# Method Statement

## Medius House

**MS004 – Piling Activities**

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| Status of This Revision | | | | |
|---|---|---|---|---|
| **Overall Approval Status** | | **Yes** | **No** | **Date** |
| Cat A | Accepted for implementation. Work may proceed as planned. | | | |
| Cat B | Accepted for implementation with comments incorporated | | | |
| Cat c | Not accepted for implementation. Resubmission required. | | | |
| Date Returned to Deconstruct (UK) Ltd Project Manager | | | | |

| Revision History | | |
|---|---|---|
| Date | Revision No. | Details of Revision |
| 20/09/19 | 00 | Initial Issue of Document |
| | | |
| | | |
| | | |

| | **Print Name** | **Signature** | **Date** |
|---|---|---|---|
| **Sign off by Client representative** | | | |

# Contents

| Section 1 – Project Details | | | |
|---|---|---|---|
| **Principal Contractor** | Royal London Asset Management | | |
| **Contract/Site Name** | Medius House | | |
| **Site Location** | Central London | | |
| **Job No** | **Revision** | **Date** | **Reference No.** |
| 52790 | 00 | 20/09/2019 | MS004 |
| **Work/Tasks to be Carried Out** | | | |
| • Core Drilling Basement slab for Piling Activities<br>• Piling works | | | |
| **Dates/Times the Work Will be Carried Out** | | | |
| **Date From** | 30/10/2019 | **Date To** | 04/08/2020 |
| **Daily Start Time** | 0800 | **Daily Finish Time** | 1800 |

| | Section 2 – Significant Hazards & Risks |
|---|---|
| | **Significant Details of Risk Assessment or Reference to Risk Assessment** |
| | **Manual Handling, Rotating auger, Exposure to noise & vibration, Piling Plant Operations** |

| Hazard | Identified at Risk | Uncontrolled Risk | Control Measures to be applied | Residual Risk |
|---|---|---|---|---|
| Operatives competence | Site based personnel | High | All operatives will hold a current CSCS card and cards relevant to their work. Operatives will undergo the site induction.<br>Operatives with correct level of training will be used for the task in hand. Operatives will be fit for work at the beginning of each shift. Operatives will attend daily safety briefings.<br>Operatives' performance will be monitored by site supervisor. | Low |
| Slips and Trip | Site based personnel | Medium | Ensure exclusion zones are in place with adequate solid barriers and signage. Exclude all other works within area.<br>All hydraulic hoses, cables and concrete lines will be routed out of walkways where possible.<br>Good Housekeeping practice will be observed at all times with waste regularly cleared to a designated area until removed from site. Safety footwear to be worn. | Low |
| Delivery Wagons | Site based personnel & the general public | High | Wagon to have wooden floor or rubber matting to reduces slips. Edge protection must be provided on lorry bed, to be fitted prior to man access. Safe means of access and egress to be provided to lorry bed. Loading/unloading operations or crane operation to be controlled by an appropriately trained banksman. | Low |
| Collision with men or equipment | Site based personnel | High | Movement of rig to always be controlled by a trained banksman. Exclusion zone is to be set up and all non-essential persons are to be removed from the area. | Low |

| Hazard | Identified at Risk | Uncontrolled Risk | Control Measures to be applied | Residual Risk |
|---|---|---|---|---|
| Failure of Drilling Rig | Site based personnel | High | Current inspection certificate, not more than 12 months old, to be provided with machine. Foreman to inspect the machine on delivery. Operator to inspect machine daily before use. Weekly inspection reports. Ensure hydraulic hoses are of the correct size and correctly fitted; daily / weekly rig inspections to identify if hydraulic hose replacement is required. | Low |
| Rotating auger (Restricted Access Piling) | Site based personnel | High | Only assessed and competent person to operate rig. No drilling is to be carried out without the appropriate interlock rig guarding in place, the interlock mechanism along with the emergency stop is to be checked daily to ensure correct operation before any drilling operations take place. The guarding is to cover the drill string from 0.5m from to 2m above ground level. Avoid loose clothing and maintain clean working area. | Low |
| Inadequate drilling platform | Site based personnel | High | Working Platform Certificate to be completed to confirm that platform is adequate before work commences. Machine is to be banked at all times whilst maneuvering on slopes. Piling Platform to be maintained throughout the piling operations. | Low |
| Manual Handling | Site based personnel | High | Use mechanical means where possible, such as winch and attendant excavator. Manual Handling training and toolbox talks. Good housekeeping to avoid trip hazards when lifting / carrying. Use correct tools for the job; don't improvise. | Low |
| Buried Services | Site based personnel | Medium | Permit to dig must be completed and issued by the Principal Contractor (PC) before any work commences. Services to be traced by a cable avoiding tool by a trained and competent person (PC). Any located utility apparatus must be uncovered by the PC. The permit to dig / excavate / break ground must be renewed at intervals no greater than seven days. | Low |
| Un-Exploded Ordnance Requirements | Site based personnel and the general public | Medium | Following the desk top study document ref: DA7499-00 of Castlewood House it has been categorised as 'Medium Risk'. In practice, this could involve pre-drilling the site at pile locations using a Magnetometer Survey to provide clearance. | Low |

| Hazard | Identified at Risk | Uncontrolled Risk | Control Measures to be applied | Residual Risk |
|---|---|---|---|---|
| Noise | Operatives and the general public | Medium | Noise monitors are to be placed around the perimeter of the project (in accordance with Camden approved CMP) with readings recorded throughout the duration of the works. Should excessive noise levels occur, the working method shall be reviewed in order to reduce noise pollution to an acceptable level. This will be documented within Deconstructs site safety file for reference/review.<br>Hearing protection will be employed by any operative working with/close to any sawing or breaking machinery.<br>Visible signage is to be posted warning of the dangers involved in the task.<br>A mandatory hearing protection zone and a 'hearing protection station' will be established by use of signage and chapter 8 barriers and all operatives directly involved in the works will be issued with suitable hearing protection.<br>All excessive noisy works will only be undertaken during the prescribed noisy hours of work laid down by Camden Council. | Low |
| Nuisance Dust | Operatives, Site Personnel, The General Public, Environmental | Medium | As far as practicable construction techniques will be adopted that minimise dust emissions.<br>Vehicles departing the project will be fully sheeted (where applicable) prior to leaving, this will prevent the likelihood of spoil leaving the back of tipper lorries during departure.<br>Traffic Marshals will be under instruction to inspect vehicle wheels prior to departure and where required, jet wash significant amounts of dirt or dust.<br>In the event of particularly wet weather, it is proposed that a visiting road sweeper will be utilised to provide additional support to keeping the highway clean. Typically, Traffic Marshals will maintain the cleanliness of the roadway as part of our maintenance regime around the site.<br>The site will be monitored for dust (PM10), noise and vibration. It is anticipated this will require the following monitoring stations: Four (4) No. dust (PM10) MCerts monitors set with 150µg/$m^3$ and 250µg/$m^3$ Trigger and Action levels. | Low |

| Hazard | Identified at Risk | Uncontrolled Risk | Control Measures to be applied | Residual Risk |
|---|---|---|---|---|
| Vibration | | | Vibration will be measured using a minimum 2No Din 45669 compliant (or similar). No of vibration monitors to be agreed. Monitors will be configured to send email alerts in the event of exceedance events.<br><br>The project team will maintain a diary record log of all site activities and on receipt of email alerts for any noise/vibration exceedances will inspect the works activities on the site at the time of the alert and review the methodology being used and investigate any further practicable B.P.M measures that may be available. A complete record log of all exceedances will be maintained detailing responses and actions taken. | |
| Groundwater | Environmental | Medium | Thames water discharge license required.<br>Groundwater to be filtered through DR10 silt buster/sediment tank prior to be discharged into sewers (pending Thames Water approvals). | Low |
| Piling in Close Proximity to Thames Water Sewer | Damage/ movement to Thames Water Sewers | Medium | Thames water sewers are above the level of the existing basement structure, therefore the risk of damage/movement to the structure is low.<br>Deconstruct/CBRE are to liaise with Thames Water to organise existing condition survey of the sewer prior to piling works commencing. | Low |
| Piling in Close Proximity to London Underground & Royal Mail Tunnels | Damage/ movement to London Underground Tunnels | High | It is known that the Central line tunnel locations are based on survey information received from London underground ltd, with potential inherent location uncertainty up to 400mm due to London grid conversion. Temporary and permanent piles/foundations have been designed with consideration of the location of the existing London Underground; structures and tunnels, ensuring that pile tolerances and tunnel location tolerances have been allowed for.<br>Acoustic specialist (Sandy Brown) has advised that further mitigation measures are not considered necessary.<br>Deconstruct/CBRE are to liaise with London Underground & Royal Mail to organise existing condition surveys and movement monitoring of tunnels before (baseline monitoring), during and after the works. | Low |
| Falling Materials | Operatives | High | Where work at height is being undertaken, an exclusion zone is to be established (by use of chapter 8 barriers) around the immediate work area to reduce risk of anyone being struck by falling materials/tools. Where this is not practicable, a banksman shall be put in place and all tools shall be tethered. | Low |

| Hazard | Identified at Risk | Uncontrolled Risk | Control Measures to be applied | Residual Risk |
|---|---|---|---|---|
| H.A.V.S. | Operatives | High | Deconstruct endeavour to use modern, effective and optimal hand tools in order to reduce HAVS exposure.<br>All operatives will work within the HAVS guidelines stated within each tools operating manual, their duration and the tools vibration level will be recorded to ensure that operatives do not become over-exposed.<br>An operative rotation system will also be employed. | Low |
| Electrocution | Operatives | High | All electrical tools are to be 110V, and are to be PAT tested (within 3 months) with the results held in the sites HS file.<br>Tools are to be inspected before each use, and a thorough inspection will take place once a week, with the results logged onto a PUWER register. | Low |
| Slips Trips & Falls | Operatives and the general public | Medium | Housekeeping is to be maintained to a good and safe standard. Workstations are to be cleared continuously as works progress.<br>Leads/cables are to be tied up off of the floor using sky hooks (or alike) to prevent slips, trip and falls or accidental damage.<br>Walkways/fire escapes are to be kept clear at all times. | Low |
| Manual Handling | Operatives | Medium | Operatives shall not be exposed to any manual handling or lifting they are not comfortable with, in any case no repetitive lifting over 25kg will be undertaken. All waste material shall be bagged, bundled, moved by wheel barrow or trolley.<br>All lifting to be undertaken by mechanical means where practicable with team lifting as a secondary alternative.<br>A manual handling assessment shall be undertaken for all team lifting scenarios detailing size, weight and shape of material to be lifted and distance/height it is to be transported. | Low |

| Hazard | Identified at Risk | Uncontrolled Risk | Control Measures to be applied | Residual Risk |
|---|---|---|---|---|
| Nuisance Dust | Operatives, Site Personnel, The General Public, Environmental | Medium | During the proposed works dust may be produced, particularly during the breaking out of the existing concrete/masonry structure. A dust suppression system shall be introduced consisting of a fine water spray if deemed necessary on site. This will be controlled and limited.<br>FP3 dust mask are available to all operatives should they be required and shall be mandatory to any operative directly involved or in close vicinity of the works.<br>Dust monitors are to be placed around the perimeter of the project with readings recorded throughout the duration of the works (by others). | Low |
| Vehicles striking persons in areas of restricted space during vehicle manoeuvres. | Site Personnel & General Public | High | All deliveries must be pre-arranged and manoeuvred into position under the supervision of a suitably competent person – Deconstruct will appoint a road traffic manager to oversee such operations.<br>**See risk assessment (Plant Movements) for controls of working around moving plant.** | Low |

In order to ensure that the greatest risks are addressed first it is necessary to be able to rank those risks.

To do this takes a subjective judgment of both the likelihood of damage occurring (the likelihood) and the potential damage that would occur if the worst were to happen (the severity). By assigning a value to each task's likelihood and hazard and multiplying those together a risk value for that task is established.

LIKELIHOOD - Probable Frequency (taking into account whatever precautions are currently being taken):

| | |
|---|---|
| Improbable Occurrence | Low |
| Possible Occurrence | Low |
| Occasional Occurrence | Medium |
| Frequent Occurrence | Medium |
| Regular Occurrence | High |
| Common Occurrence | High |

SEVERITY of the hazard:

| | |
|---|---|
| Trivial injury | Low |
| Minor Injury | Low |
| Major injury to one person | Medium |
| Major injuries to several people | High |
| Death of one person | High |
| Multiple fatalities | High |

RISK - The expression of the risk is then the sum of multiplying likelihood by severity as in the grid below:

| Likelihood | | | | |
|---|---|---|---|---|
| Severity | | High | Medium | Low |
| | High | High | High | Medium |
| | Medium | High | Medium | Low |
| | Low | Medium | Low | Low |

## Section 3 – Methodology & Sequence of Works

**Detailed sequence of work operations in a logical order, easily understood: -**
**Attach relevant drawings/sketches and/or technical information if required.**

**Introduction**

As part of the temporary and permanent works for the project, restricted access rotary bored piling works will be undertaken.

**Setting Out & Core Drilling for Early Stage Piling**

The piles will be set out from grid by Deconstruct's site engineer using an EDM (to hold in date calibration certificate). A trained and competent operative will then carry out a CAT scan to the areas to ensure that no services are located under the proposed core locations. Any possible services are to be clearly marked on the slab using line paint and also a drawing for record purposed (this will be attached to the permit to dig). The drilling works will be carried out using a 110V rig and track mounted motor equipped with a 550mm Ø core. The drill rig base will be initially fixed to the slab with an M12 mechanical fixing. The fixing requires a 20mm diameter hole to be drilled at approximately 75mm deep using a handheld 110V rotary drill.

The drill motor is water cooled. Water is introduced to the motor and the cutting head (core) to cool the motor and lubricate the diamond tips via a water swivel attachment on the motor. Water will be kept to a **minimum** when drilling but **must** be used to cool the diamond segments that are braised onto the end of the drill cores or the segments will overheat and tear off the cores.

The MDU motor will be offered to the rig column and holding clamps closed. Drilling will commence and once the required depth is achieved, the drill will be removed from the hole and the core will then be extracted from the inside of the core tube. The open hole will then be covered using 18mm plywood which will be drilled and fixed in position using an SDS drill and screw and plug fixings. This methodology would then be repeated for all pile locations.

**Mobilisation of Restricted Access Piling Equipment**


The site will be prepared for the piling with diamond drilling or concrete sawing. Generally, temporary piling will be undertaken using the existing basement slab as the piling platform. A services check will be undertaken, and a permit to dig issued. The piling rig will be mobilised to site on a low loader using the approved transport route, into Dyott Street. The ramps will be lowered, and plywood sheeting placed on the existing road surface as protection. The rig will then be tracked off the wagon, operated by remote control, and into the site. Rig access to the basement level is via the 5t beam and hoist, down to the basement level. The associated augers & drill casings and other sundry items of equipment such as toolboxes, and small tools will be delivered and unloaded by excavator.

A concrete pump, wash-out skip and fuel storage will then be delivered to site and established at basement level. Deconstruct will ensure all deliveries are pre-slung, have fall protection or can be unloaded by hiab or telescopic handler. Steel reinforcement cages and sand / cement will be delivered in handle-able loads and lengths and transported into site using the excavator to an area designated on site for pile cage storage.

**Piling Methodology for Restricted Access Piling**

The rig will be tracked over to each pile position and the mast raised to vertical using the built-in levelling system and checked with a spirit level. The centre point of the auger will be checked again by Deconstructs site engineer to ensure that the pile is in correct position. Should the rig need to be adjusted, the aforementioned methodology will be repeated until pile position is correct. Piles will be bored using the rotary bored, continuous flight, cased and augered technique. The casing will then be rotated through the slab and into any unstable fill and Gravels using rotation only until it begins to show signs of stalling. At this point, auger sections will be lowered into the casing in lengths of 1m and jointed using hexagon connectors. The auger will then be drilled down within the casing until it is in advance of the casing shoe by approximately one auger section length. The auger will remove the bored material followed by the casing being advanced over the top of the auger. This process will be repeated until strata that is able to maintain an 'open' bore is reached, assumed to be between 4m and 5m below the piling platform level. At this point the augers alone, will be advanced in sections until founding depth is attained. Manual handling of the auger and casing sections will be reduced using the rig winch and / or an attendant excavator, using a lifting bell or sling. Operatives will be protected from accidental entrapment in the auger by means of an interlocked wing guard, in compliance with current HSE guidelines. Drilling spoil will be cleared away from the rig by means of an excavator, removed from the basement by conveyor (or similar) and loaded into muck-away wagons on a regular basis. The excavator may also be used to assist with movement of augers, drill casings, concrete hoses and pile reinforcement. The bore will be drilled to tolerances specified in SPERW 3rd Edition, of positional tolerance 1 in 75mm and verticality 1 in 75.

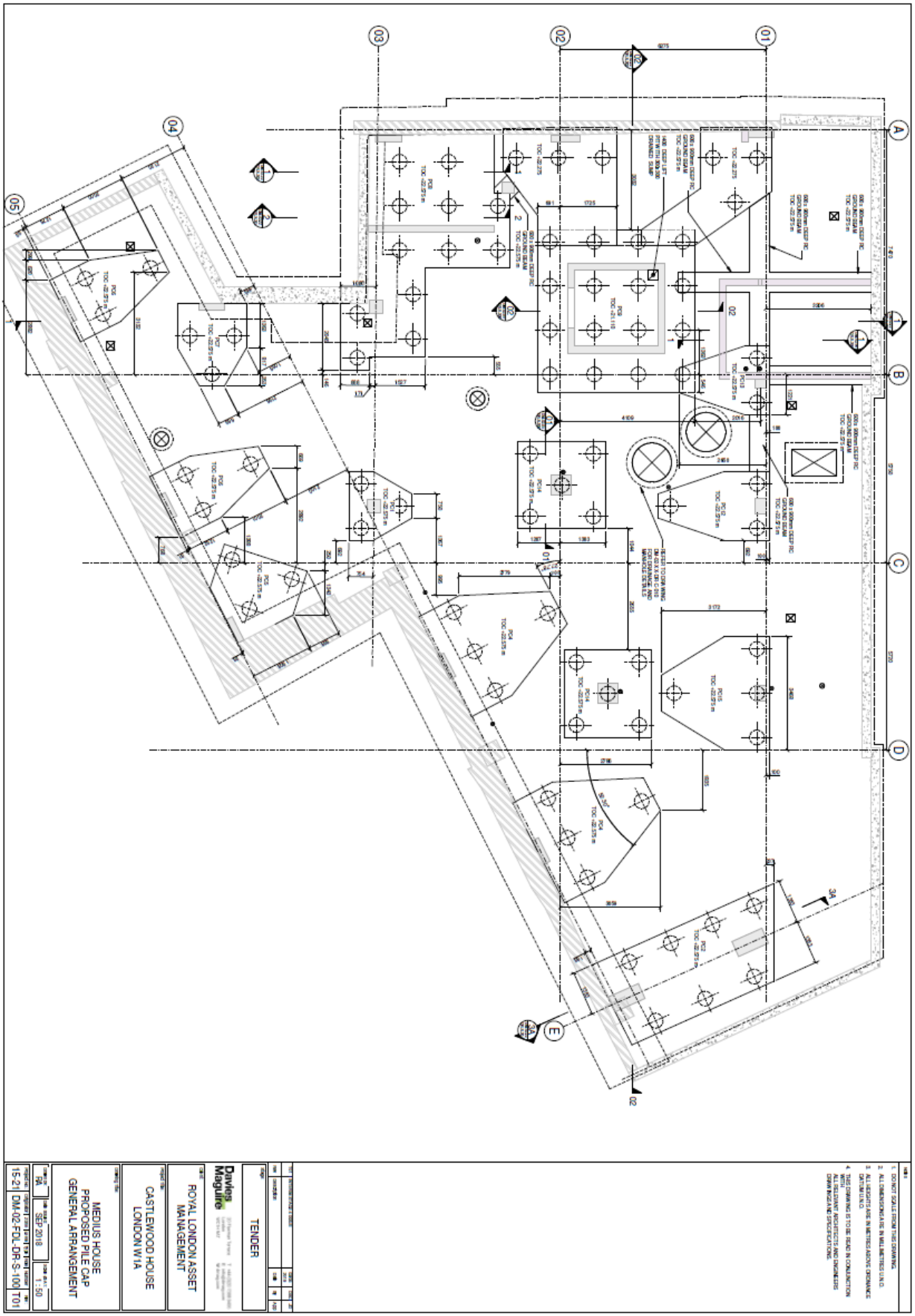
Once the founding depth has been reached, the augers will be completely removed from the pile in 1m sections, and the bore dipped with a weighted tape and the area cleared of excess spoil. Concrete is then pumped via a flexible 4" tremie-pipe to the base of the piles until full, and the temporary casings then removed in 1m sections, topping up the bore as necessary. The concrete pump and lines are to be cleaned in accordance with the procedure for cleaning concrete lines, with washout slurry being pumped into a washout box. The pile reinforcement will then be introduced into the open bore using the winch or an excavator in manageable lengths, lapped together as they are progressively installed. Skid spacer blocks will ensure concrete cover remains in accordance with the design.

For temporary façade retention piles, a steel Kingpost will then be lowered into the pile using the winch of the piling rig or similar. A steel trapping rod will be fed through a central hole the kingpost (when at the desired level), which will be rested against the existing basement slab. The kingpost will be levelled using threaded bar, which will be anchored to the retaining wall (this can be removed once the pile has cured).

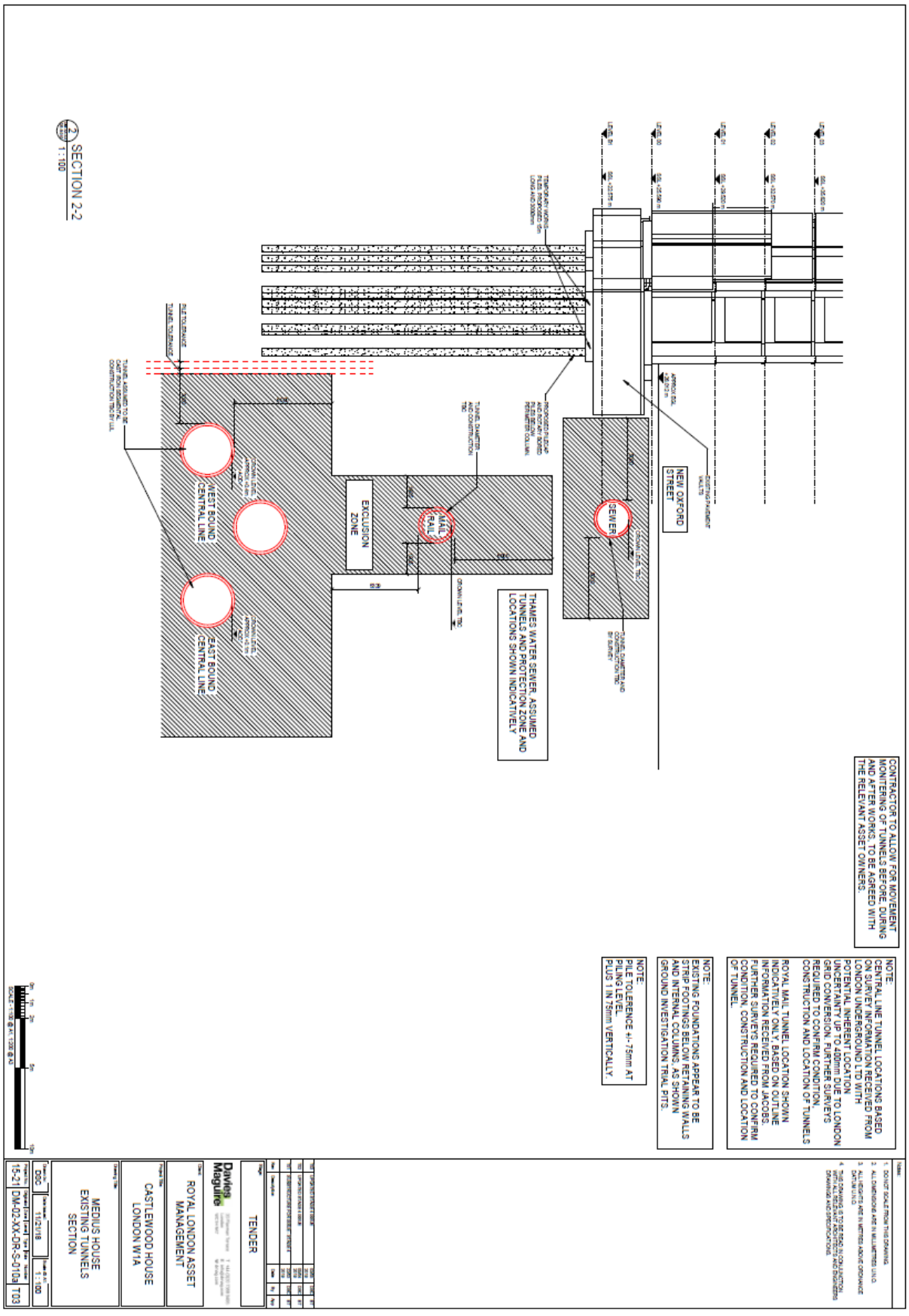
**Concrete Testing**

Cubes of 150mm³ will be prepared and tested at 7, 2x28 and 56 days. A slump test will also be performed on each concrete delivery to check the consistency of the concrete is compliant with specification. All piles can be subjected to a non-destructive pile integrity test by an independent testing house, after a period of 7 days has elapsed and following preparation of the pile head to cut-off level. However, for piles that are permanently bonded to the existing slab, integrity testing may not produce representative results.

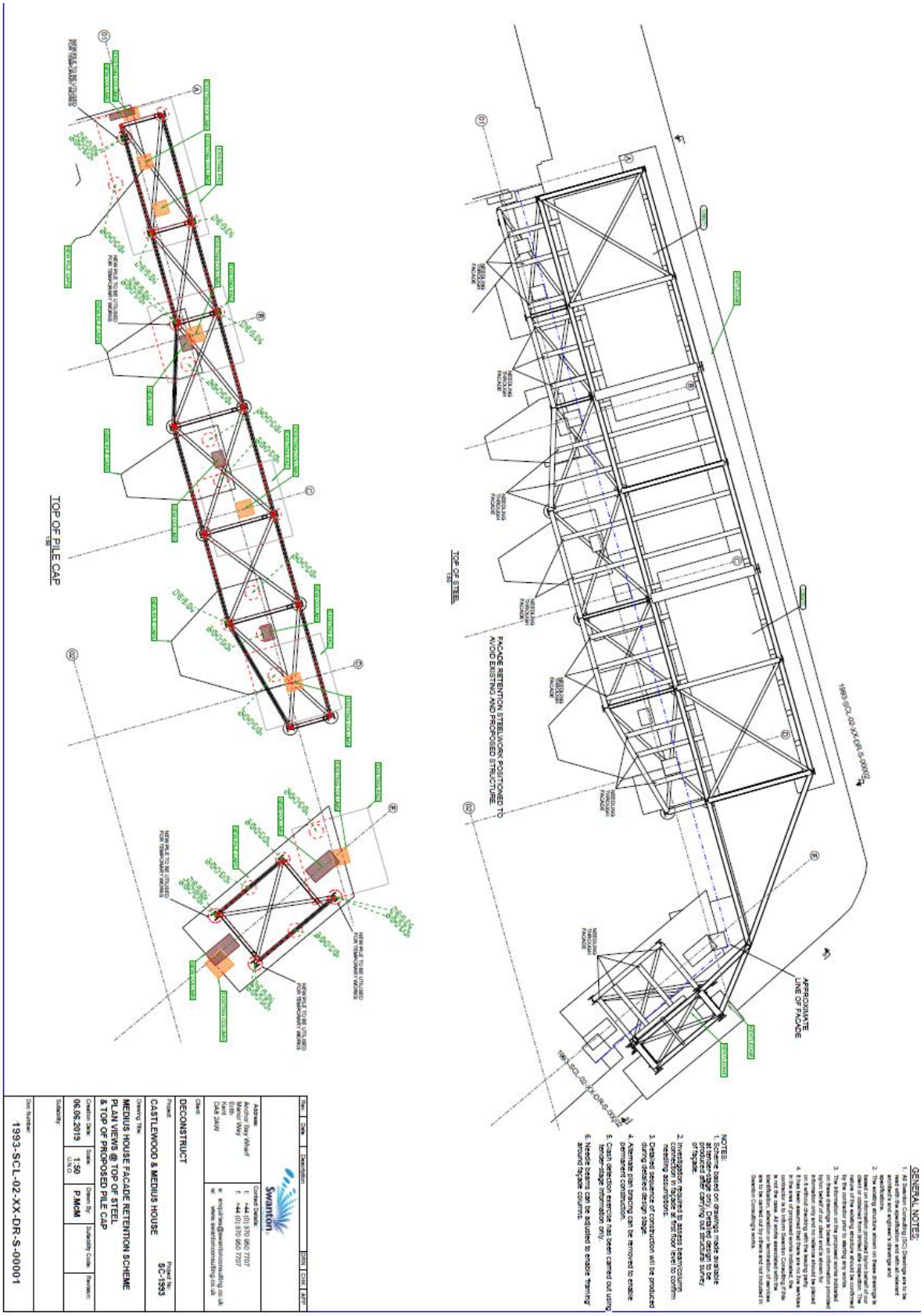
## Piling Layout



## London Underground Tunnel Locations & Thames Water Sewer Location Plan



## Temporary works at B1 Level



**Preliminary Pile Design**

| Quantity | Type | Characteristic Load (kN) | | | Length (m) | Reinforcement |
|---|---|---|---|---|---|---|
| | | Compression | Tension | Horizontal | | |
| 83 | Restricted Access Bored | 850 | 0 | 0.5% Compression | 20 | 6B20 |
| 18 | King Post | Refer to TW Design | | | 16 | Universal Column |
| 8 | Tower Crane | 500 | 300 | 50 | 25 | 6B25 + 40mm GEWI central bar |

The piles are based on restricted access bored piles using 508mm OD casing with a 450mm auger string.
The preliminary design for restricted access piling is based upon maximum temporary casings of 5m being required, with piles being bored thereafter in dry and stable conditions.
We have assumed that piling will be undertaken from the existing basement slab which will be broken out locally and backfilled with a suitably compacted boreable material to a platform level of 22.400m AOD.

**Section 4 – Resources**

**Number of operatives anticipated to be on site and minimum to carry out the works safely:**

Driller / Supervisor (SMSTS, CPCS, Lift Supervisor, Occupational Work Supervisor NVQ level 3, 1st Aider)
Driller's Assistant (CPCS Piling Rig Attendant, Slinger / Signaller)
Concrete Pump Operator/ grout plant operator (CPCS Trailer mounted concrete pump)
Labourer (CSCS Construction site operative)

**Plant, equipment and materials to be used**
**To include details of inspection/certification requirements.**

| | |
|---|---|
| Hutte 203 MP | Yearly thorough examination certificate |
| Concrete Pump | PUWER inspections |
| Attendant excavator | Yearly Thorough examination certificate |
| 5t Hoist and beam | Yearly Thorough examination certificate |

**Section 5 – Access / Egress / Work at Height**

**Details of access and egress to work areas:**

Access to the works areas is via the designated site routes, ramps and/or staircases. All routes are to be kept clear of tools, materials waste and leads at all times

**Specific detailed description of safe working at heights/prevention of falls:**

**Hierarchy for managing and selecting equipment for work at height.**

| | Equipment | Selected Equipment | | | Details of use, also give reasons why equipment is not used. |
|---|---|---|---|---|---|
| | | To be used | N/A | Not suitable | |
| 1 | MEWPS Scissor lifts, cherry pickers etc. | | | ✓ | |
| 2 | Scaffolding/Fixed Guardrails | ✓ | | | To be fixed to all leading edges/open excavations |
| 3 | Mobile Towers | | | ✓ | |
| 4 | Safe Stands | | | ✓ | |

| | | | | | |
|---|---|---|---|---|---|
| 5 | Podium/access platform with guardrails. | | | ✓ | |
| 6 | Stepladders | | | ✓ | |
| 7 | Ladders | | | ✓ | |
| 8 | System Safety Decking | | | ✓ | |
| 9 | Nets/Airbags / other soft landing systems | | | ✓ | |
| 10 | Safety Harness/Safety Lines | | | ✓ | |

**Detail of work at height**

Works at height will include unloading and loading of delivery wagons; edge protection must be provided on lorry bed, to be fitted prior to man access.
A safe means of access and egress is to be provided to the lorry bed (built-in access steps or a short ladder with fixing points or similar).

**Section 6 – Protective Measures**

**Protection needed for any other persons**

| Other employees (✓ if required yes/no) | Yes | No | Employees of others (✓ if required yes/no) | Yes | No | Members of the Public (✓ if required yes/no) | Yes | No |
|---|---|---|---|---|---|---|---|---|
| | ✓ | | | ✓ | | | ✓ | |

**Detail procedures**

Exclusion zones as described in section 3.
External scaffold to all open elevations fully protected to prevent items of debris falling to the lifts below.
Operatives will report to site management/site office before the work shift starts. All operatives are encouraged to integrate with the surrounding workforce.
Full PPE is to be warn onsite at all times.
The working area is to be an exclusion zone to any other personel other than Deconstruct piling operatives.
Site access doors are to be locked at all times to prevent trespassers.
It is expected that all operatives remain courteous to one another other, to other trades, and to the public when working on site. Operatives are encouraged to always ensure that communication is
open between themselves and the various trades, to minimise the opportunity of risk. Others who are not involved in these works and who may be adversely affected by our operations will be segregated from the work areas by means of safety barriers/signage where required.

| Signage | Is site specific signage required? (✓ if required yes/no) | Yes | No |
|---|---|---|---|
| Detailed below | | ✓ | |

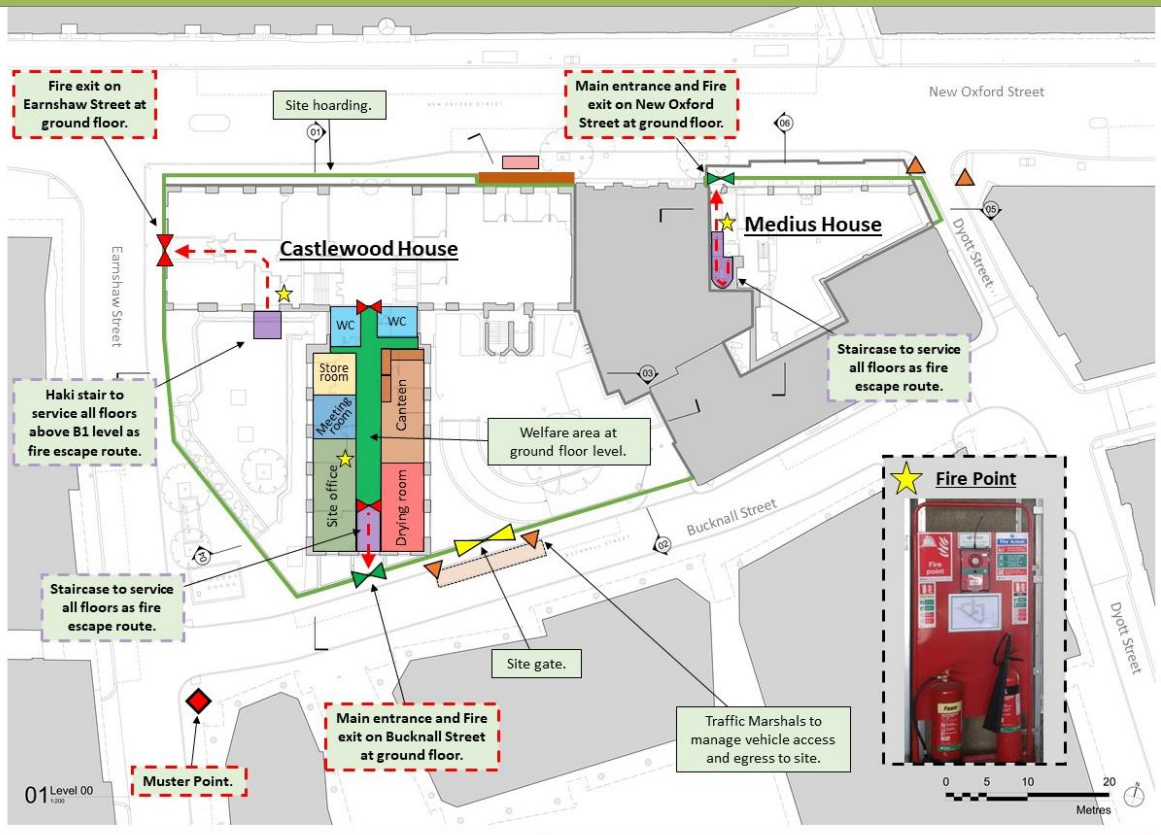
**Full details below**

## Section 7 – Emergency Procedures

### Description of any site/task specific emergency/rescue and fire procedures

All Deconstruct emergency procedures, first aiders, first aid box locations, fire points and the assembly point will be explained to all operatives at their site safety induction and will be adhered to by all operatives.
A first aid box is to be kept in site offices.
No operatives shall enter site until they have attended the Site Induction.
Deconstruct will be briefed on the site rescue plans which will cover all operations. All operatives will be briefed on this prior to any work being undertaken.
In addition, all operatives are instructed to communicate with their fellow workmates and the site management (where applicable) in the event any emergency occurs (fire, first aid, bomb threat, etc.) to minimise the opportunity for risk and further potential injury/damage. At no point should operatives attempt to fight fires, administer first aid (unless fully qualified to do so) or otherwise put themselves or others in further danger; all operatives are expected to use a common sense approach in these situations and not attempt to become a hero. Operatives/employees will be told where the nearest hospital location will be during their site induction.

### Ground Floor Fire Plan




Castlewood House and Medius House Ground Floor Fire Plan

### For out of hours emergency contact

| First Name | Surname | Contact Number |
|---|---|---|
| Steve | Gillam | 07930 545969 |

### Who will be the First Aider on site

| First Name | Surname | Training Course/Date |
|---|---|---|
| Steve | Gillam | FAW Expires 30/09/2022 |

| Section 8 – Materials Handling & Storage |
|---|
| **Site specific arrangements for delivery, stacking, storing and movement on site of plant/materials** |
| All deliveries to be booked in with the logistics team.<br>All deliveries / collections will be undertaken onto site via designated delivery routes using the specified materials entrance provided, where applicable. All site-specific logistics for deliveries/collections will be adhered to.<br>Tools, equipment or materials requiring secure storage will be stored safely either within a designated storage area on site (i.e. site box or pre-determined secure location agreed with site management). |

| **Is a manual assessment required (✓ if required yes/no)** | **Yes** | **No** |
|---|---|---|
| | ✓ | |

| **Manual Handling Details** |
|---|
| Manual handling assessments shall be assessed and undertaken on a task specific basis by the project manager on site as required.<br>Employees are to lift a maximum of 20kg as a guideline only. This weight may be varied depending on the strength of the employee, size of the object, site conditions, quantity to be moved and the distance to travel with the loads. Check all ground conditions prior to carrying out manual handling activities, including slippery surfaces due to weather conditions (rain, ice, snow).<br>All operatives are to complete the Deconstruct Manual Handling Self-Assessment form where there is any doubt with manual handling techniques required for each task they carry out.<br>Mechanical lifting equipment to be used where practicable such as barrows, trolleys, winch, Site excavator, telescopic hander or site crane. |

| Section 9 – Environmental Considerations |
|---|
| **Environmental controls** |
| Diesel will be stored in double bunded containers with 110% bund capacity. A spill kit will be located adjacent to COSHH area. In the case of a fuel leak the spill kit will be deployed and the spillage will be contained, and all surrounding watercourses and drains will be protected.<br>Noise pollution will be minimised by using electric tools in lieu of petrol/diesel tools where practical, and noise mitigation barriers.<br>A jet wash will be used to clean the wheels of traffic leaving the site during bad weather or when deemed necessary. Otherwise proprietary road sweepers will be hired.<br>There are to be no noisy work activities outside normal site working hours which are 8.00am – 6.00pm. If it is envisaged that a noisy task will be carried out outside these normal working hours, then prior permission is to be obtained.<br>The working environment is surrounded by public area. Any person using loud, offensive language will be removed from site immediately.<br>The latest low vibration emitting tools are selected; where the risk of vibrations from our work activities may affect the stability of surrounding structures, operatives are encouraged to discuss this with their Managers and site management before starting. |
| **Description/frequency of clearance of debris.** |
| All waste materials to be segregated and removed from the project via skips or muck-away wagons. Waste will be cleared during quiet times to a designated area. |

| Section 10 – Noise / Vibration / COSHH | | | | |
|---|---|---|---|---|
| **PPE, Noise assessment, Vibration assessment (HAVS), COSHH assessments and permit to work procedures** | | | | |
| **Is a noise assessment required? (✓ if required yes/no)** | | **Yes** | ✓ | **No** |
| **Full details below: Hand tools detailed below. Heavy plant TBC in CMP & Section 61 Noise predictions.** | | | | |
| **Type of machine** | **Name of machine** | **dB (A) max. at source** | **Area of use** | **Ear protection requirements and type** |
| Drill rig | Hutte 203D-4F | >85dB(A) | Piling area | BS EN 353 part 3 – SRN30 |
| Concrete Pump | PM55 | >85dB(A) | Piling area | BS EN 353 part 3 – SRN30 |
| Angle Grinder | Makita GA9020 | >85dB(A) | All Areas | BS EN 353 part 3 – SRN30 |
| Disc Cutter | Evolution Disc Cutter | >85dB(A) | All Areas | BS EN 353 part 3 – SRN30 |

| **Is a vibration assessment required? (✓ if required yes/no)** | | **Yes** | | **No** | ✓ |
|---|---|---|---|---|---|
| **Full details below** | | | | | |
| **Type of Machine** | **Name of Machine** | **Vibration Level m/s²** | **Exposure limit and control measure** | | |
| | | | | | |

| **Is a COSHH noise assessment required? (✓ if required yes/no)** | | **Yes** | ✓ | **No** |
|---|---|---|---|---|
| **Full details below** | | | | |
| **Type of Materials** | **Manufacturer** | **Hazard/effect** | **Exposure limit and control measure** | |
| Silica Dust | N/A | Silicosis, irritant | Damp down with water, wear FFP3 half mask and suitable eye protection. | |
| Concrete | TBA | Alkali burns, irritant and allergic dermatitis | 8hrTWA, gloves and glasses, eye wash station | |
| Hydraulic Oil | Pennine Lubricants | Irritating to skin and eyes | 8hrTWA, gloves and glasses, eye wash station | |
| Copper-slip grease | Granville Oil & Chemicals Ltd | Irritant on prolonged exposure to the skin | 8hrTWA, gloves and light eye protection | |
| Prime-a-pump | Lansdowne Products Ltd | Irritation to eyes & lungs if breathed in. | 8hrTWA, dust mask, gloves and glasses | |
| Diesel | Crown Oil | Irritating to eyes, nose, throat, and lungs | 8hrTWA, gloves and glasses, eye wash station | |

| Section 11 – Permit to Work | | | | |
|---|---|---|---|---|
| **Permit to work required (✓ if required yes/no)** | | | | |
| **Permit to/type** | **Yes** | **No** | **Location on Site** | **Details when used** |
| **Hot works** | | ✓ | | |
| **Confined Space** | | ✓ | | |
| **Access** | | ✓ | | |
| **Excavate** | ✓ | | Basement | Prior to penetrating ground and then in accordance with permit system. |
| **Work on or near electrical equipment** | | ✓ | | |
| **Other** | ✓ | | Piling Area | Platform permit to load, permit to dig |

| Section 12 – PPE | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Detail any personal protective equipment required (PPE)** | | | | | | | | | |
| **PPE Item** | **Yes** | **No** | **Type** | | | | | | **Details when used** |
| **Safety Footwear** | ✓ | | Steel toecap with mid sole protection safety boots | | | | | | At all times |
| **Head Protection** | ✓ | | Only helmets to BS 5240 or EN 397 less than 3 years old will be worn | | | | | | At all times |
| **Hi-Vis clothing** | ✓ | | Hi-visibility vest, Overalls | | | | | | At all times |
| **Gloves, include type** | ✓ | | General site use (EN420 minimum) | | | | | | At all times |
| **Eye Protection** | ✓ | | Light eye protection (EN166) | | | | | | At all times |
| **Ear Protection** | ✓ | | BS EN 353 part 3 – SRN30 | | | | | | During breaking |
| **Respiratory Protection** | ✓ | | FFP1 | | FFP2 | | FFP3 | ✓ | During breaking and clearing rubble |

| Section 13 – Specific Training / Competence Requirements | | |
|---|---|---|
| **Competent person/supervision/training** | | |
| **First Name** | **Surname** | **Training/level of competence** |
| Steve | Gillam | NVQ L6 CCDO & CSCS Manager |
| **Training/site induction procedures** | | |
| Inductions are held daily at 08:30AM. Operatives must be briefed on their RAMS and take signed acceptance sheet along with copies of relevant cards. | | |

| Section 14 – Changes to Authorised Methodology |
|---|
| **Procedures for changing or departing from method statements** |
| Changes to the method statement may be carried out by the site supervisor only after prior authorisation from a member of Deconstruct (UK) Ltd management, preferably the person who prepared the original Plan of Work, or the following nominated Directors;<br>• Richard Hayman-Joyce<br>• Sam Peck<br><br>All changes will be recorded on the site generated method statement; this will be given a reference number, date and name of person who authorised changes.<br><br>In the event of significant change, the project will cease and plan of work shall be withdrawn. The project shall be re-evaluated by the relevant Contracts Manager and the revised method statement submitted to the Client |

| Section 15 – Responsible persons | | | |
|---|---|---|---|
| **Name of competent person/s who prepared this method statement** | | | |
| **Name** | **Job Title** | **Signature** | **Date** |
| Steve Gillam | Project Manager |  | 04/09/2019 |

| **Name and contact details of Health and Safety Officer/Manager or Consultant (Must include qualifications/membership of professional H&S body)** | | |
|---|---|---|
| **Name** | **Contact Details** | **Qualifications/membership of professional H&S body** |
| Marc Smith | 07889 726344 | CMIOSH MIIRSM |

| Section 16 – Method Statement Briefing / Acceptance Record | | | | |
|---|---|---|---|---|
| **Names of all operatives involved in this operation – MS002 Rev 00**<br>**N.B. To be completed by all operatives involved in the works after Site Supervisor has explained the contents.** | | | | |
| **First Name** | **Surname** | **Job Title** | **Signature** | **Date** |
| | | | | |
| | | | | |
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HBR 203

## Technical specifications / *Technische Daten*

| **Machine crawler base** | *Raupenfahrwerk Maschine* | | |
|---|---|---|---|
| Overall width of undercarriage | *Gesamtbreite* | *740/1200 mm* | 29.1/47.2 in |
| Track shoes width | *Kettenbreite* | *220 mm* | 8.7 in |
| Overall tracks length | *Länge der Fahrschiffe* | *1950 mm* | 76.8 in |
| Travel speed | *Fahrgeschwindigkeit* | *2 km/h* | 1.2 mph |
| Max. gradeability | *Max. Steigfähigkeit* | *20°* | 20° |
| Ground pressure | *Bodendruck* | *94 kPa* | 13.6 psi |

| **Powerpack Engine** | *Antriebsaggregat Motor* | | |
|---|---|---|---|
| Cummins - Diesel | *Cummins - Dieselmotor* | **QSB4,5-TAA** - EU Stage IIIA - US EPA Tier III | |
| Rated power at 2200 rpm | *Leistung bei 2200 U/min* | *97 kW* | 130 HP |
| Cummins - Diesel | *Cummins - Dieselmotor* | **QSB4,5-TAA** - EU Stage IV - US EPA Tier IVf | |
| Rated power at 2200 rpm | *Leistung bei 2200 U/min* | *119 kW* | 160 HP |
| Fuel tank capacity | *Dieseltankinhalt* | *190 l* | 50 gal |
| Hydraulic oil tank capacity | *Hydraulikölbehälterinhalt* | *350 l* | 92 gal |

| **Clamping and breaking devices*** | *Klemm- und Brechvorrichtungen** | **CB2-1** | **CB3-2** | **C7** |
|---|---|---|---|---|
| Diameters | *Durchmesserbereich* | *67÷254 mm* \| 2.6÷10 in | *67÷324 mm* \| 2.6÷12.7 in | *152÷610 mm* \| 2.6÷24 in |
| Clamping force | *Klemmkraft* | *44,060 lbf* \| 196 kN | *44,060 lbf* \| 196 kN | *44,060 lbf* \| 196 kN |

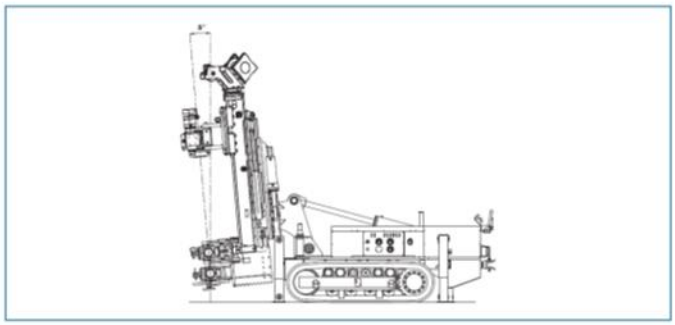
| **Hydraulic hammer** | *Hydraulikhammer* | |
|---|---|---|
| Recommended | *Empfohlen* | HH 1265 |

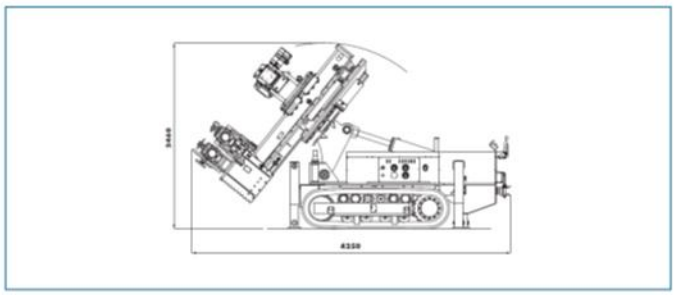
| **Rotary heads** | *Kraftdrehköpfe* | |
|---|---|---|
| Recommended | *Empfohlen* | HG 13 - HG 20 - HG 28 |

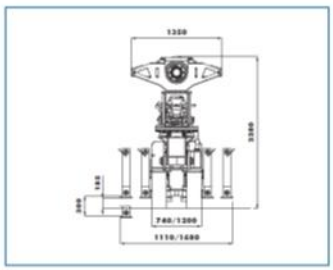
| **Options** | *Optionen* | | |
|---|---|---|---|
| Winch | *Seilwinde - max. Zugkraft* | *13 kN* | 3,000 lbf |
| Electric motor | *Elektromotor* | *75 kW* | 100 HP |
| Radio remote control | *mit Funkfernsteuerung* | | |

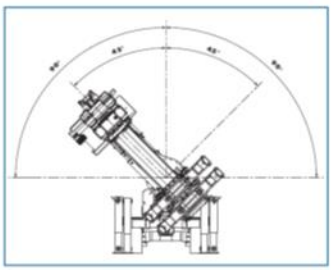
* **Other clamping and breaking devices available on request** / *Weitere Klemm- und Brechvorrichtungen auf Anfrage erhältlich*





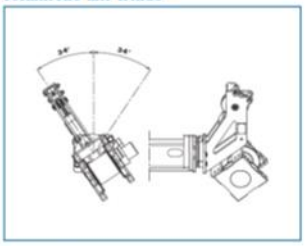








**Cat head with winch**
***Turmkrone mit Winde***



Winch - 13 kN
*Winde - 13 kN*

**Lateral slide**
***Gleitschlitten seitlich verschiebbar***