

# Risk Assessment & Method Statement Review Form



<b>Project name</b>	UCL Institute of Neurology	<b>Project no</b>	DC1215
<b>Project Address</b>	256 Grays Inn Road WC1X 8LD		
<b>Package no</b>	Demolition & Groundworks	<b>Subcontractor</b>	Keltbray LTD
<b>Anticipated start date</b>	May 2021	<b>Issue no</b>	P03
<b>Activity</b>	Plot 1 Piling Operations	<b>RAMS ref no</b>	BEMP-KBY-SW-ZZ-MS-X-00-0083

<b>The following items must be covered as a minimum (where relevant) This is not exhaustive but is intended to aid those reviewing RAMS</b>			
Have the hazards and risks been identified?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Has the work been sequenced?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Has a safe method of work been demonstrated?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Have they identified any restrictions or limitations on the activity/location?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Have they considered a safe means of access and egress?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Have the appropriate permits identified?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Has proof of workforce competence been provided? i.e. (IPAF, PASMA, CPCS)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Have they identified specialist training requirements i.e. manual handling?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Is there adequate and suitable supervision? Have they named the supervisor responsible for the trade?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Will other people be affected by their work, if so have they been identified?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	n/a <input checked="" type="checkbox"/>
Has the need for tool-tethering be identified and controlled?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	n/a <input checked="" type="checkbox"/>
Have they defined the appropriate PPE, both site and task specific?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
First aid provisions stated	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Emergency procedures stated	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Communication methods to be used i.e. TBT, briefings	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Task specific lighting arrangements?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Hot Works and Fire arrangements stated	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Have existing services been identified and control measures stated	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Has all required plant/tools/equipment been included on a plant schedule?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Does the work involve working near water, if so has control measures been stated?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	n/a <input checked="" type="checkbox"/>
Is highways work involved, if so has control measures been stated?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	n/a <input checked="" type="checkbox"/>
Have COSHH assessment been provided?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Have manual handling assessments been provided?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Have noise assessments been provided?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Is confined space working necessary, if so have control measures been stated?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	n/a <input checked="" type="checkbox"/>
HAV's assessment provided	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Are excavations involved, if so have control measures been stated?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Does the work involve demolitions if so have control measures been stated?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Does the work involve asbestos if so have control measures been stated?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>

Does the work involve lead work if so have control measures been stated?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	n/a <input checked="" type="checkbox"/>
Does the work involve working at height if so have control measures been stated?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Are temporary works included in their works if so have control measures been stated including nominated persons?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	n/a <input checked="" type="checkbox"/>
Does the works include scaffolding or other access equipment if so have control measures been stated?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	n/a <input checked="" type="checkbox"/>
Has the environmental issues of the work been identified	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	n/a <input type="checkbox"/>
Does the works include the use of Acetylene, if so, what arrangements are in place to remove from site each day ( <i>ISG does NOT allow the storage of Acetylene on site</i> )	Yes <input type="checkbox"/>	No <input type="checkbox"/>	n/a <input checked="" type="checkbox"/>
COVID 19 RA in place along with Social Distancing taken into account	Yes <input checked="" type="checkbox"/>	No <input checked="" type="checkbox"/>	n/a <input type="checkbox"/>

<b>State any additional project specific requirements</b>	

Reviewed by:	Name	Date	Reviewed by	Name	Initial / Date
Contracts manager			H&S advisor	Liam O'Meara	
Project manager	Constantin Varzari	19.02.2021	Other:		
Senior site manager	John Mitchel				
Site manager					

Comment	Circle	Initials / Date
RAMS accepted	A	
RAMS NOT acceptable	R	
RAMS NOT acceptable	R	
RAMS NOT acceptable	R	

ISG acceptance			
Print Name	Signature	Position	Date
<b>ALL RAMS MUST be reviewed at intervals not exceeding 3 months as required under the project league table scoring criteria</b>			
Print Name	Signature	Position	Date

**METHOD STATEMENT**

## Institute of Neurology Plot 1 Piling Operations

<b>Method statement No.</b>	BEMP-KBY-SW-ZZ-MS-X-00-0083	<b>Revision No.</b>	P03
<b>Title</b>	<b>Plot 1 Piling Operations</b>		
<b>Start Date of Works</b>	<b>May 2021</b>	<b>Duration</b>	TBC

**Revision History**

Document No.	Revision No.	Issue Date	Author	Description of Modifications
0083	P01	05/02/2021		
0083	P02	09/02/2021		
0083	P03	19/02/2021		

**This Revision**

	Print Name	Signature	Position	Issued to:
Author	Chris Moore		Contracts Manager	ISG
Checked by	Helen Gregory		Proposals Manager	ISG

**Status of This Revision**

Overall Approval Status	Yes	No	Date
Cat A Accepted for implementation. Work may proceed as planned.			
Cat B Not accepted for implementation. Resubmission required.			
Date Returned to Contractor			

Sign of by Project Manager	Print Name	Signature	Date

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Risk Assessment Index		New for this Task Specific MS
Number	Title	
	Piling site specific risk assessment	Y
	General piling attendance	N
	Lifting operations	N
	Plant maintenance	N
	Plunge column operations	N
	Rigging/ De-rigging	N
	Rope replacement	N
	Site logistics	N
	Rotary bored piling	N

COSHH Assessment Index		New for this Task Specific MS
Number	Operation / Process / Substance	
	Diesel	Y
	Engine Oil 15w-40	Y
	Hydraulic Oil 10W	Y
	Line Marker Paint	Y
	Morris Grease	Y
	Mould Oil	Y
	Petrol	Y
	Ready Mix Concrete	Y

Health and Safety Factors	
Phase	Key Factors
<b>Design</b>	<ul style="list-style-type: none"> <li>▪ Structural knowledge of the structure and site surveys or assessments</li> <li>▪ Structural knowledge of any adjacent structure</li> <li>▪ Equipment and methods selected for Work</li> </ul>
<b>Planning</b>	<ul style="list-style-type: none"> <li>▪ Site knowledge</li> <li>▪ Health and Safety risk assessment</li> <li>▪ Development of safe sequences of work activities</li> </ul>
<b>Execution</b>	<ul style="list-style-type: none"> <li>▪ Workforce Supervision</li> <li>▪ Control of method statements implementation</li> <li>▪ Communication of unplanned discoveries</li> <li>▪ Safety information and training selection</li> </ul>

## 1. Introduction

Before any works progress on site, all operatives must be briefed and signed up to the current approved copy of this method statement and the associated risk assessments. **Please refer to Appendix G – Method Statement Briefing Sheet for a copy of the relevant briefing sheet which will be used to capture the briefing records.**

**This Method Statement will be reviewed periodically with a maximum of 12 weeks between review dates.**

All operatives will be required to attend a site induction facilitated by the Main Contractor upon arrival to site.

Note: - no works shall take place until a piling method statement for plot 1 prepared in consultation with Thames Water has been submitted and approved in writing by the local authority.

Ramboll are currently in the process of consulting Thames Water and have submitted a technical note (BEMP-RAM-P1-XX-TN-CG-00-0001) summarising considered effects from the proposed development associated with 256 Grays Inn Road. This document includes the proposed movement monitoring strategy and other risk mitigation measures.

All works will be undertaken in accordance with this method statement.

## 2. Scope of Works

- The works which Keltbray Piling are undertaking are for the installation of approximately
  - 900mm contiguous wall piles from within the existing basement
  - Installation of the good yard ground bearing piles on the S/E elevation of the site, please check Appendix 1 for details.
  - There will also be a number of smaller size piles required to be installed by a low headroom piling rig on the outside of the contiguous wall, adjacent to the Grays Inn Road elevations. The location of the smaller piles are marked out on the Appendix A of this document.

Note:- should the 'option F / LFB core' be instructed then the piles in this area will be 750mm  
Pile depths are as detailed on the piling report and drawings

- The piling operations are planned to start on site from 03<sup>rd</sup> May 2021 for a duration of 15weeks.
- The sequence of works
  - 1) Installation of guide wall and site mobilisation
  - 2) Installation of contiguous wall within existing basement concurrent with the installation of the good yard piles and the low headroom piles adjacent to Grays Inn Road

## 3. Enabling Works

Below is a summary of the Key activities required to be carried out by the Demolition Contractor and/or the client prior to the Mobilisation of Keltbray Piling to site

- RAMS and ITP are to be submitted for approval prior to commencing with works
- Lifting plan to be submitted for approval prior to works commencing, within a two weeks period for the documents to be reviewed by the principal contractor, pending on the available cranes models and specs at the time of the site mobilisation.
- Demolition of existing structures.
- Removal of overhead, surface or underground obstructions.
- Protection, diversion or removal of existing overhead or underground services which may impede upon the planned pile positions

- Installation and testing of the Piling Working Platform in accordance with the requirements of the Working Platform Certificate. **Certificate to be signed and handed to KB Piling prior to works commencing.**
- Construction of the guide wall.
- Erection of Site Hoarding to include crossover points where/ if required
- Potable water supply under sufficient pressure.
- Permit to pile to be completed and issued to KB Piling.
- Support of the existing upper level retaining wall (by others)

Vibration monitoring points and base line established when/ if required.

#### 4. Method of Works

Construction of the contiguous wall piles shall commence from 16.8mOD. Plate Bearing tests shall be carried out to ensure that the design and installation is suitable and sufficient for the piling equipment to be used.

The piles are being constructed from a low level in an existing basement. The existing upper basement will be retained by other means.

All operatives will attend a 'Daily Activity Briefing' prior to the commencement of every shift, the briefing will include but not limited to; planned activities for the shift, deliveries/collections, site logistics

Site working hours are from 0800hrs until 1800hrs

Guidewall to be constructed as per the approved pile layout drawings. The wall is to be checked for position by a setting out engineer prior to the wall being cast

Boring at each pile location will only start when the correct reinforcement cage has arrived on site and has been checked against the reinforcement drawings for that pile.

Piles to be constructed as per the approved ITP.

Piles will be marked on the piling platform with a pin within the guide wall. The pin will have a safety cap with the pile number marked on it.

The work area will be segregated with physical barriers with signage, please refer to Section 4 above for typical piling rig setup.

Once the casing has been installed, the casing shall be left with an upstand of 1m in order to provide sufficient edge protection from the open bore.

Prior to pulling the casing, the open bore shall be back filled with shingle.

Cages, casings (when stored horizontally), and digging tools shall be chocked to ensure that they do not roll.

The piling rig will be tracked to the location of the pile position. The operator will level the mast on both axis with the auger over the pin.

Construction will continue as per the standard piling procedures attached.

**Keltbray Piling works will be constructed in accordance with the approved Keltbray Piling Procedures:**

**KP-COMP-PRO-035 - Establishing Control Points**

**KP-COMP-PRO-015 - Rigging up Procedure**

**KP-COMP-PRO-020 - Permit to Pile Procedure**

**KP-COMP-PRO-032 - Rotary Construction Procedure**

**KP-COMP-PRO-038 - Adding Water Procedure**

**KP-COMP-PRO-039 - Non Conformity and Corrective Action**

\*Any deviations from the approved working procedures listed above which are expected to occur during the under taking of this project will be detailed in the below sequence of works.

**The steps below detail the sequence of works**

- Before any works take place the Piling Platform Certificate is required to be signed and issued to the Keltbray Piling site management team, prior to either the crane or piling rig being erected or working.  
This will be done in accordance with:  
**KP-COMP-PRO-020 Permit to Pile Procedure**
- The reinforcement cages will be pre-fabricated off site and delivered on FORS registered vehicles which will have edge protection to allow the safe unloading of the cages. Cages will be offloaded on site, using the webbing slings provided.
- Before we commence works, a site walk through with Operatives and/or the Project Engineer must take place along with a representative from the Main contractor and Keltbray D&C team and review any hazards that may be present, or relay any concerns to the client before commencement of piling works, so they can either be discussed and closed out, or actioned by the client.
- The Piling operation will be carried out in accordance with Keltbray procedure:  
**KP-COMP-PRO-032-Rotary Construction Procedure**
- Whilst digging the pile, the rig banksman is to watch the arising for any signs of ground contamination. Should there be a sign of contaminations, the material will be segregated and placed on plastic sheeting until further testing can be carried out. This will be signposted as potentially hazardous material.
- If during piling works concrete has been tested and is out of specification, then the procedure for adding water must be adhered to.  
This will be done in accordance with:  
**KP-COMP-PRO-038- Adding Water Procedure**  
Water must never be added without first speaking to the batching plant.
- Should any non-conformances arise which deviate from the specification and the Keltbray ITP, then an NCR will be raised for this pile and communicated with the principal contractor and the design team.  
This will be done in accordance with:  
**KP-COMP-PRO-039-Non Conformity and Corrective Action**



Pile plan and verticality tolerance to be in accordance with the piling and embedded retaining wall specification (BEMP-RAM-P1-XX-SP-CG-15-1001).

- Plan position tolerance at commencing level: +/- 25mm
- Verticality tolerance required for all piles 1:100mm

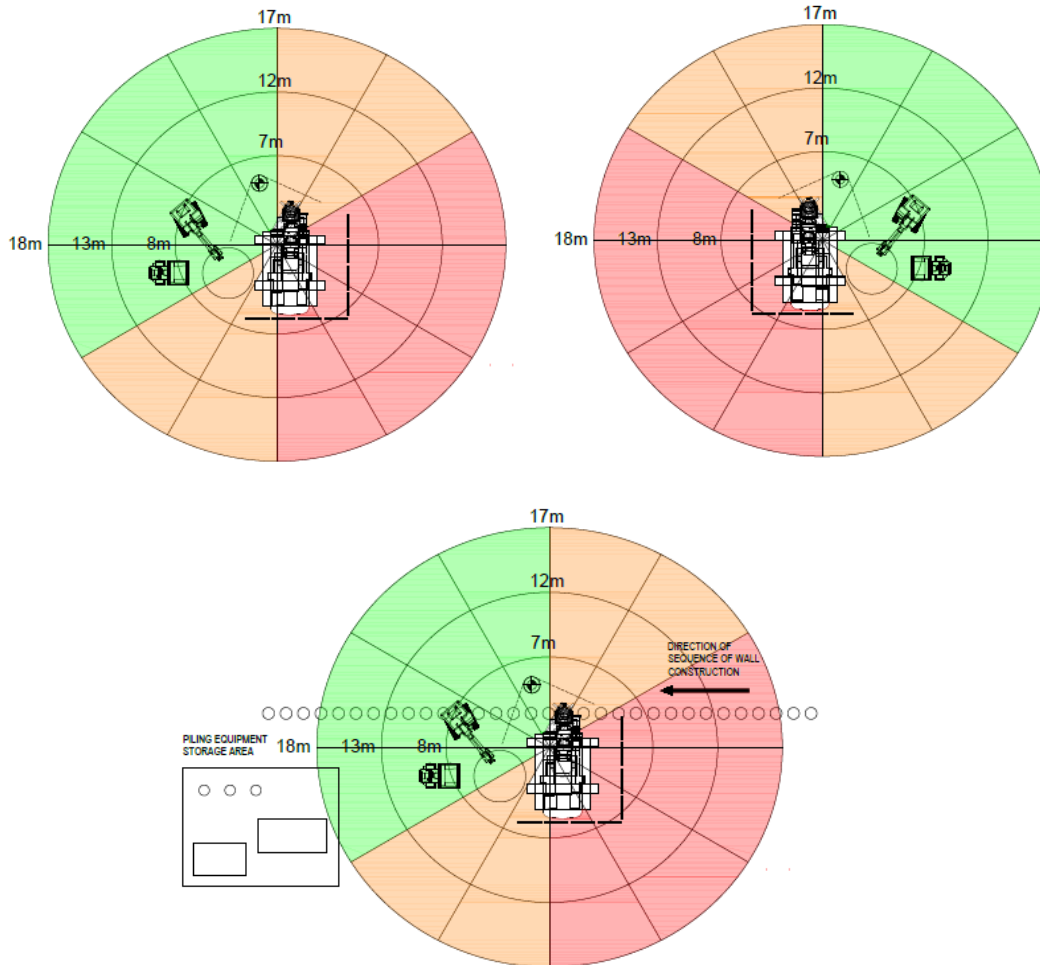
Note ; The project piling specification details a non-standard deviation from the general piling specification noted in ICE SPERW and Keltbray piling procedures:

In order to minimise the potential damage to the surface water table, the following have been accounted for:

- Rotary bored piles to be installed, which implies securing of a segmental casing seal to prevent the water seepage into the bore, the casing is to be driven down further to ensure a seal protection is achieved.
- The pile probing works will be completed to a depth up to 3.0M with all known obstructions to be removed within the 3.0m depth. This will ensure the ground is not disturbed during the pile probing or other works
- The secant wall pile installation can also be sequenced to minimise the ground movement and potential disturbance to the surface water table

## 5. Logistics

- Keltbray require an access gate for rigid vehicles to provide continuous access during contiguous wall works. Concrete will be discharged directly into the bore.
- Pedestrian access is via the pedestrian gate located on Basil Street
- All vehicle movements will be controlled by Vehicle Marshals, access/egress for articulated vehicles will be via Brompton road
- There shall be daily coordination between all parties to ensure everyone is aware of the vehicle movements throughout the day.
- All 360 excavators are to be fitted with 360degree vision camera systems
- Due to restrictions in place for the movement of heavy plant, Keltbray piling will require to be granted access to the site at a time and date to be confirmed, for delivery of the Piling Rig, crane and ancillary equipment
- Exclusion zones will be formed around piling areas by use of crowd control barriers which will be located as and where required on a daily basis.



Piling arising will be transferred using licenced hauliers to a licenced facility, this work will be carried out by Keltbray.

**6. Hazards / Risks –Refer to risk assessments for further details**

The following General piling risks have been identified as being applicable to this project.

Keltbray R.A. Reference Number:	Risk Assessment Title:
SPA1, SPA2	Piling Attendance
LO1	Lifting Operations
R1, R2, R3	Rotary Piling
SL1	Site Logistics
PM1, PM2, PM3	Plant Maintenance
1 - 17	Environmental

In addition to the above identified risk assessments, please refer to Appendix G for the site specific piling risks associated with this project.

A full COSHH assessment has been carried out in relation to this project, below is a list of the identified substances which will be on site and require COSHH assessment documentation.

Control of Substances Hazardous to Health	
Concrete	Hydraulic Oil
Grease	Diesel

Mould Oil	Petrol
Engine Oil	Line marker (spray paint)

Please refer to Appendix F for fully detailed COSHH assessments in relation to the project.

Existing structures, i.e. the retained façade and the façade retention towers are to be briefed to the site team within a toolbox talk as part of the site induction.

Significant Hazards	Risks	Controls

**7. Control Measures (Permits, Exclusion Zones, PPE etc)**

Permits Required	Yes	No	Assessments (Attach If Yes)	Yes	No
<b>Hot Works</b>	✓		<b>COSHH</b>	✓	
Crane check list	✓		Noise	✓	
Excavation	✓		Manual handling	✓	
Confined space entry		✓	Electrical Isolation		✓
Riser shafts		✓			

**Further Control Measures / Security Requirements.**

As stated above, due to the nature of the works being carried out on the site, no personnel are to enter the building / working areas without express permission for the site manager or the supervisor in charge of that area of works.

Due to the nature of the works being carried out on the site, no unauthorised personnel are to enter the piling exclusion zone area without permission from the Keltbray supervisor in charge of works.

In any instances whereby works are close to the boundary of the site, either with public footpaths or highways, this proximity must be considered during casing installation of Rotary Bored piling, when the spoil laden auger is removed from the casing at height. This must be done with care and under strict control of the banksman.

In relation to the above mentioned close proximity to 3rd parties, there is also the risk of a hydraulic hose failure. All hydraulic hoses connected to the rotatory table will be encased in a protective sleeve that in the unlikely event that a hose burst, the hydraulic oil will be contained.

Prior to works commencing all relevant precautions must be in place e.g. safe access, electrical disconnections, removal of hazardous materials, surveys etc. (this list is not exhaustive and items are dependent on the specific scope of works covered by this MS – include specific items in section 3 above

Personal Protective Equipment	Yes	No		Yes	No
Safety Helmet – BS EN 397	✓		Gloves BS EN 388	✓	
Protective Footwear - BS EN 345	✓		Hearing Protection BS EN 352	✓	

High Visibility Clothing - BS EN 471	✓		Fire Proof Overalls - BS EN 531		✓
Eye protection BS EN166	✓		Body Harness BS EN361	✓	
Face Respirator BS EN 140		✓	Other? (state)		
<b>Equipment To Be Used</b>					
	Yes	No		Yes	No
Lifting	✓		Cradle		✓
Materials hoist		✓	Excavation shoring		✓
MEWP	✓		Ventilation Equipment		✓
Ladder		✓	Cable avoidance tool - CAT		✓
Passenger Hoist		✓	Mechanical tools		✓
Test Equipment - state		✓	Lifting slings/chains	✓	
Task Lighting	✓		Mechanical plant (State)	✓	
Scaffolding		✓			
Mobile scaffolds		✓			

## 8. Resources

### Management / Supervision

#### Site Based (full time)

Project Manager – TBA  
 Site Supervisor – TBA  
 Contracts Engineer – TBA  
 Setting out Engineer – TBA

#### Site Based (part time)

Site Administrator – TBA

#### Site (visiting)

Operations Director  
 Contracts Manager  
 Safety Advisor  
 Quality Manager

### Labour

Rig Driver x 1  
 Banksman x 2  
 Slinger/ Signaller x 2  
 Crane driver x 1

### Plant & Equipment

Piling Rig  
 Crawler Crane x 1  
 13t Excavator x 1  
 Tremie rack x 1  
 Jetwash x 2  
 Diesel Bowser x 1  
 Stores

### Materials

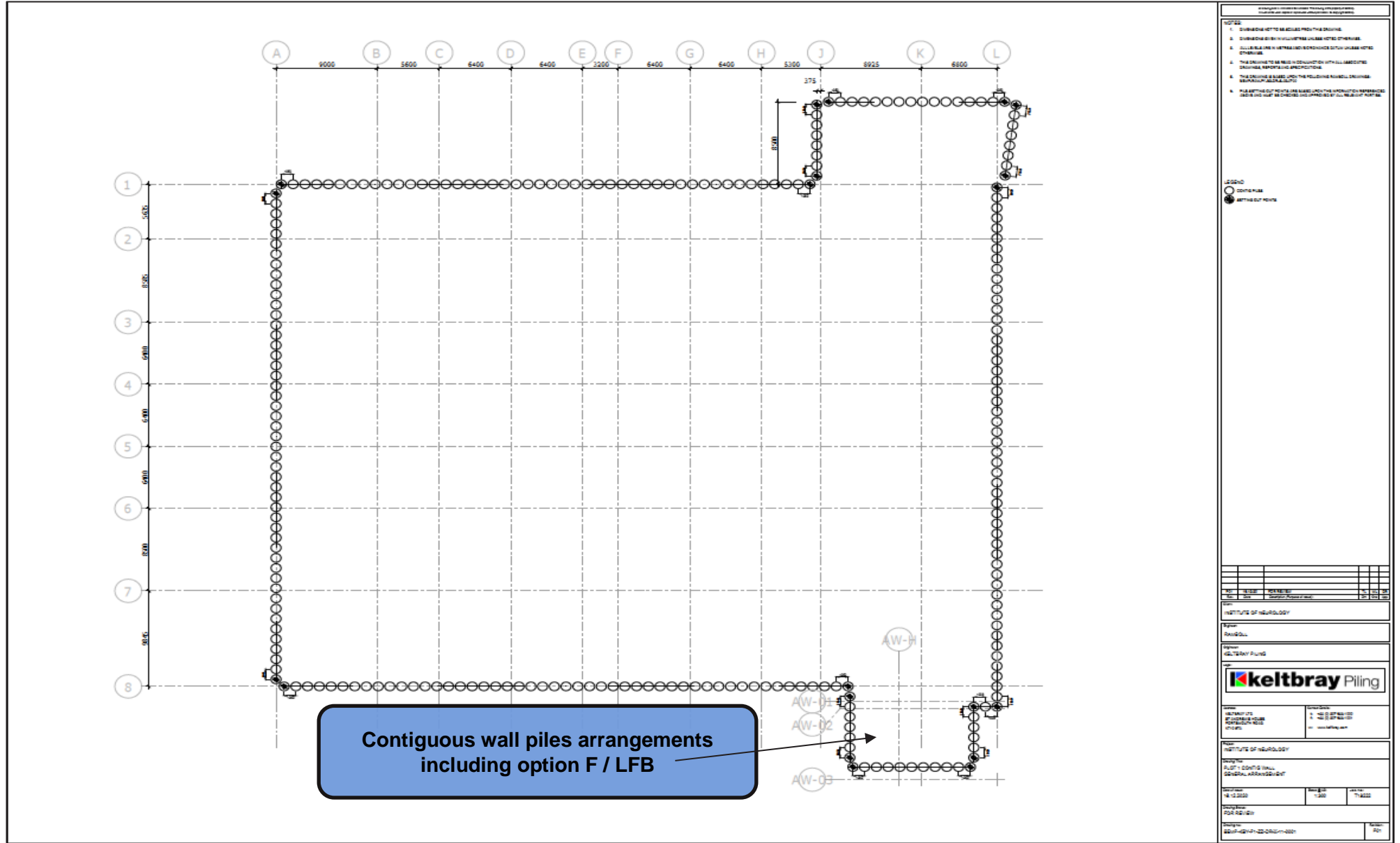
Pile cages  
 Concrete

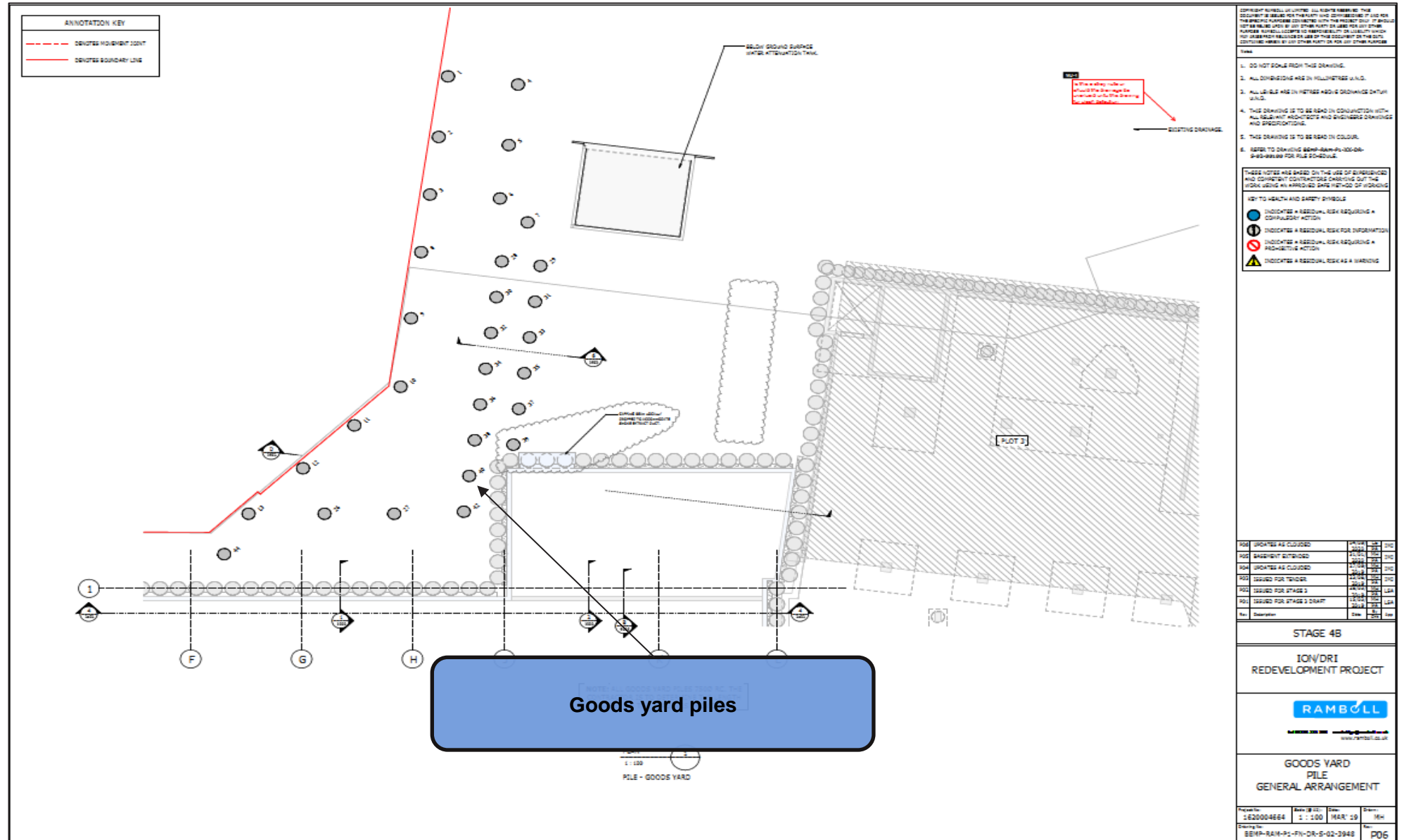
9. Training & Supervision					
Training Certificates Required					
	Yes	No		Yes	No
Scaffold		✓	Mobile Elevating Platform	✓	
Forklift		✓	Mobile Access Towers / steps		✓
Dumper	✓		Banksman	✓	
Excavator	✓		Abrasive Wheels	✓	
Mobile Crane	✓		Tower crane		✓
Skid steer		✓			
Others (Please state):					
Overall Assessment of Risk after the Implementation of Control Measures (tick one)					
Low	Moderate		Substantial		High
✓					

10. Emergency Arrangements	
First Aid Measures required	Security Measures required
Trained first aider on site	Security provided by others
First aid kits	
Rescue Measures	
Rescue Plan	

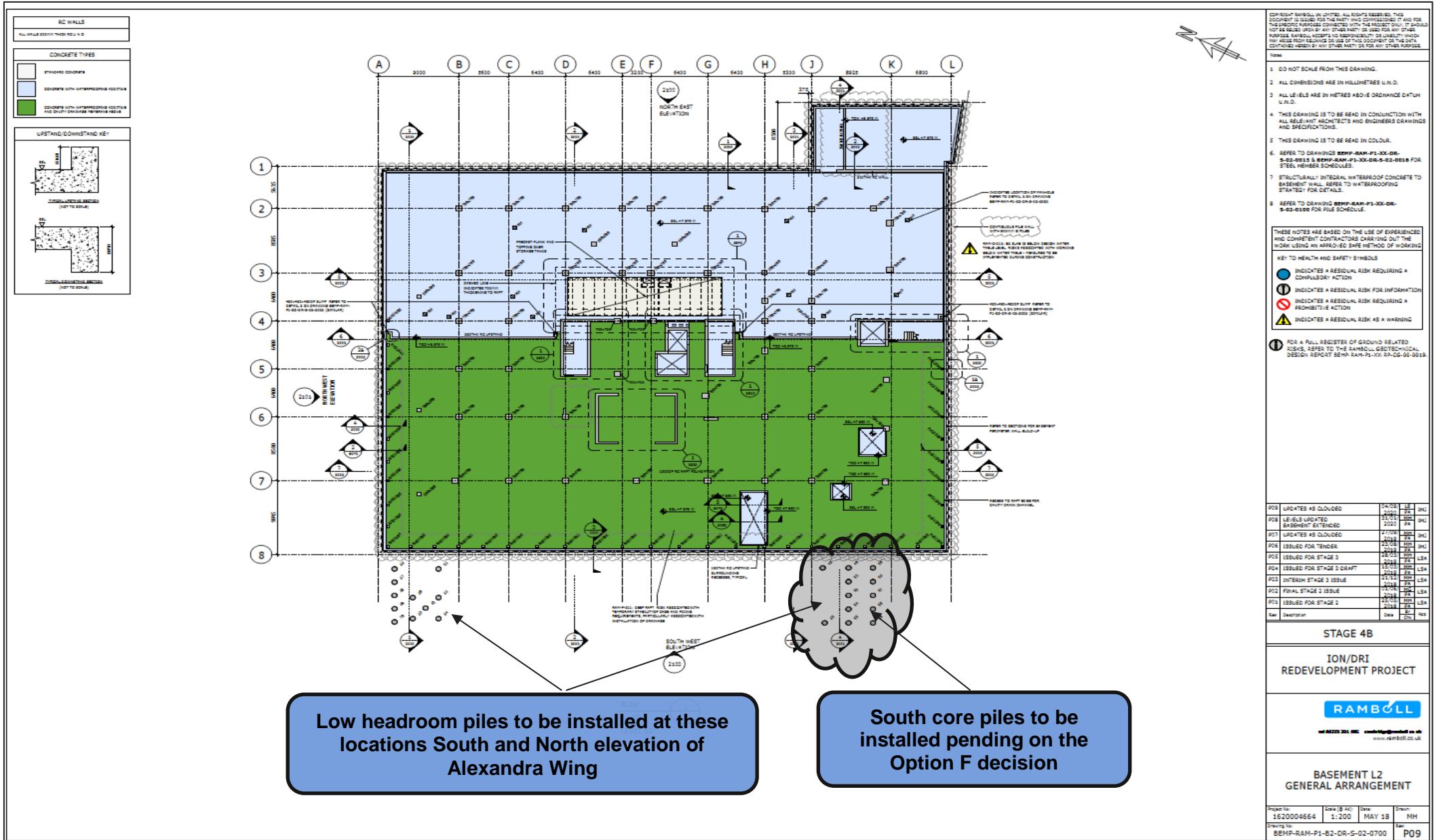
11. Contractor Monitoring & Compliance			
Who is accountable for monitoring compliance with the method statement?	Project Manager. Site Supervisor		
Will any test / sampling requirements impose compliance standards?	Yes	✓	No
If yes, who will carry them out and with what equipment?	ESG – Integrity testing and cube crushing		

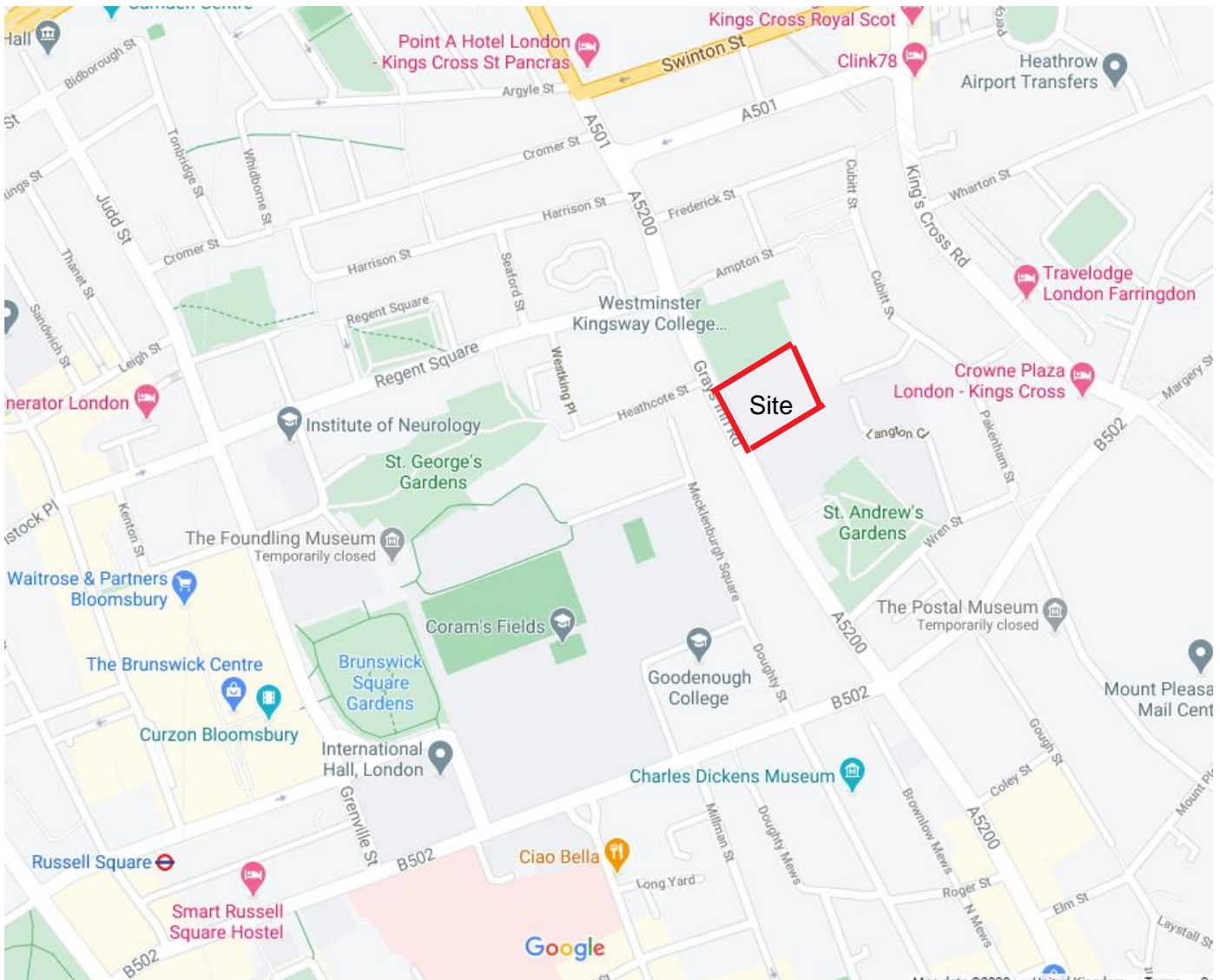
1. Appendix A – Site Location Plan contiguous wall and good yards piles general arrangement



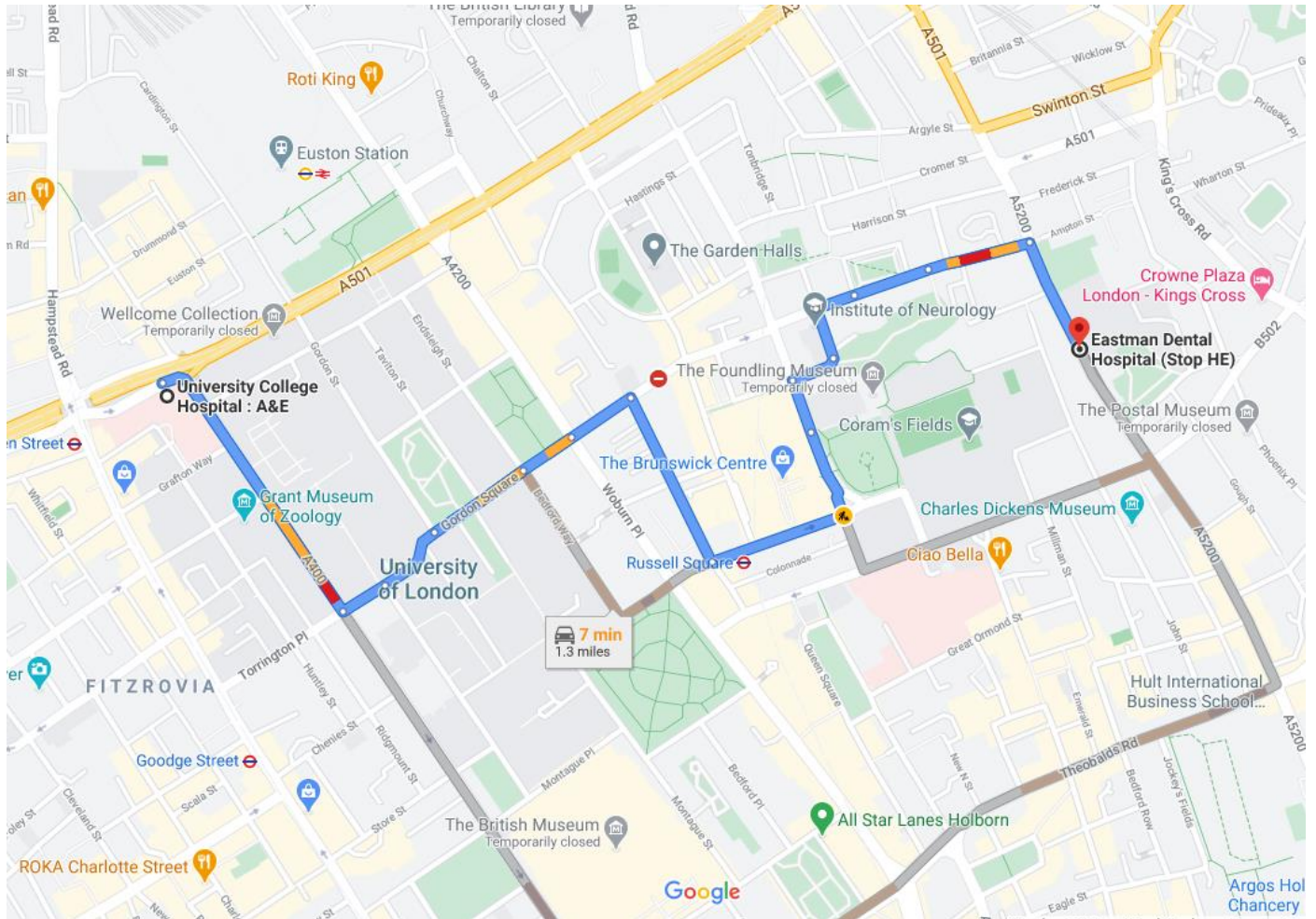








Site Address	Grays Inn Road, London
Post Code	WC1X 8LD
Delivery Restriction Times	As per the ISG TMP



Hospital:	University College Hospital
Post Code	NW1 2BU

## 2. Appendix B – Rotary Bored Action Plan

Description	Action
What if breakdown of rig occurs during pile construction?	Depending on the type of breakdown it may still be possible to extract the auger and remove the piling rig to a safe distance to allow assessment and fitting works to take place. If the breakdown is beyond quick repair the pile will be backfilled to save design capacity of the shaft.
Obstructions are not able to be penetrated by piling rig.	In the very unlikely event that an obstruction is encountered then the Engineer and Client would need to be notified and a course of action to be agreed.
Concrete supply not available after boring is complete or if time period between placing successive concrete batches exceeds 2 hrs.	<p>In the first instance the back-up plant would be contacted to arrange delivery and every attempt would be made to continue concreting the pile within the specified placement timescales and contract working periods. In the event that concrete was completely unavailable for the remainder of the day, a decision would be made to withdraw the cage from the pile, with the pile then subsequently being backfilled with a suitable weak concrete mix.</p> <p>The following day after assessment and discussion between all parties, the pile would be re-bored including likely allowance for a slightly deeper pile the second time around. Reinforcement cages would need to be adjusted as appropriate and this would also be discussed prior to the commencement of the re-boring of this pile.</p>
Water collects in bottom of bore.	After review of the site investigation it is likely that any water in the bore will be as a result of minor seepages in the London Clay. In the event that a reasonable amount of water (i.e. more than a 100mm) lay in the bore then the pile would be concreted through the use of tremmie pipe placed at the bottom of the bore and fully embedded during concreting works.
Casing Seal not preventing Water seepage	<p>If the casing seal does not prevent water seepage and is confirmed by the piling banksman, pile boring is to be ceased immediately with attempts made to form a new seal into the London clay by driving the casing down to a greater depth.</p> <p>Alternatively, part backfill (approximately 4m inside the casing) with weak concrete, P100 backfill mix. Surge casing up and down forcing grout around the casing. Leave to set overnight and drill out on the following morning.</p> <p>Where the water seepage has been eliminated or deemed to be at a manageable level (minor seepage) then boring will continue. Any standing water on completion of the bore will be noted on the piling log</p>

	<p>and every attempt will be made to complete the pile as swiftly as possible.</p> <p>In the event that a reasonable amount of water (i.e. more than a 100mm) lay in the bore then the pile would be concreted through the use of tremmie pipe placed at the bottom of the bore and fully embedded during concreting works.</p> <p>Upon removal, the casing sections shall be inspected and not used again until repaired or replaced.</p>
<p>Individual Dry Pile Construction Duration &gt;12hrs</p>	<p>The installation sequence is based on pre-bored piles being completed within a single shift.</p> <p>In the event of major plant breakdown and where the bore is unable to be backfilled with a suitable weak concrete mix (if bore is past the toe of the casing) the Engineer and designer is to be consulted as to the most appropriate means forward.</p> <p>In many cases it is likely that upon recommencement of boring the pile can be completed within the same working shift. However, it is possible that the bore may have been open for a period of 24-48hrs (or greater depending on the magnitude of the breakdown)</p> <p>The Engineer and designer is to be consulted as to the most appropriate course of action which may involve some or all of the following:</p> <ol style="list-style-type: none"> <li>1. Pile back-fill pending additional design</li> <li>2. Completion of pile bore to a greater depth</li> <li>3. Completion of pile bore with installation of a heavier steel cage.</li> <li>4. Increase bored length / steel of adjacent piles</li> </ol>
<p>What if cage wagon is incorrectly slung?</p>	<p>Should a cage wagon be incorrectly slung, then it will be dangerous for operatives to unload. Haulier/Supplier should be contacted first thing to prevent this happening again. If no other measures available wagon is to be returned to supplier, however this will only be done once the cage wagon is made safe to enter a highway.</p>

3. Appendix C – Plant Details

*Piling Rig and Crane TBC*

**4. Appendix D – Rescue Plan**

<b>MEWP Details – Manufacturer/model/ID:</b>	<b>TBA</b>
<b>Location of Use:</b>	<b>Piling Platform</b>
<b>Date &amp; Duration of Rescue Plan:</b>	<b>for duration of the project</b>

Emergency Situation	Proposed Action
Failure of upper control functions while elevated	Where the normal upper control functions fail, the operator will use the upper auxiliary controls to lower the platform safely
Failure of the operator to be able to operate the MEWP functions while elevated due to one of the following reasons: <ul style="list-style-type: none"> <li>Operator incapacitated</li> <li>Auxiliary functions fail to operate from upper control station</li> </ul>	Where the operator is incapable of lowering the raised platform using the upper controls, an appointed person familiarised in the use of the 'ground' controls will lower the platform safely using the normal ground controls
Failure of normal ground controls	Where the normal ground controls fail, an appointed person familiarised in the use of the 'ground' controls will use the ground auxiliary controls to safely lower the platform
Failure of ALL normal and auxiliary lowering functions	Where all normal and auxiliary functions have failed, a competent and authorised service engineer should be contacted  Name:  Contact details:

Name	Signature

This rescue plan should be brought to the notice of those exposed to the risk of working at height and those supervising and managing the same work at height.

Consideration for mid-air rescue

A mid-air, platform to platform rescue should only be considered in exceptional circumstances and only after:

- All normal and auxiliary lowering procedures have been attempted and these are unable to lower the platform.

- Site management have contacted the competent and authorised service engineer listed in the rescue plan, to report failure of normal and auxiliary lowering systems and request engineering assistance.

If after inspection by the competent engineering assistance, it is not possible to affect a timely repair to allow the machine to be brought to the ground safely, senior site management should be contacted for permission to carry out mid-air rescue.

Or

Where the competent engineering assistance is not readily available and an immediate risk exists to the health and safety of any of the occupants from remaining in the elevated basket until an engineer can attend, then senior site management should be contacted for permission to carry out mid-air rescue.

#### Code of practice for mid-air rescue

- Rescue using another MEWP should only be performed once a site-specific risk assessment has been carried out and a specific plan has been documented and approved by senior management.
- The rescue machine must be positioned so as to enable the rescue procedure to be carried out without compromising the safety of any personnel involved in the rescue procedure.
- The platforms of both machines must be adjacent to each other with a minimal gap between them, unless exceptional circumstances mean this is not possible.
- Where reasonably practicable, precautions should be taken to prevent inadvertent movement of both platforms during the transfer.
- The person being rescued (transferred from basket to basket) should wear a full body harness with an adjustable lanyard – the lanyard should be attached to the anchor point on the rescue machine before transfer takes place.
- Care must be taken not to overload the rescue machine during transfer. This may mean more than one journey to complete the rescue.



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5. Appendix E – COSHH Assessments

*Submitted separately*

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6. Appendix F – Risk Assessments

*Submitted separately*

**7. Appendix G – Method Statement Briefing Sheet**

**Method Statement, Risk & COSHH Assessment Talk Attendance Register**

<b>Project Name</b>	Institute of Neurology	<b>MS/RA No</b>	T18222-MS-001
<b>Title</b>	Piling Operations		

**I hereby acknowledge that I have attended, received and understood the above mentioned Method Statement and Risk Assessment talk.**

No	Print Name	Signature	Date	Briefed by
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**Appendix H - Piling Programme Extract**

