



Method Statement

Admiralty Arch

North Core Construction

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057

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Table of Contents

TABLE OF CONTENTS	2
APPENDICES	3
DOCUMENT CONTROL	3
AMENDMENT HISTORY	3
INTRODUCTION	4
1. SITE DETAILS	4
2. SCOPE OF WORKS	4
3. RESOURCES	5
PERSONNEL INVOLVED	5
PLANT	6
SMALL TOOLS REQUIRED.....	6
MATERIALS REQUIRED	6
4. PERSONAL PROTECTIVE EQUIPMENT	6
5. ACTIVITY HAZARDS/ RISK	6
6. TRAINING REQUIREMENTS	7
7. METHODOLOGY	7
SEQUENCE OF WORKS	7
STITCH DRILLING OF THE RAFT SLAB	8
PILING OPERATIONS	8
BULK EXCAVATION	ERROR! BOOKMARK NOT DEFINED.
CONCRETE WORK.....	10
8. TEMPORARY WORKS REQUIREMENT	10
9. ARCHAEOLOGY, HERITAGE AND GEOLOGICAL	10
10. SPECIAL ARRANGEMENTS	10
SITE PLAN	10
EMERGENCY PROCEDURE	11
FIRE.....	11
PERSONAL INJURY	11
FIRST AID	12
• CONTROL MEASURES	12
• ENVIRONMENTAL MANAGEMENT	12
• COMPLIANCE AND MONITORING	13

Introduction

This Method Statement has been prepared for the task as identified under section 2. However, as it is only part of the overall scope of works, it should be recognized that activities on the site covered by other Method Statements may have a bearing on this operation and elements from them should be considered for inclusion in this document.

1. Site Details

Project Name:	Admiralty Arch	
Site Address:	The Mall SW1A 2WH	
Works commencement date:	May 2020	
Works completion date:	Feb 2021	
Area works to commence in:	North Core	
Area works to complete in:	As Above	
Working Hours	Monday – Friday:	07.45-05.45
	Saturday:	07.45-.12.45
	Sunday:	N/A
Working Hours Restrictions	As per the section 61 <i>i.e. Noisy working</i>	

2. Scope of Works

The scope of works is as follows;

- Stitch Drilling of the existing raft slab for the permanent work
- Back filling of the existing trench both Permanent and Temporary
- Underpinning
- Piling
- Bulk excavation of the North Core Box
- Installation of Structural Steelwork Work
- Concrete works
- Forming the Tunnel Eye
- Injection works for the tunnel dewatering

3. Resources

Personnel Involved

Role	Contact Name	Contact No.
Contracts Director :	Troy Robertson	07903183904
Project Manager:	Macdara Woods	07881505752
Principal Supervisor:	Paul West	07500008165
Section Supervisor:	Ionel Iulian Patrascu	07469084813
Project Safety Advisor:	Liviu Darie	07903184057
Project Engineer	Diego Fenaroli	07469084846

The named Project Manager has overall responsibility for safety of the work; he will be responsible for ensuring that suitable experienced and qualified supervisors are appointed for each work face. All supervisors will be responsible for carrying out a pre-start safety inspection of their work place; this will be followed by a method statement briefing before putting men to work.

All supervisors will be fully conversant with the content of the risk assessment and method statement pertaining to their works.

The appointed resident safety advisor, Liviu Darie , will monitor compliance with the RAMs, any non-compliance will be recorded and brought to the attention of the supervisor or project manager in order that corrective actions can be implemented

Duties and Responsibilities – refer to Health and Safety Policy The following trades/skills and required numbers of personnel have been identified as being required to carry out the activity safely:

Role/ Trade	Total No. Involved	Supervisors Name
Laborers (CSCS):	4+	Iulian Patrascu
Miners	6	
Hoist Driver	1	
Steel Erector	2	
Carpenters	3	
Concrete Operative	6	
Concrete Pump Driver	1	
Excavator Operative	2	
Dumper Operative	1	
Steel Erector	1	

Plant

- Tumbler skip for removal of arising
- Material Conveyor
- Compressor
- 9tn Excavator
- 2tn Excavator
- electric hoists
- Bentonite mixer
- Bentonite Pump
- Electric Dumper

Small Tools Required

- FL 22 Clay Spades
- Welding Plant
- Impact Gun
- Diamond Drilling Rigs

Materials Required

- Formwork systems
- Scaffolding
- Barriers
- Waterproofing system
- Steel Beams
- Benonite powder
- Cement
- Concrete

Plant and equipment will have current certification that will be retained in the Site Safety File. Records of inspection and examination will be maintained. Plant and equipment is regularly serviced and, where required, labelled with next service due date.

4. Personal Protective Equipment

Standard Issue PPE:	Other PPE deemed necessary for carrying out activity:
<ul style="list-style-type: none">• Safety helmet• Safety footwear c/w protective toecaps and midsoles• Hi-vis vest/ coat• Safety glasses• General hand protection	<ul style="list-style-type: none">• Gloves – level of protection decided by risk assessment• Eye/ face protection i.e Safety goggles/full-face visors level of protection decided by risk assessment• Hearing protection – to correct attenuation• Dust masks – FFP or similar• Concrete overalls

5. Activity Hazards/ Risk

With reference to existing documentation e.g The Health and Safety File, the following associated workplace/activity hazards and risks have been identified. The full risk assessments are found within the appendices.

- Safe access
- Manual handling
- Lifting Operations
- Slips, trips and falls
- HAV
- Damage to the existing structure (listed features in the area)
- Hot works
- Working in an Enclosed Space
- Access/Egress
- Flying Particles
- Concrete Works
- Dust
- Ground Water

6. Training Requirements

All McGee Group personnel and (sub contractors) hold relevant CSCS/CPCS/ SSSTS qualifications and skills necessary to carry out the activity. Records will be kept on site and uploaded on to Content Server.

Miners hold valid Confined space tickets and there is trained confined space rescue people available if the need arises

7. Methodology

Sequence of Works

1. Backfill the existing redundant trench with suitable detail provided by WSP
2. Stitch drill the slab for the under pins along the southwestern façade
3. Concurrent with above; the new pile line is to be stitched drilled and guide wall formed around back and sides of the Lift Pits
4. The next stage is to start the Underpinning to the southwest façade to pick up the future pynford Beam and to install the cement bentonite water cut off Piles
5. The slab above the piles is to be reinstated
6. Once the slab above the piles has been reinstated then a line along the front face of the lift pits can be stitched to install a piled wall.
7. Whilst we are working on the water cut offline for the lift pit along the front face we also need to start work on the pynford beam also
8. Once the pile cut of wall and pynford beam is complete; we begin to underpin the slab
9. Once the first stage of underpinning has been completed then. Then structural blinding will need to be installed before the second stage commences

Stitch Drilling of the Raft Slab

1. Operatives are to stitch drill a line of holes along the new line of the slab for the cement bentonite pile cut of wall
2. Prior to the stitch drilling; the existing redundant trench for the previous scheme is to be backfilled to not undermine the existing permanent structure.
3. Exclusion zone is to be set up around the location of the stitch drilling.
4. Drillers are to stitch drill the slab to 100mm above the formation of the slab and move on to the next hole
5. The walls must be disassociated from the slab in entirety any demolition of the raft slab can take place
6. The above will also take place along the South western façade wall also at the same time

Piling Operations

1. The Bentonite farm is to be set in a well-ventilated area away with an exclusion around it
2. An exclusion zone is to be set up around the piling operations with only the piling team allowed access
3. A Guide wall is to be constructed using the 750 Dai interlocking polystyrene cones
4. As the piling commences a hose from bentonite farm is start filling the bore with bentonite as bore the increases in depth
5. As the arising's are removed from the bore, they are to be removed by 2tn excavator to 1tn excavator and removed a boat skip in south Moling Hole
6. Area is be cleaned up and all excess bentonite to be removed at the completion of each pile before moving on to the next one
7. Once the piles have been completed then the Guide wall is to be broken out and slab reinstated using the detail supplied by the Structural Engineer
8. Scallops to be broken back to give a smooth flat surface

Underpinning

1. Engineer is to set up monitoring points and take a series of readings over a couple of days prior to commencement of the underpin
2. Slab is to be stitched drill ahead of the underpinning one pin ahead
3. Sequence of underpinning is to be clearly marked on the wall by the Engineer
4. Slab is to be broken out using a 2tn Hybrid excavator carefully up to 100mm from the face of the Façade
5. Suitable protection around the opening will be installed
6. The initial arising's and dig for the shaft will be removed using the 2tn excavator but a runway beam and hoist will be needed for the removal of arising's after the first 1.5m
7. Remaining 100mm to be trimmed back by Hand using an hand breaker
8. Shaft to service the underpin is to be sunk using timber poling boards with the ground behind the poling boards grouted to firm up any voids
9. 8*4 timber waling beams are to be used to shore up the poling boards and form a frame
10. Underpin is to be opened by hand to a depth of 1.5m with trench sheets placed at the back face with 150*75mm channels welded to them, Stiffeners to be welded approximately 100mm from the end for construction purposes and the back of the trench sheet is to be grouted.
11. All Loose material from the underside of the raft slab is to cleaned off in preparation for the dry packing phase the following day before the pin is poured
12. The ground at the bottom of this Phase of the pin to be leveled out, blinded and have ply placed on the ground to a tolerance of +/- 5mm in anticipation of the next phase

13. Reinforcement is to be fixed with couplers on the bottom and sides to pick up the follow on pins as well with couplers on the top to pick up a 200mm wall for waterproofing at a later date.
14. Pins are to be cast a maximum of 75mm shy of the bearing slab for dry packing purposes
15. Extreme care should be taken when placing the concrete from Phase 2 onwards of the pin to make sure that the concrete is fully connected and bonded to pin above and that there is no voids. This may require topping up the pin after an hour to make sure that all settlement has been accounted for
16. After the shutters are struck on each phase of the pin; the waling props must be reinstated to provide lateral support,
17. Once the underpin has been cast then it will then be dry packed and allowed to cure for 48 hours before the next pin can be opened
18. A second phase of Pins is required behind and to the side of lift shafts

Pynford Beam

1. On the South Western Façade, a pynford beam is to be constructed which spans over the tunnel location
2. The pynford beam requires pockets to be created in the brick façade to take a steel stool
3. The pockets are to be created by stitch drilling out a rectangular section
4. The bottom of the pocket is to be filled up with 25mm grout or steel shims to provide a level surface
5. A Steel section is placed into the pocket on the top of the grout
6. Between the top of the steel sections and the masonry there is a requirement for dry packing to be carried out so that there is solid contact between the steel section and the masonry
7. The above is to be repeated as per the engineers' sequence with only one pocket to be open at a time
8. Once all the all the steel sections have been installed then the remaining pieces of masonry can be removed in between the steel sections
9. Reinforcement is to be installed along the length of the beam and around the stools
10. The beam is then to be cast and allowed to cure
11. Once the beam has been cured then the slab beneath the pynford beam can be removed along with the bulk excavation

Demolition Enabling Works

1. As part of the Enabling Works there is some element of walls that need to be demolished.
2. The demolition works comprise of hand demolition at high level and mechanical demolition at slab level

High Level Hand Demolition

1. Demolition is to take place using the existing roof slab as platform
2. Edge protection is to be established length of the open side of the slab with suitable access
3. A Physical barrier is to be erected at each end of the corridor to stop people from walking up under the demolition area with signage
4. Walls are to be broken down in small portions by the operatives and material arising to be cleared as we go along in to the 1tn Dumper for transportation to the Moling Hole
5. Operatives to use dust suppression methods during demolition

Mechanical Demolition

1. Demolition is to take place using a 2tn excavator of the slab
2. An exclusion zone around the excavator/demolition is to be put in place
3. The demolition is to start at the south block and work away from the Moling
4. Excavator to carefully break the remaining high levels and then start demolishing of the top slab

5. As the demolish of the walls progress then the excavator will need to clear away the arisings so that the area is clear and a suitable working area is maintained
6. Again, proper dust suppression should be used at all times

Steel Work Installation

TBC

Concrete work

TBC

8. Temporary Works Requirement

- Truss Design
- Formwork design
- Scaffold Platform

9. Archaeology, Heritage and Geological

- N/A

10.Special Arrangements

- N/A

Site Plan

- All operative will attend the mandatory McGee Induction, where all site specifics will be explained in full and then followed with the RAMS briefings

Emergency Procedure

All accidents and incidents must be reported to the McGee supervisor and Project Manager and in turn they will notify the McGee Health and Safety Advisor immediately. If he/she is unreachable, please contact the SHE Director (Nick Wing 07469084900) or McGee Head Office Safety Department in order to investigate.

Appropriate forms to be completed and emailed to incidents@mcgee.co.uk

Personal Injuries <http://mcgeenet.mcgee.co.uk/Livelink/livelink.exe/Open/1011765>

All other Incidents <http://mcgeenet.mcgee.co.uk/Livelink/livelink.exe/Open/176000>

Fire

The reporting point will be at the muster point located at the corner of Hortensia and Fulham Road

1. Person discovering the fire MUST;-
 - Alert all personnel by shouting 'Fire, Fire, Fire' and sound the alarm.
 - Alert supervisory staff and go to the assembly point.

Only attempt to extinguish the fire if it is small or is obstructing your route to escape.

Enclosed Space Rescue Room

Please see attached Enclosed Space Rescue Plan

DO NOT PUT YOURSELF AT RISK

2. Senior Management (Project Manager/Supervisor) ;-
 - On being alerted of the fire, call the emergency services - 999.
 - Go to the assembly point and assess the situation.
 - Check with contractors to see if any operatives are missing (if any personnel are reported as missing, call the ambulance service).
 - Once all personnel have left the building, do not allow anyone to re-enter, until authority has been given from the fire service.
 - Receive and brief the emergency services, giving the location of the water hydrants/ gas bottles on site and details of any missing personnel.
 - Contact site safety advisor.
3. All Contractors/Sub-Contractors MUST;-
 - Isolate any appliances in use
 - Go directly to the assembly point
 - The senior person from each contractor will carry out a role call and report any person/s missing to the Fire Safety Co-ordinator/ Senior Management.

Suitable and sufficient fire-fighting equipment will be identified and provided. Where practical dry powder extinguishers will be used.

Personal Injury

In case of injury, initial treatment should be by First-aider. Injured persons requiring further treatment will be taken to hospital by either site transport or by ambulance (call 999). Follow Safety Policy requirements for accident reporting

procedure. All accidents are to be recorded on the McGee Group accident reporting form and emailed to incidents@mcgee.co.uk.

First Aid



First Aider/s (Name & Contact No):	Site Office Traffic Marshall Huts Stores
First Aid Box Location:	St Thomas Hospital Westminster Bridge Rd, Lambeth, London SE1 7EH
Address of Nearest Hospital:	St Thomas Hospital Westminster Bridge Rd, Lambeth, London SE1 7EH

• Control Measures

General : Regular toolbox talks will be used to provide further information on the topics associated with the methodology and or plant and equipment used.

Fire: Fire Point is located in the Park next door to the building. See the site plan for the Muster points.

Access: High standards of housekeeping will be maintained to ensure clear access at all times. Logistics supervisor will be responsible for the maintenance of their own workplaces.

Lighting: McGee Group will provide and maintain all task lighting required to carry out the activity safely. Where specified we will also provide all access lighting. (not required)

Traffic Control: All vehicle movements, both on and away from stores will be directed by the traffic marshal

• Environmental Management

Our works may create noise and vibration, nuisance, dust, and spoil deposits on public thoroughfares. We will endeavour to eliminate and reduce at the very least our impact upon the local environment and our neighbours. We will adhere to all noise restrictions imposed by the local authority. Any dusts generated will be cleared away where reasonably practicable, otherwise suppressed using water.

Where reasonably practicable, any arisings will be re-used/recycled rather than transporting away to landfill. Any landfill sites used will be as near to site as possible so as to reduce vehicle emissions and excessive use of fuel. Please refer to our Site Waste Management Plan.

All static liquid-fuel driven plant will be provided with drip trays. Fuels and liquids stored on site will be kept within secure, and where appropriate, lockable facilities. We intend to remove the need for site-stored fuels by providing a visiting fuel supply bowser where practicable. Adequate provisions will be made to prevent fuel spillage. Any spills will be cleared away using appropriate spill kits.

Waste transfer notes will be issued to each vehicle leaving the site with waste. Information will be captured using the PODFather system which automates and digitizes the 'Waste Transfer & Conveyance Notes' for the movement of waste materials, utilizing Handheld PDA & mobile printing devices over a 3G network for any vehicle movements from site by any appointed Haulier.

- **Compliance and Monitoring**

- N/A