METHOD STATEMENT

Company	Demolition and Geotechnical limited **Geotechnical, Demolition and Ground Support Foundation Specialists**
Job Description	Drilling and Grouting of Shallow mining via Rotary Drilling and Grout injection
Job Reference	51018
Site	Extension to Cherry Tree Surgery, Upper Commercial Street, Batley
Site Address	Extension to Cherry Tree Surgery, Upper Commercial Street, Batley
Client	A to Z Medical Instruments
Proposed Start Date	w/c 16/10/23
Duration of works	2-3 weeks
Supervisor	Johnathan Froggatt
Appendices	SPA1 – Potential Asbestos concerns

Briefing Record - The following personnel have read, understand and agree to follow the procedures of work detailed within this method statement and associated risk assessments and COSHH assessments;

Date	Name	Signature
02/10/23	Garry Pilkington	
02/10/23	Jamie Green	
02/10/23	Matthew Hoggard (Transport)	
02/10/23	Thomas Perks (Project Manager)	
02/10/23	Johnathan Froggatt	
02/10/23	Iain Wray	
02/10/23	David Dobbs	

General

It is generally our companies practice that drilling masts are left in the upright position at the end of the shift. This is so the weight of the mast is off the rigs hydraulic systems.

Set Up Works:

Site safety warning signage will be used when required to warn of work whilst work is being undertaken.

Barriers/fencing will be used to prevent access to the drilling operations on site when there is a risk of 3rd party contact.
All equipment/ materials shall be stored within a pre-determined area at all times. All materials storage areas will be securely fenced off to prevent unauthorised access dependant on the site location and liaison with the client.

All personnel are to report to the site management / supervisor for site induction prior to commencement of work on site. All site-specific information will be given during the induction to ensure operatives are fully briefed on the control measures to reduce risk on site.

It is critical at all stages of the works that working areas including work equipment and materials are securely segregated from 3rd parties.

Operatives are to be briefed on this method statement prior to the commencement of any work.

All static plant must be located on drip trays where required.

Flashing amber beacons on plant must be used at all times when in operation.

No digs are to take place without the service drawings viewed and a cat survey carried out.

All operators of mobile plant will hold current and relevant training certification, which will be presented prior to works commencing.

Operatives will wear suitable FFP3 respiratory dust protection at all times with a valid face fit test while carrying out cutting operations on site using a disc cutter. Water dust suppression will also be fitted to all disc cutter to keep dust to a minimum on site.

Operatives will be supervised by competent person at regular intervals to ensure they are working in accordance with the method statement and safe working practices. All operatives are trained and competent to carry out their works on site and ongoing training initiatives are in place to ensure training does not lapse.

Any unsafe actions on site will be stopped immediately and reported to management.

When using vibrating and noise emitting equipment during these works, operatives will follow the following procedures;

- Job rotation will be in place whilst using these machines to ensure exposure to vibration is kept to a minimum.
- Noise and vibration information shall be made available for all site personnel relevant to the equipment being used on site. Where possible noise producing and vibration emitting equipment will be substituted for less hazardous processes to ensure the vibration exposure action value of 2.5Ms2 A8 is not exceeded where practicable. Where this is not possible low noise/vibration emitting equipment will be used and job rotation shall be employed to ensure the exposure to vibration is kept to a minimum throughout the works, with necessary PPE and hearing protection zones implemented.
- Operatives using any noise emitting machine and those in the vicinity of the works will wear hearing protection when the equipment is being used.
- Operatives carrying out works which create silica dust will wear FFP3 dust masks with a valid face fit test and those in the vicinity of the works.

Task and site-specific risk assessment has been completed to establish any specific risks that may be apparent. This site-specific risk assessment has taken into account all the activities involved while work is being carried on site for the duration of the works.

The findings of this risk assessment will be used to take appropriate action to manage the risks and to assess the risk level presented to the workforce.

Personnel within the workforce will be trained in first aid to ensure there is always a qualified first aider present while work is being carried out. A fully stocked first aid kit will be kept in the work vehicle and inspected on a regular basis by the first aider.

When there is likely to be a significant risk to 3rd parties, an exclusion zone will be formed around the entire working area, this will be cordoned/partitioned off to ensure access to the hazardous areas cannot be gained until work is completed and it is deemed safe to do so by a competent person.

Plant

1 x Drilling Rig - SM400, C6, Hutte HB 503, SM-15 or Beretta T46 (Between 1 and 17 tons)

Equipment

Drilling rods - Drilling rods are required to reach the proposed depth these are attached to each other with threads at the top and bottom of each rods.

The size commonly used with our drilling machines are 3.5api.

Casing - Should sands and gravels be encountered or loose broken ground or excessive amounts of water then casing needs to be used to create a clean uncontaminated hole from which an accurate log can be created.

High Pressure Hoses – Between the source of compressed air and the drilling machine.

Optional Plant

1 x Underground Services Scanner - CAT scanner (if the drilling contractor is the main contractor and so is responsible for the marking out of underground services)

1 x Safety drilling platform (if mine shafts are located then the drilling platform has to be used when remediation commences)

Tools

Spades, Pick axe, Spike etc for removing spoil from drilling area

Materials

Hammer Oil - The DTH hammer needs to be oiled periodically to ensure operation and health of the hammer, the oil used is of a special type designed for use in these types of hammers.

PPE (Personal protective equipment)

A normal drilling operation requires that all operatives wear full overalls and impervious gloves to prevent skin coming into contact with dust and debris, operatives handling drilling rods around the drilling table are generally required to wear eye protection and FFP3 dust inhalation protection depending on site conditions.

Manpower

A normal drilling operation requires 2 to 3 operatives, but always at least 2 for safety reasons these operatives will have the appropriate licenses to operate the equipment there using.

Health and Safety and Environmental Issues

All high-pressure air and water hoses will be fitted with whip checks.

The drilling process will be monitored constantly by all operatives to reduce the amount of water and debris been spilled onto the site unnecessarily.

The stability of the ground needs to be assessed either from the logs available or by observations from onsite operatives before the drilling machine is brought onto the site.

If hoses from the sources of compressed air have to be trailed down public rights of way or paths these need to be clearly identified using cones and signs.

The drilling process can cause bits of debris and dust to come out at high speed, it is Important that operatives stand clear of the area when not needed or wear suitable PPE.

Drilling rigs are heavy complex machines, when moving about it is important that it is monitored to check it is not damaging itself or its surroundings.

Operatives should be aware of the danger posed by equipment when the job is of a confined nature, Equipment moving around can quickly become a hazard even when the operative has already assessed the situation as safe.

When drilling over mineshafts, or looking for mineshafts, there is the possibility that the weaker ground may fail under the weight of the drilling rig, it is in these situations that a safety drilling platform may be needed to prevent this happening.

If there are overhead cables in the working area of the drilling rig then the rig must maintain a safe distance from them.

Environmental

In the event of a spillage of a hazardous substance such as gas oil, or other oil based substance the employees on site will endeavor to keep the damage to a minimum and use appropriate remediation equipment such as a spill kit to prevent damage to the environment and / or injury to the general public.

Important Equipment Reminder

No handheld tools must be left on site at the end of a shift.

All cones and signage used during the day must be returned to the site.

If the drilling operation is taking place in cold conditions, then it is important to ensure that all hoses are blown out before leaving the site as ice can be damaging to equipment.

At the start of a shift, if the weather is particularly cold the hydraulic oil in the drilling rig will be very thick, it is important that not too much is expected of it until it has warmed up as this could cause hydraulic hoses to become over pressured and blow off.

In order to prevent this, start up the rig and turn on the rigs head rotation on as this is one of the most effective way of moving the oil around the machine and warming it up.

When the drilling rig is moving it is important that the second man is observing all the angles that the driver cannot see to prevent damage to the rig and/or its surroundings.

If driving the machine on concrete ground, then it is important to take notice of what the tracks are doing as it is in these circumstances that it is easiest to cause the tracks to derail.

Emergency Procedures

In the event of an injury to an employee on site, work will cease, and the situation will be assessed by the supervisor on site.

If the injury is deemed to be serious the appropriate emergency services will need to be contacted and the injured employee made as comfortable as possible until they arrive.

All injuries will need to be reported in the accident book and notes taken of how it happens and how it could be prevented in the future.

Work Procedures

Step 1.
The operatives will consult with the engineer or the specification as to what the proposed drilling schedule is, this includes the depth of the holes required, and the spacing.

Step 2.
Once the borehole locations have been decided the rig is taken into position.

If the engineer has decided that there is mine shafts in the area or that there is a possibility of them been found, then the drilling safety platform will need to be moved into place and then the rig moved onto it

The DTH hammer is then taken into position in between the rig jaws, the head is then lowered and connected to the DTH Hammer.

The head is then lifted back up ready to commence drilling.

Step 3.

The water is then switched on and the head lowered to force the DTH Hammer into the rock / ground.

Further drill rods are added periodically, the head is raised and lowered during the drilling process to flush debris from the base of the bore hole and prevent the DTH Hammer becoming stuck.

Step 4.

If areas of sands and gravels, unstable ground or excessive water are encountered then casing may need to be used to maintain borehole stability.

Step 5.

Drill rods are then added until the required depth is achieved.