STRUCTURAL RISK ASSESSMENT & METHOD STATEMENT

For the Purpose:
LISTED BUILDING CONSENT APPLICATION

148 KENSINGTON PARK ROAD
LONDON
W11 2EP
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METHOD STATEMENT

SITE: 148 Kensington Park Road
       London
       W11 2EP

JOB No: LR010

ANTICIPATED ACTIVITY

Start Date: November 2014
End Date: March 2015

CONTRACTOR: CUBIC Design & Development
PREPARED BY: Peter Steyn

NUMBER OF PERSONS INVOLVED IN ACTIVITY:
1 Supervisor 6 Operatives

STRUCTURAL UNDERPINNING FOR THE STABILISATION OF THE SUBSIDING BUILDING STRUCTURE

1.0 PURPOSE:

The following method statement is in relation to the underpinning of the existing party-wall between 146 and 148 Kensington park road. Also stabilisation of the rear facade and rear garden wall.

This Method Statement provides guidance to prevent injury to persons engaged in the excavation, concrete footings and structural works. It also provides a safe system of work to prevent any damage to adjacent properties.

Underground construction will always – inherently and unavoidably – cause some movement in the surrounding ground. A scheme that is poorly designed and/or constructed would tend to cause greater ground movement and, hence, have greater potential for damaging adjacent structures. This compared with a well–designed and well–executed scheme for which ground movements have been minimised and controlled.

With this property, which is currently in very poor structural condition, care will be taken to initially stabilise the rear elevation of the building using mass pour pins prior to any further works.

2.0 SCOPE:

Planning, Preparation, Conduct and Method for the safe Excavation, Concrete Footings & Structural Work to the party-wall and boundary walls of the property.

3.0 CONSULTATION

The principal contractor (Cubic Studios Limited), have developed this Method Statement and Risk Assessment during various consultation processes. The planning and preparation stages determined safe systems of work that are based on the assessment of the risks and guidance provided by the Structural Design. The Structural Design developed by the Structural Engineers, MMP Design Limited, will be adhered to during the construction phase. MMP Design Limited will also be involved during the construction process and offer inspections and guidance where appropriate.

Geotechnical and ground investigation was provided by GEA and formed the basis of the structural
The Method Statement below to be read in conjunction with:

- MMP Structural Report
- Geotechnical Environmental Associates J14196

The consultation process covered the following:

(a) Nature and Condition of the ground or working environment:
Geotechnical Environmental Associates (GEA) were employed to complete a thorough Desk Study and ground investigation report (attached Report no. J14196)
- Trial holes and window sampling, highlighted that the existing foundations were based on solid clay and ground water was evident deeper than 4000mm in the rear garden and not at all in the front garden
- Non-invasive tree root investigation carried out by specialist horticultural contractor uncovered roots from the neighbours existing Birch tree. These entered the property within the top metre of soil under the low garden wall between 150 and 148 Kensington park road. Meetings with RBKC arboriculture department and Barrell Tree care have highlighted the need to create a one-metre wide tree root protection zone. No excavation or loading to this exclusion zone. (Report attached ref. 14287 –AIA– MW)
  This is critical to the on-going health and vigour of the tree

(b) Nature of the work and other activities that may affect safety:
- Overhead working will be limited.
- Stabilisation of the existing rear façade prior to any further investigation work

(c) Static loads near excavation:
- Loading/Unloading of materials will not take place adjacent work areas and monitored daily by an experienced Site Manager

(d) Dynamic/Live loads near excavation:
- Access routes above the excavation will be limited due to the nature of the site. Diversions will be in place.

(e) Interaction with other trades:
- Trades will be notified of the structural works in advance.
- Suitable signage will be placed around work area.

(f) Workplace Access
- Site access will be restricted to structural trades only.
- Suitable signage will be placed around work area.

(g) Management of surrounding vehicular traffic and ground vibration:
- The Traffic Management Plan has been developed.
- No vehicular access is possible to the rear garden are

(h) Work Force Safety:
- All trades involved have been issued with the appropriated PPE and have effective experience and training to be able to carry out the tasks.

(i) Type of equipment used for excavation:
- Shovels, spades, light duty breakers, props, sheet piles, and conveyor to be used.

(j) The provision of appropriate amenities:
- Satisfactory amenities have been provided. And will be maintained to accepted standards

(k) Compliance with all HSE regulations:
- The HSE has been notified of the construction project and the F10 has been displayed.
3.2 PLANNING

Planning and preparation was the first essential step in ensuring that work will be done safely. Planning and preparation involved consultation with all relevant persons engaged in the work and includes hazard identification, risk assessment and risk control processes. Cubic Studios Limited and their contractors in their capacity as employers have:

1. Provided information, instruction, training and supervision as may be necessary to ensure the health and safety of the employees; and
2. Provide / maintain means of access to and egress from the work place safe and without risks; and
3. Provide / maintain the wellbeing of the neighbours and their properties.

3.3 PLANNING BY CONTRACTOR

Cubic Studios Limited will plan for the work to be done safely. The site specific Health and Safety and Environmental Management Plan has been prepared and copy made available to all trades and site staff. The health and safety management plan will be monitored to ensure that work is carried out according to that plan and that the plan is effective. The plan will be maintained and up to date during the course of the structural works. Before any structural work starts, all operatives carrying out the work will be made aware of the following:

- Review the Risk Assessment specific to the activity involved prior to carrying out the work.
  - Excavation, Concrete & Structural Work Risk Assessments are attached.
- Providing suitable and safe access to and from the work place including the work area.
- A suitable temporary roof be installed and piped rainwater fed into the existing outlets to prevent water ingress to the work zone
- The area of the excavation work will be clearly defined by barricades and warning signs.
- Where necessary the exact location of the work will be clearly marked.
- The identification and marking of the location of any above ground, underground or overhead services and fencing of tree protection zones.
- A exclusion zone encompassing a protection zone to be installed with appropriate signage.
- That the work does not affect the structural integrity of adjoining buildings or structures.
- The excavation & concrete placement sequencing stipulated within the Structural Design with be adhered to.
- All operatives will be supervised during the excavation and concrete works.
- An Electrical survey was carried out which located underground and aboveground service cables and clearly marked. (CAT)
- A plumbing survey was carried out and all the waste & clean water services have all been located and clearly marked.
- All exposed excavations/footings will be made secure during work and when left unattended.
- Emergency and rescue procedures have been explained and displayed in the event of an emergency.
- The use of personal protective equipment (PPE) EG: Safety footwear, eye, coveralls, high visibility jackets, hearing protection, safety helmets, gumboots, gloves, disposable clothing etc.
- All persons carrying out the work are provided with appropriate training and instruction.
- A competent person will provide supervision.

3.4 HAZARD IDENTIFICATION, RISK ASSESSMENT AND CONTROL

A hazard identification risk assessment and control process has been carried out to determine if persons are at risk. Safe systems of work are then put into place to control the risk. The identification
of the hazards associated with the excavation, concrete & structural work will be documented on the risk assessment along with the risk control.

The process of hazard identification, risk assessment and control is made up of the following steps:

• Identifying the hazards
• Determine what type of safeguards or alternative system of work
• Reducing/eliminating exposure of persons to the hazard

3.5 PREPARATION

Site Management will ensure that all controls identified by the risk assessment have been put in place and that new hazard are effectively dealt with.

Preparation includes the following:

• Assessing the climatic/environmental conditions.
• Access to and from the workplace.
• Notify neighbors should any of the hazards affect them.
• Specific instructions for employees.
• Plant and equipment is suitable for the intended use and inspected by a third party before use and is properly maintained.
• Personal Protective Equipment.
• Location of underground, above ground and overhead services are identified and clearly marked.
• Emergency and rescue procedures are setup in the event of an accident, injury or other emergency, including the means to protect any other persons in the vicinity.

3.6 EMERGENCY AND RESCUE PROCEDURES

In the event of an emergency, adequate arrangements have been made to ensure the safety of workers and other persons on site. The emergency may result from an accident or injury, landslip or other potentially dangerous occurrence. Natural disaster including electrical storms, floods, plant or machinery fire etc may also present hazards to the working operations.

Plans have been setup for such matters and appropriate control measures are in place. The risk assessment have taken the following factors into account:

• Nature of the hazard and possible emergencies;
• The size and location of the place of work;
• The number and mobility of persons at the workplace; and
• The Location of nearest emergency services.

Control measures include:

• A tried and tested warning system
• There are rapid evacuation procedures with a safe means communication of safe and, including injured persons.
• Site Managers are trained to carry out the evacuation and rescue procedures and maintain the site safety until the emergency authorities arrive.
• All staff has been trained to shut down the site equipment.
• Pump equipment on standby.
• Provisions of regularly inspected firefighting equipment have been made at the appropriate locations.
• Evacuation procedures have been displayed in appropriate locations.
4. WORK SYSTEMS AND CONTROL MEASURES

Cubic Studios Limited have an obligation under the HSE regulations to provide and maintain a workplace that is safe and without risks to health for the employees, sub-contractors and public in relation to those matters over which they have control. Control measures have been put in place to prevent persons from being injured during the construction works. These measures are to be maintained as part of a safe system of work.

The system of work along with the control measures have been determined by individual job factors identified during the risk assessment process.

The following hazards have been identified are commonly associated with structural works and will be considered by the risk assessment process:

- Instability of the Excavation
- Seepage of Water
- Unplanned contact with Utility Services eg: Electricity, Water
- The placement of Excavated Material
- Falls into Excavations / Falls from Height
- Movement and positioning of heavy plant/equipment that may affect the excavation
- Ground vibration affecting the stability of the structure/excavation.
- Excessive noise from the operation of machinery and plant.
- Chemical Burns.
- Manual Handling Injuries.
- Changes to environment conditions.

4.1 PREVENTION OF COLLAPSE OR FAILURE OF TRENCHES AND OPEN EXCAVATIONS

A risk assessment has been produced by MMP designs, which has controls implemented to prevent persons being injured by collapse or failure of all or part of a trench or open excavation. Additional attention has been given to adjacent properties that may be affected during the excavation process.

The following has been considered:

- Depth of the excavation
- The nature of the Strata
- The presence of Moisture or Water
- Loads close to the edge or in the zone of influence to the excavation
- Vibration
- Exposure Time
- Previous disturbance of the ground, EG: Previous Excavations
- Adjoining buildings or structures
- Structural propping of walls

Removal of soil from an excavation causes unbalanced soil stresses, which reduce the capacity of the excavation to support it. The risk assessment identifies an unstable condition, the following measures have therefore been implemented:

- Structural Engineer Design – Underpinning and structural propping
- An experience Site Manager to supervise the progress of the excavation work.

The use of adequate designed shoring, benching and battering is essential to control the risk of a
collapse or failure of a trench or open excavation.

4.2 DESIGN OF ENGINEERING CONTROLS

MMP Designs proposed excavation sequence minimizes the number and length of open trenches. Additional controls such as shoring support structures, benching, or battering will form part of the excavation process. The following factors have been considered:

- The size and length of the excavation
  - Max 1.0m wide
- Existing ground conditions of rear garden
  - Top 450mm – Mixed clay/rubble/ topsoil made ground
  - Below 450mm – Firmer and denser clay.

4.3 SHORING/FORMWORK

Where necessary, all trenches and excavations will be adequately shored or supported to prevent a fall or dislodgement of earth, rock or other material forming the side of any excavation. Where such a risk also exists for those installing supports, other appropriate control measures will be in place to ensure the safety of persons entering the excavation.

Due to the nature of underpins the sides of the excavation and other relevant circumstances it is essential that there is no reasonable likelihood to trap or strike a person that is in the excavation. The designed method by MMP has been adopted and backed up by daily inspection of temporary works by an experienced foreman.

The excavation/concrete footing installation sequence as detailed below:
As the rear of the existing is structurally poor, a series of mass concrete pins will be installed to stabilize the property.

- Mark footing bays areas as per structural design by MMP,
- Excavate and batter the soil in equal steps to lower overall excavation depth.
- Excavate the first 1000mm and install sliding sheet piles and move regularly as excavation deepens. Temporary propping of any exposed face as works progress and overnight to prevent accidental slippages.
- Excavate/carve the area beneath the party wall to the required depth and temporarily propped.
- Clean all muck/clay from beneath party wall.
- Install DPC layer and reinforcing spacer blocks.
- Fix vertical wall reinforcing allowing for 100mm maximum dry packing below the existing walls.
- Hammer horizontal reinforcing wall starter bars into either side of the trench allowing for the designed splice length.
- Tie all reinforcing and spacer blocks ensuring required covers are achieved.
- Cut formwork shutter to the required width & depth, cut rebar slots within formwork.
- Clean steelwork of any debris.
- Ensure Building Control Inspector has approved the reinforcing, splicing, depth of excavation, cleanliness of wall prior to formwork installation.
- Apply shutter-oil to face of formwork.
- Fix formwork shutter to face of trench using timber staging & props.
- Ensure formwork is plumb to the wall and in line and cast pin using the required mix of Sulphur resistant concrete.
4.3.1 REMOVAL OF SHORING SUPPORTS/FORMWORK
When removing the shoring/formwork the support system will be extracted / dismantled in the reverse order of its installation. Persons performing the work in the excavation will not work outside the protection of the ground support system. The concrete formwork will only be struck after 48 hours.
Dry Packing of approximate and no more than 100mm void between the new pin and the old wall to be undertaken immediately after removing the formwork using a one to one mix of sharp sand and sulphur resistant cement. No excavation is allowed adjacent this pin until the dry pack has cured for at least 48 hrs.

4.4 BENCHING AND BATTERING EXCAVATION WALLS
Both benching and battering of excavation walls are methods of that may be used to minimize the risk of the soil or rock slipping onto the excavation.
Where battering is implemented, it will commence from the bottom of the excavation. When benching or battering the walls of an excavation, an angle of repose of 45 degrees will not be exceeded.

4.5 INSPECTION OF SUPPORT SYSTEMS
The risk assessment will be reviewed at all terms during the excavation works. The following conditions have been considered and will be monitored:
Ensure shoring/formwork does not become unstable
- Ensure formwork is not removed prematurely (only after 48hrs)
- Monitor ground water, possible seeping into excavations from its side walls or base
- Monitor changes to soil and/or weather conditions
- Ensure that surface water or run-off entering the excavations or accumulating on surface near the excavation
- Monitor possible heaving or swelling of the ground at the bottom of the trench
- Maintain safe access or egress
- Ensure no undercutting of the excavation

4.6 SECURITY OF EXCAVATIONS
Control measures have implemented that are appropriate and effective for the hazards and risks of the situation. Consideration has been given to the following factors
1. How long the excavation will be open?
2. Who may gain access to the excavation?
The following control measures have been implemented:
• Isolating the hazardous area with the use of perimeter fencing (hoarding), barriers, and temporary handrails, which are capable of preventing access or preventing the fall of a person.
• Installing a temporary roof structure to prevent any rain water ingress
• Access Ladders will be removed and chained up after hours.
• The site manager will ensure that all the HSE requirements are adhered too.
• Additional signage will be installed.
Signs have been be erected around the site showing the name and contact telephone number (including after hours emergency number) of the Site Manager.

4.6.1 FALL PREVENTION
A safe system of work has been implemented to prevent persons from being exposed to a risk of
falling. It is a HSE requirement to effectively fence all excavations and holes more than 1.2m deep, along with all platforms, open sides of stairways and stairway landings to be fenced.

In addition to the security measures listed above, the following measures to prevent falls from height will be implemented:

Intermediate levels/platforms for deep excavations and working at height.
Ladders will be provided to provision of a safe means of movement between different levels of the height.
Fall arrest systems are to be provided to trained operatives when working at height for areas where safe landings are not available.
Removal of the risk, backfilling, additional handrails, safety barriers etc as work progresses will be installed and maintained until the work is completed or until there is no longer any risk of persons falling.

4.7 UNDERGROUND SERVICES
As this is a redevelopment, majority of the underground services (eg. electricity, telecommunication cables, etc) have already been identified. Allowances have been made for inaccuracies and the possibility of other unknown or hidden services.

All services have been clearly marked according to the available plans and on site checks prior to the commencement of work. Services will be exposed at sufficient intervals to positively identify their location and/or lie.

The following ways have been used for checking underground services:
  • Remote location devices (CAT)
  • Soft hand digging, using hand tools with non-conductive handles.

All operatives have been made aware of the location of the underground services. Control measures have already been put in place and the relevant service providers have been contacted and majority of the services have been disconnected and or relocated.

4.8 EXCAVATIONS ADJACENT TO BUILDINGS OR STRUCTURES
Special attention has been directed towards excavation works that are likely to reduce the security or stability of any part of any building or structure. The following steps have been adopted to prevent danger to any person from collapse of the building or structure or a part of a building or structure.

  • A structural design has been developed by a qualified engineer (MMP Design Ltd.)
  • A competent and experience Project Manager, (Mr. Peter Steyn) will supervise the progress of the excavation works.
  • Adequate temporary support structures (Props and sheet piling) installed prior to commencing.
  • An effective method of works to ensure minimal unsupported loadings.
  • Ensure minimal disruption to surrounding walls and newly installed footings.
  • Minimizing ground disturbance and vibration by removing location of adjacent machinery, alternative sequence of work, the impact, severity and scale of excavation.
  • Placing the concrete as work progresses, additional additives to ensure rapid curing.
  • Minimize the amount of staff within the affected areas.
4.9 MATERIALS AND LOADS ABOVE AND NEAR EXCAVATIONS

To reduce the risk of excavation collapse excavated or other loose material will be effectively stored or retained away from the excavation. Excavated material will be placed outside the zone of influence. No materials or spoil placed in the demarcated root protection zone

Mechanical plant, storage of materials or any heavy loads will be prevented from approaching within or encroaching on the zone of influence of the excavation.

Where the risk assessment has identified a risk of collapse as a result of loads or materials above or near the excavation/area of work, shoring/staging will be installed before any person enters the works area.

The following measures will be implemented before starting excavation work:

- Controlling access to exclude persons from hazardous areas, eg relocating means of access
- Ensure that storing loads will now be outside the zone of influence of the excavation
- Reducing the number of open trenches
- Ensure all loose material is secured.

4.10 ELECTRICAL HAZARDS

A power line or electrical conductor will always be assumed to be energized or 'live', including when a communication cable or wire is encountered.

A safe system of work has been devised to address the following electrical hazards associated with electrical services:

- Electronic surveillance (CAT) will be used prior to determine location of services.
- Hand digging using tools with non conductive handles
- Wearing rubber boots and insulating gloves

4.11 MANUAL HANDLING

Manual Handling Risks have been assessed and the following control measures have been put in place:

- Mechanical Aids and/or personal protective equipment have been provided.
- Powered mechanical equipment has been hired to lift and move heavy material.
- Site–specific training has been provided to employees on safe handling techniques.
- Weights that are normally manually handled will be minimized. Furthermore persons will not lift, lower or carry loads above 25kg, unless mechanical assistance and/or team lifting arrangements are provided to lower the risk of injury.
- Where manual handling involves repetitive bending, twisting, over-reaching, work overhead or where persons have pre existing injuries, these loads will be further decreased.
- Rotation of work duties has been implemented after consultation with employees.
- Strict supervision of work areas and passageways to ensure that they are kept clean and clear of debris.
- Slippery floors and surfaces and trip hazards will be controlled.
4.12 ACCESS

Access equipment requirements have been taken into account along with the number of persons using them and any tools and equipment that they may be required to carry to and from the work site.

Implemented Control measures:
- Proper storage of materials and plant
- Keeping work areas and passageways clear and free of obstructions
- Removal of rubbish, including construction waste and excess excavated material
- Use of safety handrail
- Controlling people, traffic and plant.
- Effective placement of safety fences and warning signs.

4.12.1 LIGHTING

Adequate lighting (natural or artificial) has been provided to ensure that the work areas and access ways are well lit. Adequate local lighting will be provided for detailed work, for dangerous processes and where machinery is being operated.

4.12.2 LADDERS

Ladders will be used for access and the following provisions have been made:
- Ladders will be secured at both top and bottom against displacement.
- Ladders will have non-slip feet and whenever practicable will be set up at an angle of 1:4 (75 degrees).
- Safe and adequately sized landing places for stepping off the ladder will be provided.
- Ladder stiles will extend at least one meter above the landing place.

4.12.3 SCAFFOLDING

Scaffolding will be used to provide workers with a safe temporary work platform. It will be planned, erected, inspected and tagged by competent persons and will be regularly inspected to ensure there are no risks to safety and will comply with the requirements of RLC/HSE regulations.

4.12.4 FIXED PLATFORMS, WALKWAYS, STAIRWAYS AND LADDERS

All fixed platforms, walkways, stairways and ladders will comply with the requirements of HSE regulations.

4.13 NOISE

Noise Management provisions have been carried out and provisions have been made to ensure that noise levels from machinery or equipment being used do not become a risk to hearing or health.

A noise assessment has been conducted where the various noise levels have been determined. Where the noise is in excess of the noise exposure limits, engineering controls will be implemented. Where this cannot be achieved or work cannot be organized to minimize exposure, appropriate hearing protection equipment, hearing protectors, will be provided to all persons in the vicinity of the noise.

All possible prevention or protection measures will be undertaken to ensure the Health and Safety of persons who may be exposed to excavate material.
A safe system of work will be put in place where there is a risk of inhalation of harmful airborne substances such as silica dust. Measures have been taken to minimize the exposure of nonhazardous substances such as nuisance dust is at a level not greater than that established by safe exposure standards. In dry conditions, frequent watering, where practicable, or other similar methods will be used to reduce nuisance dust that will not exceed 20mg/m³.

The following has been considered when developing the appropriate assessment:

- Site Staff, including other contractors or persons working on the site.
- Visitors to the site (eg: couriers)
- Site Neighbors (as appropriate).

5. INSPECTION AND MAINTENANCE OF PLANT AND EQUIPMENT

A risk assessment will be conducted before operating plant to identify any hazards that may arise and the control measures to be implemented.

The risk assessment will consider at least the following:

- The safe working load is displayed
- Witness the record of testing, maintenance, servicing and repair
- Check the general mechanical/electrical condition of plant, especially any wear or damage that may affect safe operation.
- Specific controls to prevent entanglement or workers being trapped between moving parts.

If the function or condition of plant represents an immediate risk to health and safety, operation will cease and the plant will be withdrawn from use until a risk assessment and appropriate control measures and or repairs have been implemented.

5.1 ROUTINE INSPECTION

Regular planned inspection and adequate maintenance will be carried out by Site Management to ensure safe operation of all plant used on works activities, whether leased, hired or owned. Both mechanical and electrical testing will be done.

In addition the following checks will also be carried out:

- **Daily Checks**: the person doing the excavation work will check general condition and maintenance of the plant daily.
- **Regular Checks**: a competent person on a regular basis, or at least every two weeks will inspect the plant.

5.2 REPAIRS AND MAINTENANCE

Plant repairs will be carried out by a competent person and in accordance with the designer or manufacturer’s requirements.

5.3 REPORTING DEFECTS

Any defects to equipment will be reported immediately to Site management who will inform the person responsible for maintaining such plant.

Where a defect is likely to pose an immediate risk to health and safety the equipment or plant will not be used until the defect is rectified.

5.4 LOG BOOKS AND INSPECTION CHECK SHEETS

Site Management will keep a site logbook and inspection check sheets containing a full service and repairs history of the equipment.
6. **TRAINING AND INSTRUCTION**

Under HSE regulations employers will provide training, instruction, information and supervision, as may be necessary, to ensure the Health and Safety at work of their employees/sub-contractors.

All persons involved in any structural and or associated work will:
- are trained to follow systems of work and work practices that enable them to perform their work in a manner that is safe and without risks to health, and;
- hold appropriate certificates of competencies where required. Only persons who have received training and instruction will carry out the work.

The training provided and the instruction given will include the following:

Induction training, which complies with Construction Safety & HSE regulation.

The work method to be used for the excavation or associated work and the manual handling procedures for the work to be carried out, including control measures based on the risk assessment to prevent injury.

The correct use, care and storage in accordance with the manufacturer’s recommendations where appropriate, of:
- Personal Protective Equipment; and
- Tools and Equipment to be used.

The use of plant and associated equipment, including electrical safety and hazardous substances.

Procedures to be adopted in the event of accident, injury or other emergency, including evacuation.

7. **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

The use of PPE to control hazards and risks is the least effective measure and is lowest on the hierarchy of control measures. Control measures will be selected from the highest level possible and be adopted where practicable. The measures at the lower levels are less effective and they require more frequent reviews of the hazards and systems of work. They will only be used when other control measures are impracticable or when, after implementing other controls, a residual risk remains.

7.1 **PROVISION OF PPE**

Before commencing any work, contractors will identify any conditions likely to affect the health and safety of persons. If other means of control are not practical, the provision and use of appropriate PPE that complies with the relevant HSE regulations will be arranged.

Employees will be trained till they are competent in the proper selection, use and maintenance of the PPE.

There will be sufficient supervision and monitoring conducted to ensure compliance.

7.1.1 **SAFETY HELMETS**

The use of safety helmets may prevent or lessen a head injury from falling objects or a person hitting their head against something. Where there is a likelihood of persons being injured by falling objects and overhead protection is not provided, persons will be provided with and will use an appropriate safety helmet. Appropriate safety helmets will also be provided and used where a person may strike their hand against a fixed or protruding object or where there is a risk of accidental head contact with electrical hazards.
### 7.1.2 EYE PROTECTION

Eye protection complying with HSE Regulations will be provided, where there is a risk of eye injury. Selection, Use and Management Systems will comply with HSE Regulations.

### 7.1.3 PERSONAL HEARING PROTECTION

A noise assessment will be conducted to determine the level of noise that employees are exposed to. Where the noise is in excess of the noise exposure limits, engineering controls will be implemented.

### 7.1.4 HIGH VISIBILITY GARMENTS/SAFETY REFLECTIVE VESTS

All staff, persons, sub-contractors will be provided with high visibility garments. Minimum site requirements are Hard Hat, Safety boots, High visibility vest. All other safety items task relevant as laid out in the method statement.

### 7.1.5 SAFETY GLOVES

Where there is a risk of hand injury, hand protection that complies with HSE Regulations will be provided and used.

### 7.2 MAINTENANCE AND USE OF PPE

Information, instruction, training and supervision will all be used to ensure that PPE is used and maintained as intended. All PPE used by persons during heavy work will be regularly inspected and replaced as necessary.

### 8. OCCUPATIONAL HEALTH AND SAFETY

While the obligation for each person is different, all persons will ensure that the way they carry out their work will not interfere with the Health and Safety of the other persons who are present at the workplace. All work practices must comply with HSE regulations.

### CONTRACTOR’S RESPONSIBILITIES

Each & every contractor has an obligation to take reasonable care for the Health and Safety of the other persons in the place of work and to cooperate with their employer in the interests of Health, Safety and Welfare. Employees will use appropriate protective equipment for the work being performed.
### 10.0 CONTINGENCY AND EMERGENCY PLANS:

- Supervisors are First Aid trained.
- Operatives to have mobile phones in attendance.
- Dial 999 in case of emergency.
- Warning Signs displayed.
- Emergency Services Displayed.

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<tbody>
<tr>
<td>Small Hand Tools</td>
<td>Plant Inspection Tickets</td>
<td>Abrasive Wheels Certification.</td>
</tr>
<tr>
<td>Compressor</td>
<td>Electrical PAT Tested</td>
<td>PASMA Certified</td>
</tr>
<tr>
<td>Breakers</td>
<td>Tool Box Talks</td>
<td></td>
</tr>
<tr>
<td>Metal Grinder/Cutter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical Extension Cables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety Harness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scaffold Tower</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hand Wood Saw</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drills</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### PERMIT REQUIREMENTS

<table>
<thead>
<tr>
<th>PERMIT REQUIREMENTS</th>
<th>FROM - TO</th>
<th>HAZARDOUS SUBSTANCES</th>
<th>PPE REQUIRED</th>
<th>TOOLBOX TALKS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUBIC PERMIT TO DIG</td>
<td>CSL to Staff</td>
<td>Contaminated Soil</td>
<td>Hat/Gloves</td>
<td>Yes</td>
</tr>
<tr>
<td>CUBIC PERMIT TO WORK</td>
<td>CSL to Staff</td>
<td>Dust/Nails/Sharp Edges</td>
<td>Face Mask/Eye Protection/ Safety Boots/Gloves</td>
<td>Yes</td>
</tr>
<tr>
<td>SCAFFOLD PERMIT</td>
<td>Council to CSL</td>
<td>N/A</td>
<td>Traffic Signs/Barriers</td>
<td>Yes</td>
</tr>
<tr>
<td>PARKING BAY</td>
<td>Council to CSL</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CUBIC PERMIT TO LOAD TEMPORARY WORKS</td>
<td>CSL to Sub-Contractor</td>
<td>N/A</td>
<td>Hat/Gloves/Goggles</td>
<td>Yes</td>
</tr>
<tr>
<td>CUBIC ELECTRICAL ISOLATION PERMIT</td>
<td>Electrician to CSL</td>
<td>Electrocution</td>
<td>Gloves/Glasses</td>
<td>Installation Certificate</td>
</tr>
</tbody>
</table>
ENVIRONMENTAL CONSIDERATION

With the clearly define root protection zone in place to prevent tree and root damage:
  The importance of no loading and excavation and loading will be emphasized during induction and by the use of clear site signage.
All arising’s taken to licensed tip areas and all consignment notes logged and stored on site
Spill kits available at the excavation site

LIST ANY OTHER SAFETY CONSIDERATIONS BELOW
(including methods to be adopted to reduce risks)

These considerations are included in the Cubic H&S Plan.
For works where no Cubic H&S Plan required the following should be considered:

- Welfare Facilities
- Names of Appointed Persons including qualified first aiders.
- Standard forms for such items as Toolbox Talks, Risk Assessment Method Statement Inductions and Records

WILL YOUR ACTIVITIES AFFECT ANY OTHER CONTRACTORS WORK AREA?
If so please give details below and define the methods you wish to adopt to reduce risk.

All excavation works to be carried out by fixed groundwork team. No other contractors require access until structural works are completed.

This method statement together with the risk assessment must be authorised by Cubic.
Once authorised by Cubic, the authorised Method Statement Risk Assessment is to be registered and a copy kept in the site file.
OPERATIVES SIGNATURES:
Operatives who sign below hereby confirm that they fully understand the Works detailed above:

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cubic Manager</td>
<td>Peter Steyn</td>
</tr>
<tr>
<td>Cubic Foreman</td>
<td>Edvinas Zemitis</td>
</tr>
<tr>
<td>Trade Supervisor</td>
<td></td>
</tr>
<tr>
<td>Operative 1</td>
<td></td>
</tr>
<tr>
<td>Operative 2</td>
<td></td>
</tr>
<tr>
<td>Operative 3</td>
<td></td>
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<tr>
<td>Operative 4</td>
<td></td>
</tr>
<tr>
<td>Operative 5</td>
<td></td>
</tr>
<tr>
<td>Operative 6</td>
<td></td>
</tr>
</tbody>
</table>

ALTERATIONS TO THE ABOVE SEQUENCE.

Alterations on Site:

To be altered on Site by Contractors Supervisor

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