likelihood Severity **Risk Level** 5. Risk Rating (With controls) 5 5 1 6. Further Guidance 🖊 CL:AIRE; Asbestos in Soil Guidance HSE; Managing and working with (CAR-SOIL) asbestos 089 Activity STOCKPILE MANAGEMENT 1. Hazards 2. At Risk Groups Falling material Leading edge Erith employees Contractors Falling/overturning Working at height Visitors The public equipment Material storage Machinery Vulnerable groups Migrant workers runoff Likelihood **Risk Level** 3. Risk Rating Severity (Before controls) 4 4 16 4. Control Measures 4 All operators must have the correct competence, training, and experience to operate the relevant machinery. 🖊 All machinery must undergo daily inspection checks before use, recorded on the correct forms. \downarrow Ensure the material being stockpiled meets the requirement of use. Unstable materials do not compact to form a stable surface and are more likely to fail or flow. 븆 The angle of response of the stockpiled material must be calculated, to avoid failure of the stockpile. \blacksquare The ground used for the stockpile should be on a firm, levelled, and stable foundation and properly drained. 4 Do not store material near a watercourse that could potentially flood. 🖊 Do not store material near drainage systems. Drainage systems near stockpile storage areas must be protected from runoffs. 4 The size of the area, irrespective of the type of stockpile, must be sufficient for mobile equipment to operate when dumping and loading out.

- Stockpile should not be formed under or in proximity to power lines. Access shall not be from beneath overhead power lines. High stockpiles should not be located where high wind conditions may suddenly occur.
- 4 Suitable access must be created to allow machinery access to the stockpile.

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- Ensure a ramp is created to allow safe access. The ramp angle should be such that it is compatible with the safe use of the appropriate mobile equipment.
- 4 A bund should be created on the edges of the stockpile.

Tipping or dumping:

- The lead up to the edge should be compacted and have an upward run to the tipping point. At the sides of the approach and at the tipping point.
- Form a bund at least the height of the axle of the vehicle used, with the width a minimum of twice the height.
- Operators should always ensure that they maintain a bund at the 'tip-head that will prevent the inadvertent movement of vehicles over the face.
- Operators of tracked plant must always be aware of their direction of travel, with the tracks forward facing.

Instability of the Stockpile/Tip:

- Stockpiles will be inspected and assessed under Temporary Works and recorded on the TW register.
- 4 Avoid simultaneous loading and stockpiling/tipping in the same area.
- 4 Ensure dumpers are level loaded to avoid instability of the machine and loss of material.
- Tipping should be carried out at a safe distance from where the loading is being performed.
- Heanksman/spotters should be used in areas of high risk of instability.
- Exclusion zones shall be present in non-operational areas, unstable surfaces, or edges to prevent unauthorized access.
- Consider excessive rainfall as it can have an impact on the stability of the stockpile, with additional inspections after heavy or prolonged rain.
- In Areas with high rainfall the construction of a water 'run-off' and collection system may be required. Specialist advice may be required for these scenarios.

4a. Additional Site-Specific Controls / Information

4					
5. Risl	< Rating	Likelihood	Severity	Risk Level	
(With	controls)	1	4	4	
		6. Furthe	er Guidance		
🖊 Qua	rry Regulatio	ns 1999	∔ ACOP: Health ar	nd Safety at Quarries	
006 Activity EXPOSURE TO ASBESTOS					
	1. Hazards 2. At Risk Groups				
Exposure mat	e to ACM erial	Dust inhalation	Erith employees	Contractors	
Mesoth (cancer o of the	nelioma f the lining lungs)	Asbestosis (scarring lungs)	Visitors	The public	
Pleural th	nickening	Uncontrolled fibre release	Vulnerable groups	Migrant workers	
3. Risk	Rating	Likelihood	Severity	Risk Level	
(Before	controls)	4	5	20	
4. Control Measures					

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- 🖊 A suitable asbestos survey must be completed and be available onsite.
- During works, be aware of common areas where Asbestos may be present, e.g. cement roof sheets, vinyl tiles, insulation materials, fire protection to doors, infill panels below windows etc.
- Where possible ACMs to be marked up prior to works commencing and removal works will be completed before demolition begins.
- In the event of encountering suspected Asbestos Containing Materials (ACM) during work operations, take the following actions:
 - Stop Work and contact the Site Manager or Supervisor
 - Keep people out of the area where there is suspected ACM.
 - Avoid touching any suspected ACM.
 - Begin wetting down materials.
 - Avoid inhaling any dust particles, put on RPE if possible.
 - Remove any contaminated clothing and decontaminate yourself.
 - Put contaminated clothing in a plastic bag and dispose of as asbestos waste.
 - Asbestos is classed as hazardous waste and must be removed by a specialist contractor.
- All waste carriers will have suitable EA Carrier license and provide consignment notes for waste.
- All Waste placed in suitable sealed containers and locked when not in use (e.g. sealed skip).
- Fine works area will be demarcated with warning signs placed at access points.
- Information, instruction, and training for Asbestos awareness are provided to employees who may disturb asbestos during any normal work.
- 4 All persons undertaking demolition works will be subject to FFW medical assessments

4a. Additional Site-Specific Controls / Information					
+					
5. Risk	<pre>c Rating</pre>	Likelihood	Severity	Risk Level	
(With	controls)	1	5	5	
		6. Furthe	er Guidance		
🔸 Con	trol of Asbest	tos Regulations 2012	📥 HSG248 – A Guid	le to Asbestos	
🔸 ACo	P 143 – Mar	nage and Working with	📥 HSG264 – A Surve	evors Guide	
Asbe	estos				
007	007 Activity EXPOSURE TO LEAD				
	1. H	lazards	2. At Risk Groups		
Exposure to	o lead dust	Lead paint on pipework	Erith employees	Contractors	
Exposure fun	e to lead nes	Lead sealants on buildings	Visitors	The public	
Lead cont	amination	Lead poisoning	Vulnerable groups	Migrant workers	
3. Risk	Rating	Likelihood	Severity	Risk Level	
(Before d	controls)	3	4	12	
		4. Contr	ol Measures		
A suitable survey of areas where there is potential lead is to be undertaken before works commence. Lead, including its compounds, is a substance that has long been known to have the potential to damage health. Excessive exposure can cause lead poisoning / long term health issues.					

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- If you are working with lead a SSoW must be in place and adequate on-site supervision will be provided.
- + The works area will be suitably demarcated, and warning signage erected.
- 4 Don't work with lead unless you have received all the information and training you need.
- Remove lead-based products prior to undertaking further works where possible (e.g., clean pipe work at cut locations prior to burning).
- All those involved in lead works will be subject to pre-job health monitoring and continual monitoring throughout / post the works.
- 4 Clear up and dispose of any lead waste as hazardous waste.
- Decontamination equipment to be provided close to each works areas. Always wash at the end of each shift and before eating and drinking.
- 4 Do not take any contaminated protective equipment home return it for safe disposal.
- 4 Contaminated clothing will be disposed of via the correct waste stream.
- 4 Only eat and drink in designated areas that are free from lead contamination.
- PPE shall include suitable coveralls and lead & dust respirator combination, or air fed helmets are to be used for the works.
- Works shall take place in well-ventilated areas, where required provide extract ventilation to control fumes / dusts.
- 4 Lead dust shall be removed by vacuum rather than through brushing.

4a. Additional Site-Specific Controls / Information

Likelihood	Severity	Risk Level				
1	4	4				
6. Further Guidance						
ead at Work Regulations	 HSG53 – Respiratory Protective Equipment at Work 					
_EXPOSURE TO DUST						
Hazards	2. At R	isk Groups				
Dust-related diseases; lung cancer, silicosis, lung disease, asthma, and dermatitis	Erith employees	Contractors				
Risk of eye irritation	Visitors	The public				
	Vulnerable groups	Migrant workers				
Likelihood	Severity	Risk Level				
3	4	12				
4. Contr	ol Measures					
/ equipment shall be fine e employed. itoring shall be carried a records are retained in pro- poing activities i.e. demolit tilation where possible. A l of practicable.	tted with dust capture out throughout the site, oject files. ion, shall be limited durin Local Exhaust Ventilation	systems or wet cutting especially at the site g periods of high wind. (LEV) system should be				
	Likelihood 1 6. Further ead at Work Regulations EXPOSURE TO DUST Hazards Dust-related diseases; lung cancer, silicosis, lung disease, asthma, and dermatitis Risk of eye irritation Likelihood 3 4. Contr 5 / equipment shall be fir e employed. atoring shall be carried of records are retained in pro- ucing activities i.e. demolit tilation where possible. A lot practicable.	Likelihood Severity 1 4 6. Further Guidance ead at Work Regulations HSG53 – Respirat Equipment at Work EXPOSURE TO DUST Hazards 2. At R Dust-related diseases; lung cancer, silicosis, lung disease, asthma, and dermatitis Erith employees Risk of eye irritation Visitors Vulnerable groups Uulnerable groups Likelihood Severity 3 4 4 Control Measures c / equipment shall be fitted with dust capture e employed. A itoring shall be carried out throughout the site, records are retained in project files. Juing activities i.e. demolition, shall be limited durin tilation where possible. A Local Exhaust Ventilation by practicable.				

Dust shall be kept below the Workplace Exposure Limit (WEL) of 0.3 mg/m³ over a Time Weighted Average (TWA) of eight hours.

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- A clean, well-maintained welfare facility shall be provided, and was including showers where dusty works are undertaken.
- Waste material shall be removed from the site regularly to prevent dust spread.
- Operatives will be given regular health screening, including lung function tests. This will fall in line with the company's fitness for work policy.
- Operatives shall be given information through a toolbox talk on silicosis and other related topics before and during the project.
- Ensure PPE (eye protection) and Respiratory Protection Equipment (RPE), including face fit testing, are provided for operatives and guidance on correctly using appropriate RPE.
- 4 Demolition works will be subject to continual wetting via hoses / dust boss or moto fog.
- 4 Stockpiles will be regularly wetted to minimise dust creation.
- Tipper lorries will be sheeted before leaving site.
- Any high dust readings / complaints will be investigated.

4a. Additional Site-Specific Controls / Information						
+						
5. Risk Rating	Likelihood	Severity	Risk Level			
(With controls)	1	4	4			
	6. Further Guidance					
🖊 CIS36 – Construc	ction Dust	븆 EH44 - Dust in the	workplace			
🔱 HSG53 – Respirat	tory equipment at work					
009 Activity	_EXPOSURE TO NOISE					
1.	Hazards	2. At R	isk Groups			
Permanent hearing loss	Threshold shift	Erith employees	Contractors			
Temporary hearing loss	Tinnitus – ringing, whistling, buzzing or humming in ears	Visitors	The public			
Headaches / disorientation		Vulnerable groups	Migrant workers			
3. Risk Rating	Likelihood	Severity Risk Leve				
(Before controls)	3	3	9			
-	4. Contr	rol Measures				
 When selecting procurement of In the event of reasonably praches in the protecti Where hearing protecti Where hearing enforce this & to Health surveillan Noise level mon boundary (if req Placing loud ma Limiting the amo 	plant, tools, and other e low noise equipment. noise levels being above ticable to enclose plant/ ve PPE shall be issued for protective PPE is required warn persons that they a ce shall be provided for a itoring shall be carried of uired). chinery, a good distance ount of time that loud equ	equipment, consideration the higher exposure lin (machinery, exclusion zon all persons entering the v d to be worn signage sh are entering an area of hig all operatives who work in ut around the site perime e away from operatives w upment is in use.	n shall be given to the nit of 85dbA & it is not nes shall be provided & vork area. nall be put in place to gh noise level exposure. n high noise areas. eter and within the site where possible.			

Provision of PPE either in the form of ear defenders or in-ear plugs shall be available to operatives whilst on site.

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 Isolating equipment in sound reduced or sound proofed areas where possible. Setting up screens and barriers to deflect sound away from working areas. Using absorption panels or walls where possible. Ensuring that equipment is securely fixed to prevent additional noise from vibration. Placing silencers on loud machinery or hiring machinery which has silencers preinstalled. Equipment shall be maintained at regular intervals to ensure compliance with section 60/61 requirements. Rotation of job role to limit exposure. Provision of visual alarms or other visual indicators in high noise areas Welfare areas to be protected from noise. Ensure noise-reducing covers are closed (e.g., those on generators). 						
+						
5. Risk Rating	Likelihood	Severity	Risk Level			
(With controls)	1	3	3			
	6. Furthe	er Guidance				
 The Control of Noise at Work Regulations 2005 INDG362 – Noise at work 						
010 Activity	_EXPOSURE TO VIBRAT	ION				
1. 1	lazards	2. At R	lisk Groups			
Hand arm vibration syndrome (HAVS)	Noise producing	Erith employees	Contractors			
Damage to structures	Dust producing	Visitors	The public			
	191	Vulnerable groups	Migrant workers			
3. KISK Kating (Before controls)	Likelinood	<u>Severity</u>	RISK LEVEI			
	4. Contr	ol Measures				
(Before controls) 3 3 9 4. Control Measures 4. Avoid using vibrating tools or equipment by introducing alternative vibration-free processes. 4. Where avoidance is not possible, consider safer ways of working to reduce vibration exposure. 4. Avoid undertaken vibration activity during extreme cold or inclement weather. 4. Equipment to be used in accordance with the manufacturer's instructions. 4. Equipment to be maintained and inspected by a competent person at regular intervals. 4. Select the lowest vibration tool that is suitable and can do the work efficiently. 4. Any defects to be reported to management and documented in the PUWER register. 4. Reduce the amount of time tools are used, e.g., job rotation, share the workload. 4. HAVS monitoring shall be carried out. Vibration exposure should not exceed the exposure action value (EAV of 2.5m/s²) and MUST NOT exceed the daily exposure limit value (ELV) of 5m/s squared per 8hr working period and records must be kept. 4. Health surveillance to be carried out by Occupational Health nurse on all person exposed to vibration. 4. Only trained, and competent operatives to operate vibration producing equipment. 4. Operatives shall wear the appropriate PPE for the task. 4. Report any ill health to management immediately.						

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Monitor use of equipment through recording trigger times All plant to be assessed (HAV) before use and details of trigger times provided to the operatives. Operatives to take regular breaks when using vibrating tools, ensure hand are kept dry and warm. 4a. Additional Site-Specific Controls / Information • 5. Risk Rating Likelihood **Risk Level** Severity (With controls) 1 3 3 6. **Further Guidance** Vibration at Work Regulations 2005 HSE – Vibration Calculator 🖊 Manufacturers Guidance / Manual 🖊 Occupational Health Provider HSE – HAV good practice guidelines Construction 013 Activity MANUAL HANDLING 1. Hazards 2. At Risk Groups Task – push / pull / lift / Load – size / weight Erith employees Contractors carry Individual – capability Environment - lighting, **Visitors** The public ground conditions / competence Vulnerable groups Muscle strains Cuts / burns Migrant workers Severity Likelihood **Risk Level** 3. Risk Rating (Before controls) 12 3 4 4. Control Measures 4 If handling the load cannot be avoided, consider using mechanised means to eliminate the manual part of the handling. Ensure workers are trained to use any equipment used. 4 If handling manually, assess the risks by completing a manual handling risk assessment. 4 Loads should be assessed by way of a test lift to determine if they are heavy, bulky or unwieldy, difficult to grasp, unstable, or the contents within likely to shift, hot, sharp or dangerous. 🖊 Make the load smaller or lighter to lift by unpacking / breaking down into smaller loads. 🖊 Only tackle jobs you can do – know your limits. 4 Use appropriate lifting technique, lift with legs not back. 4 Consider your environment – think about the ground where you are working. Is the ground uneven, icy or wet? Ensure suitable safety footwear is worn. 4 Adopt a safe lifting position and avoid twisting or jerking movements. Carry loads close to your body. 4 Where possible, lifting operations should be carried out in pairs or more where mechanical means are not viable. Plan your route – reduce carrying distances, check the environment is free from obstacles like debris or closed doors. 🖊 Ensure areas are well lit. Avoid trapping fingers or toes when you put the loads down. Appropriate Personal Protective Equipment (PPE) must be worn, including gloves. Operatives to be trained and information/guidance provided. Don't carry loads that obstruct your view.

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4a. Additional Site-Specific Controls / Information				
F Pick Pating		Likelihood	Soverity	Pisk Loval
J. KISK			Seveniy	KISK LEVEI
(With o	controisj	2	3	0
		6. Furthe	r Guidance	7
🗣 Man	Ual Ho	ndling Operations	 Erith Guidance 8 Erith Manual Han 	/ – Manual Handling
HSE -	- MAC Asses	sment		ding Assessment
016	Activity	ZOONOSIS (INC. LEPTOSPI	ROSIS, PSITTACOSIS, ASPER	GILLUS AND LYME
010	ACIIVITY	DISEASE)	• • •	
	1.	lazards	2. At R	lisk Groups
Vermin /	<u>deces</u>	Contaminated water	Erith employees	Contractors
contamina	ated items	Tick bites	Visitors	The public
Underlyin cond	ig health itions	Spores / mould	Vulnerable groups	Migrant workers
3. Risk	Rating	Likelihood	Severity	Risk Level
(Before d	controls)	2	4	8
.		4. Contro	ol Measures	
 All persons shall be made dware of any fisks at the site induction. All operatives shall wear appropriate PPE. All persons on site to maintain a rigorous hygiene regime especially when leaving a known contaminated area. Known areas of contamination to be excluded from access, with adequate signage and information communicated to all on site. Health surveillance for operatives to be carried to identify any early signs of infection. At risk groups shall not be exposed to contaminated areas. 				
 A good standard of housekeeping shall be maintained across site, particular attention shall be paid to kitchen and canteen areas, with all food waste being disposed of into a closed solid bin. No eating, drinking or smoking out on site. Hands and face are to be washed thoroughly before doing so. Dead rats/vermin are NOT to be handled without appropriate PPE and authorisation. System of reporting visual sightings of rats to management is to be established. Pest control systems are to be established on site as far as reasonably practicable. If risk is water borne, ensure waterproof PPE is worn, ensure all cuts have waterproof covers. Operatives to be issued with a Health card to be given to GP if taken ill. 				
 Psittacosis The contaminated area shall be treated with PX-Ornikill. Do NOT conduct any activity that is likely to create dust (e.g. avoid sweeping). Dampen down faeces before disturbing. Operatives shall wear the appropriate PPE, and RPE with fitted carbon filter. Do NOT touch dead birds with unprotected hands. 				

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- Do NOT eat, drink, or smoke in contaminated area, wash hands thoroughly after exposure.
- 4 Ensure contaminated area is appropriately isolated and signed warning of the hazard.
- Daily visual inspections to be carried out on exclusion zones to ensure adequacy.
- Ensure contaminated cloths are discarded, or adequately cleansed.
- Showers and Decontamination Units to be established in welfare were necessary.
- Contaminated area to be thoroughly cleansed using detergent after removal.

Aspergillus

- Identify areas of risk, normally found in old / derelict buildings.
- 4 Avoid working if have underlying health condition (lungs) or weaken immune system.
- Prevent dust creation utilise wetting down.
- 4 Wear RPE if dusts are created along with disposable PPE (gloves / coveralls)
- 🖊 Maintain good hygiene levels.
- Report any ill-health symptoms.

Lyme Disease

- Avoid/decrease the risk of tick bites avoid brushy, overgrown, grassy and woody areas, especially in spring and early summer when young ticks are feeding.
- Use personal protective measures: Prevent infection by wearing long sleeves shirts fitted at the wrist, long trousers tucked into socks or work boots and a hat. Light coloured clothing assists in spotting ticks. Wear protective gloves when handling dead animals.
- Perform tick checks: Check clothing every 3-4 hours for ticks and also at the end of the working day. Check any equipment also.
- Remove ticks early: Prompt removal of attached ticks (within 24 hours) can decrease the risk of infection. If a tick is found remove it using tweezers or a tick removal tool by gripping it close to the skin and pulling it away without twisting or crushing the tick. Wash the area as soon as possible with soap and water and apply an antiseptic cream. Check for a rash over the next few weeks and consult your doctor if a rash or other symptoms develop.
- Train and educate workers on the risks that ticks pose and how to avoid them. Workers should be able to recognise and know symptoms, sources of infection and prevention measures.
- Notify your employer if you find a tick on you, so that other workers are made aware of the hazard.

4a. Additional Sife-Specific Controls / Information					
5. Risk Rating	Likelihood	Severity	Risk Level		
(With controls)	1	4	4		
	6. Further Guidance				
Health & Safety a	at Work Act 1974	🜲 Gov. UK Psittaco	sis Guidance		
Management Re	gulations				
040 Activity	TRAFFIC MANAGEME	NT ONSITE			
1. н	lazards	2. At R	lisk Groups		
Vehicle striking people	Vehicles overturning	Erith employees	Contractors		
Falling from vehicles	Vehicles out of control	Visitors	The public		

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Vehicles touching	Vehicles driven by		
power lines	untrained drivers	Vulnerable groups	Migrant workers
3. Risk Rating	Likelihood	Severity	Risk Level
(Before controls)	3	5	15
	4. Contr	ol Measures	
🔸 Wherever possibl	e, the need for reversing	shall be eliminated by th	ne provision of a turning
circle or a one-w	ay system.		
4 Gates and barrie	ers shall be erected to co	ntrol site entry. The proce	edure for obtaining
access shall be c	lisplayed. Signage shall b	be erected to warn and i	nstruct users of traffic
routes.			
∔ Traffic marshals /	Banksman shall be empl	loyed to control vehicle e	entry / exit.
📥 An appropriate s	peed limit of 10 mph for	main traffic routes and 5	mph in areas near
pedestrians (e.g.	car parks) shall be set ar	nd enforced.	
斗 All vehicles enter	ing the site must follow th	ne site rules and designat	ted routes, adhering to
the site speed lim	nits whilst within the site c	onfines.	
🔸 Traffic routes sho	uld be clearly identifiable	e and areas where cross	over between vehicles
and pedestrians	is likely, gates/barriers sho	ould be set up with warni	ing signs to inform of
nazaras.			
	titions to be maintained by the pr	iovision of convex and co	oncave mirrors.
	allions to be maintained v	where possible, drains an	id poincies to be
	hatwaan vahiclas accas	ssing site and the site itsel	f will be maintained to
	tion around the site and	any possible stacking of	vehicles
	is maintained between a	drivers and the site and t	he arrival of vehicles
will be suitably pl	anned with Just-In-Time of	deliveries.	
Wherever possible	e, the need for reversing	shall be eliminated by p	rovidina a turnina
circle or introduc	ing a trained and comp	etent Banksman.	
Routes for pedes	trians and traffic shall be	segregated with barrier	walkways and
gateways. Walkv	vays shall be on firm, leve	el ground and well-draine	ed, taking a direct
route where poss	sible.		
🖊 Where walkways	cross roadways, provide	e a clear, signed and lit c	rossing point where
drivers and pede	estrians can see each oth	ner unobstructed.	
Do not block wal	Ikways, so pedestrians mi	ust step onto the vehicle	route; consider
installing a barrie	r between the roadway	and walkway.	
An exclusion zon	e shall be provided arou	nd any work area in whic	ch plant/equipment
	s for loading and unload	aing shall be provided.	
	a to pass plant of machin	hery, they should make it	nemselves known to
Plant vehicles sho	ould be fitted with a 'Dec	adman' switch	
A traffic manage	ment plan is required an	d is also required to be h	priefed out to the
operatives			
All persons shall b	be provided with informa	tion reaarding traffic rou	tes at the point of
induction.			
Any changes or a	activities which will affec	t which will affect traffic i	routes shall be covered
in the daily, pre v	vork briefing.		
All vehicles shall l	oe fitted with flashing am	nber warning beacons ar	nd reverse warning
systems.			_

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 All vehicle and p to. The site traffic ma Edge protection, bodies of water of All temporary struction Where necessary prevent contamination No parking in ress Sufficient lighting PPE is to be worm and plant/equip 	lant checks shall be carri anagement plan shall be including stop blocks sha or close to pedestrian rou uctures shall be protected a wheel wash system a ination of the public high idents' bays is permitted shall be always used, eit at all times whilst on site ment operators 4a. Additional Site-Speci	ed out and maintenance displayed throughout sit all be provided alongside ites. d from collision. nd/or road sweeper shal ways. at any time. her natural or task specif so that they can be clec fic Controls / Information	e schedules adhered e. e any excavation, I be employed to ic. arly identified by drivers	
5. Risk Ratina	Likelihood	Severity	Risk Level	
(With controls)	1	5	5	
	6 Furthe	er Guidance		
 Management of Health and Safety at Work Regulations 1999 Workplace (Health, Safety and Welfare) Regulations 1992 Traffic Routes under CDM 2015 Erith Traffic Management Plan Site-specific Induction 			der CDM 2015 Igement Plan ction	
075 Activity	ABRASIVE WHEELS AN		NENT	
1. 1	1. Hazards 2. At Risk Groups			
Noise, dust, vibration	Bursting of abrasive wheel	Erith employees	Contractors	
Ejected particles and/or sparks	Electricity	Visitors	The public	
Contact with abrasive wheel	Fire and/or explosion	Vulnerable groups	Migrant workers	
Retuelling	Likalihaad	Soverity	Pick Loval	
3. KISK Kating		Seveniy 5		
	4. Control	Measures	20	
 All personnel involved in the use of abrasive wheels and associated equipment shall wear the required PPE at all times including gloves, eye protection and respiratory protective equipment. Work that requires the use of abrasive wheels shall be carried out under the control of a hot works permit. NB. There should be a continuous fire watch of the hot works area as defined by company policy, on a risk basis. The correct abrasive wheel/disc for the task shall be selected by a trained and competent person. Abrasive wheels/discs shall only by changed by operatives who are trained and competent to do so. Abrasive wheels/discs shall be checked for defect by a trained and competent person before issue, first use and at all times prior to any subsequent use. Worn and/or damaged wheels/discs shall be removed, replaced and put beyond use. 				

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- Regular maintenance/inspections of abrasive wheel grinding/cutting equipment shall be undertaken by a competent person as recommended in the manufacturer's guidelines to ensure vibration levels are not increased by faults and as required under PUWER.
- 4 Statutory notices required by the Abrasive Wheels Regulations shall be displayed on site.
- 4 Any E-stops that are in place should be working and functional.
- So far as reasonably practicable, equipment with the lowest vibration output shall be selected.
- HAVS monitoring shall be carried out, the vibration exposure per operative shall be restricted to the minimum possible and under no circumstances exceed the daily exposure limit value.
- Task rotation shall be employed where tasks present the potential for operatives to exceed exposure limits.
- HAVS monitoring records are to be uploaded to EZone with hard copies kept within the site safety file and made available upon request.
- 4 A Health Surveillance programme for operatives shall be undertaken where applicable.
- An exclusion zone c/w appropriate warning signage shall be set up around the work area, and the work area cleared of all loose superfluous flammable items.
- Operatives involved in the use of abrasive wheels/discs shall remove loose clothing prior to use.
- Operatives with long hair shall take care that it does not come into contact with moving parts.
- Care shall be taken to ensure that all cables are managed appropriately to prevent slips, trips, falls and entanglement.
- Where abrasive wheel grinding/cutting equipment is to be used internally, an on-tool vacuum dust extraction system MUST be fitted.
- Provision shall be made to keep the area well ventilated, and operatives shall be issued with appropriate RPE (minimum standard FFP3).
- It is imperative that guards are in place when using abrasive wheel grinding/cutting equipment, under no circumstances shall operatives remove or bypass guarding.
- Any equipment found to be without the appropriate guarding MUST be removed from service and placed beyond use.
- Abrasive wheel grinding/cutting equipment shall be used in such a way that the operative is cutting and/or grinding away from their body.
- Under no circumstances shall abrasively wheel grinding/cutting equipment be used inverted or above head height.
- Under no circumstances shall abrasive wheel grinding/cutting equipment be left running whilst unattended.

Abrasive Wheel Cutting/Grinding Equipment c/w Internal Combustion Engine:

- Where abrasive wheel cutting/grinding equipment is powered by an internal combustion engine the following shall apply:
- Abrasive wheel cutting/grinding equipment should be placed within a plant nappy/drip tray to capture any spillage during the refuelling process.
- Abrasive wheel cutting/grinding equipment should be left to cool sufficiently to prevent inadvertent ignition of fuel during refuelling.
- Refuelling should only take place within the designated refuelling area which MUST be sited away from drainage and any source of ignition.
- Refuelling area MUST be equipped with fire extinguishers suitable for the class of fire that has the potential to occur.

4a. Additional Site-Specific Controls / Information

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5. KISK Kating	LIKEIINOOD	sevenity	RISK LEVEI
(With controls)	1	5	5
1	6. Further	Guidance	
 HSG150 – Health and Safety in Construction PUWER 1998 L22 - Safe Use of work Equipment HSG17 – Safety in The Use of Abrasive Wheels CIS54 - Dust Control on Cut-Off Saws Used for stone or Concrete Cutting Control of Vibration at work regulations 2005 		 L140 Hand Arm \ Manufacturer's r INDG461 – Using to Protecting You INDG463 – Contr Dust 	/ibration manual/guidance. Cut-Off Saws a Guide ur Lungs ol of Exposure to Silica
085 Activity		NCE	
1. H	lazards	2. At R	lisk Groups
Explosion	Property damage	Erith employees	Contractors
Death/ dismemberment	Plant damage	Visitors	The public
Fire		Vulnerable groups	Migrant workers
3. Risk Rating	Likelihood	Severity	Risk Level
(Before controls)	3	5	15
 Where there is prithe following constructions of a construction of a co	ior knowledge of the potentrols shall apply: ty shall be contacted for rdment impacts from be be made to existing des evacuation plan shall be public who may be in time of any evacuation. blan shall be briefed out formed, as part of the si	ential presence of Unexp any available informatic oth WW1 and WW2 for k top study/ information developed, and conside the immediate vicinity to all staff as part of the s te safety induction, of th	ploded Ordnance (UXO on relating to the density the area on which the regarding the possible eration shall be given to outside of the project site safety induction. e potential presence c
 Non-intrusive investigation methods i.e. Ground Penetrating Radar (GPR) shall be considered and if required shall be undertaken by specialist contractors. Excavation of any identified sensitive areas shall be supervised by a specialist contractor. If considered necessary excavation shall be undertaken in layers not exceeding 3m in depth with additional investigation by GPR being undertaken during excavation until the required depth is reached. In the event that UXO is discovered the following measures shall be undertaken: All site works shall cease immediately. 			

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4	Under no circumstances shall the object be touched or moved

4 The exact location of the suspected UXO shall be marked.

4 The site shall be evacuated to a predetermined safe distance.

- 4 The police shall be contacted by calling 999 to notify the nearest bomb disposal unit.
- Under no circumstances shall any unauthorised person re-enter the site until it has been declared safe to do so by the authorities.

4a. Additional Site-Specific Controls / Information					
*					
5. Risk Rating	Likelihood	Severity	Risk Level		
(With controls)	2	5	10		
	6. Furth	er Guidance			
 CIRIA Guidance C681 – Unexploded Ordnance – A Guide for the Construction Industry 					
087 Activity	HAND DIGGING ARC	OUND SERVICES			
1	. Hazards	2. At R	lisk Groups		
Contact with underground service during excavation	es Manual handling	Erith employees	Contractors		
Collapse of excavations	Members of the public entering the work area	Visitors	The public		
Slips, trips, and falls		Vulnerable groups	Migrant workers		
3. Risk Rating	Likelihood	Severity	Risk Level		
(Before controls)	3	5	15		
 A Permit to break ground is to be issued by the site manager and all control measures followed. A Safe Plan of Action (SPA) Assessment must be completed. Every attempt must be made to access utility/service drawings, before commencing work. The work area shall be scanned and surveyed using a CAT & Genny, with all services marked using Line Marker Paint before work commences. The CAT and the Genny must be used in all modes, including induction and/or connection mode for the Genny. Adopt hand digging technique where it is not feasible for works to be completed using a mechanical excavator, the location of services is unknown, or services identified within 500mm. Operative shall adopt and maintain good posture whilst hand digging, taking care not to exert excessive force throughout the task, and not force or drive digging tools into the ground in a spearing or spiking motion. Rounded insulated shovel shall be used to carry out safe digging. The use of picks, forks, and pinch bars is not permitted when working near underground services. Operative shall dig to the side of the presumed service location and not above it to minimise striking the cable or damages to other underground utility services. Carefully remove material from above the utility by scraping material off to the sides using horizontal digging techniques until services are exposed, do not apply force. 					

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 \blacksquare Ensure continuous scanning of the ground with the CAT & Genny as works progress. 🖊 Always remain vigilant for changes in ground condition and the appearance of potential services throughout the digging process, such as a layer of sand which could identify a service beneath it. 4 Extra care shall be taken whilst removing large rocks or boulders to avoid utility damage. \blacksquare Place barriers and signage around the open holes 4 Do not work in an excavation with water ingress. Where work is restricted due to water ingress, work must stop, and action shall be taken to remove water and restore visibility before commencing digging. 4 Excavations must be suitably supported, stepped or battered back to prevent them collapsing. Under no circumstances must an operative work in an excavation where there is a risk of collapse Always support and protect exposed utilities; do not use them to step in and out of excavations. Never backfill with hard materials to avoid damage to underground utilities. 4 Where a damaged utility has been identified, stop work and report immediately. \downarrow All operatives digging shall wear the correct PPE, flame retardant PPE when digging.

4a. Additional Site-Specific Controls / Information					
4					
5. Risk Rating	Likelihood	Severity	Risk Level		
(With controls)	1	5	5		
6. Further Guidance					
HSG47- Avoiding Dangers from Underground Services		 Erith RA 029 – Undertaking of Excavation Erith Permit to break ground 			

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Appendix A - GEA Site Investigation Report (attached separately)

DESK STUDY & GROUND INVESTIGATION REPORT

> 100 Grays Inn Road Holborn London WC1X 8AL

Client:

Lawn Mist Limited

J20106

September 2022



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100 GIR, Ground Dig levels vs bottom of existing slab 15.05.2023

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Appendix C - Sign Off Sheet

	Site			Date		
Briefing Title						
Person Delivering Briefing		ng Briefing	Signature	Job	Position	
Ву	signing I coi	nfirm that I hav given to	e understood the content me and will conform to it	of the attached of the attached of the state	locument / Briefing	
No.	No	ame	Signature	Company	Date	
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
Feedback						