

Project Name:	70-86 Royal College Street, Camden, London		
Project Number:	TBC		
Revision Number:	00		
Title / Task:	Secant piles.		
Date of Issue:	20/01/2023		
Cannon Piling:	George Newton		
Rig:	Soilmec SR30		
Cannon Piling Contract Contact:	Telephone:	Cannon Piling Head Office 01245 401333	
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Other Contractors to be copied with Method Statements and Risk Assessments for information, co-ordination and interface purposes:	Principle Contractor – CField Construction LTD Attendance Contractor – TBC Other – TBC		

KEY	CP: Cannon Piling	CFC: C Field Construction LTD	TMP: Traffic management plan					
	MC: Main Contractor	LP: Lift Plan	SI: soil investigation					
	PC: Principal Contractor	MEWP: Mobile elevated work platform	GI: ground investigation					
Project Contact	Client C Field Construction LTD	Name Duncan Miller	Contact TEL: 020 7078 4364 Email: <a href="mailto:duncan.miller@cfield.co.uk">duncan.miller@cfield.co.uk</a>					
Cannon Piling						Acceptance by Customer		
Revision No	Prepared by	Date	Checker initials	Date	Status	Required Y/N	Reviewed by	Date
00	G. Newton	20/01/2023	HN	20/01/2023	For Approval			

By accepting this Method Statement the PC/ Client are to follow this during our works. The Principle Contractor is not relieved of statutory obligation to provide, monitor, and revise their safe system of work during the progress of the task. Any revisions to the document must be agreed with Cannon Piling prior to execution with agreed notice period minimum of three days.

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## Notes:

1	Project Information	
1.0	Proposed Start Date:  TBC	Proposed Working Hours  Monday to Thursday      0800 to 1800 Friday                        0800 to 1700 Saturday                      0800 to 1300
1.1	Expected Duration:  9 - Weeks	
1.2	Exact Location (S): Attach Plan  	

1.3 Sequencing & Program			
Item	Description	Duration	Completion
Mobilisation	Delivery of, mobilisation and site establishment: <ol style="list-style-type: none"> <li>1. Soilmec SR30 CFA bored piling rig</li> <li>2. Associated Drilling equipment (Augers &amp; Casings)</li> <li>3. Reinforcement</li> <li>4. Static concrete plant</li> </ol>	10 Hours	
CFA Secant piled wall.	Bore, concrete, and reinforce all 650mm diameter Secant Piles	8.5 weeks	
	De – Rig Piling rig and associated equipment	10 Hours	
De-Mobilise	Collection of. Soilmec piling rig Associated Drilling equipment (Augers & Casings) Reinforcement Static concrete plant	10 Hours	
Please note this is only used as a guideline, subject to ground conditions, site constraints & attendance capabilities and does not form part of the contract agreement.			

## 1.4 Scope of works

Piles Designed by CP

Piling Platform Designed by CP

Piles to be constructed by CP.

**Drawing Reference:** TBC once full design is complete.

Pile type: Secant piles for retaining wall.

Piling Method: CFA

Pile Diameter(s): 650mm

Pile Lengths:

Male: 650mm Av = 17m

Female: 650mm Av = 5m

Strata Summary: As per table below. Ground water not encountered.

Stratum	Exploratory holes encountered	Depth to top of stratum m bgl	Proven thickness (m)
Made ground	All positions	Ground level	1.00 – 3.40
Reworked London Clay Formation	BH2 and WS2	1.20 – 1.30	1.80 – 2.00
London Clay Formation	BH1, BH2, WS2 and WS3	1.00 – 3.40	Proven to 30.45m bgl

**Document reference:** TBC once full design is complete.

Rig(s) to be used: Soilmec SR30

Labour: 3 operatives (minimum)

Cages:

Max length: 16.5m

Max weight: 950kg

2	Safe System of Works (Methodology)
	<p>Process</p> <div style="text-align: center; border: 1px solid black; padding: 10px;"> <h3>Work Instruction</h3> <p>Before any works start all operatives will attend a site induction and provide proof of competency. Before works can start each day, the operative will attend and sign up to a daily briefing.</p> <p>Before any works take place, a Piling Platform Certificate is required (Temporary Works Permit to load, platform to be tested in accordance with the design requirements) to be signed and issued to the Cannon Piling site supervisor, prior to the rig being erected or working.</p> <p>Once the permit is signed and issued the mobilisation of the rig and associated equipment will be undertaken.</p> <h3>2.1 Mobilising on to site</h3> <ol style="list-style-type: none"> <li>1. Ensure the working platform certificate and permit to dig are signed and issued by CFC and the working area is adequately segregated from other trades.</li> <li>2. Delivery of material to site must follow the Traffic Management Plan set out by CFC. All deliveries to site must obey any site speed limits or other signage and use the appropriate routes. Concrete will be delivered direct to site to avoid delays to the supply. The rig will also be sent direct to site in compliance with the routing and transport movement orders, set out by TFL and the Met Police.</li> <li>3. The piling rig will be delivered to site on a low-Loader. Using the abnormal load procedure, the approved transport routes and in line with CFC site meeting discussions.</li> <li>4. Hiab and Artic lorry(s) will arrive on site to deliver the concrete pump and the auxiliary equipment, it will be banked into a position to unload, a lorry fall restraint will be placed around the lorry bed before the banksman accesses the lorry bed to start slinging, the pump operator will assist with the unloading and place the equipment in designated areas, making sure it is safe and secure. When unloaded the wagons will then be banked off site by the traffic marshal (supplied by others).</li> <li>5. A reinforcement wagon will arrive to deliver the steel reinforcement which will be in bundles suited to the lifting capacity of the excavator/ Hi-ab. This will be banked on to the site by the traffic marshal. The Piling Operatives will assist in unloading the steel, aided by the 360 Excavator, placed on bearers in the designated area. When unloaded the lorry will be banked off site by the traffic marshal.</li> <li>6. The remaining plant and equipment will be delivered using either 40ft articulated or 28ft flat-bed rigid wagons. Cannon Piling will ensure all deliveries are pre-slung, where appropriate with fall protection in place.</li> </ol> <h3>2.2 Site establishment</h3> <ol style="list-style-type: none"> <li>7. Cannon Piling crew to be inducted by CFC on arrival. All operatives will be made familiar with the new surroundings, site constraints, and site-specific hazards.</li> <li>8. Cannon Piling supervisor will brief the crew on mobilisation of plant, equipment, and materials along with site set up areas. All operative to sign up to Daily Briefing.</li> <li>9. Cannon Piling supervisor will conduct a toolbox talk on lifting operation prior the works starting. All operative to sign up.</li> <li>10. Permits signed briefed and issued.</li> <li>11. Note all deliveries must adhere to CFC Traffic management plan.</li> <li>12. Cannon Piling to supply attendance contractor with a schedule of lifts, prior to site arrival.</li> <li>13. Lifting operations agreed with attendance contractor. All operatives to sign up to attendance contractors LP.</li> <li>14. Plant and equipment positioned in agreed areas.</li> </ol> </div>

## 2.3 Rigging/ De-rigging Procedure

15. The rig will be mobilised in a designated area where a permit to dig and piling platform certificate is required and signed off before the mobilisation. To prepare the rig for drilling the rig operative under the instruction of two banksmen. Mobilising the machine from travel mode to working mode. See operator's manual for further method statements regarding using the machine. Manual stored inside the cab of the rig.
16. NOTE: Hand signals to be used when in lifting operations, moving plant and machinery and during any road vehicle activities. These signals will be used throughout this method of works to create a safe way of communicating. All signals to be established/ confirm during the briefing.
17. NOTE: During this entire operation, the site is to be sectioned off from other site users. Only authorising Cannon Piling qualified team alongside the attendant contractor in the area. Due to the nature of the site, no barriers and signs will be placed on the platform during piling works, the primary exclusion zone will be marked by the site boundary and the barrier off pedestrian routes and welfare. Only authorised CP and attendance staff allowed on the piling area during works.
18. Activities of unbolting temporary travel frames, that require working at height will be achieved via a static 4 tread podium. Following this the rigs mast will be erected, auger guides lifted into position via attendance excavator/ crane and concrete hoses connected.
19. Augers will be lifted under the drill head via the attendance excavator/ or the piling rigs service winch. Once the two hex are placed together. A banksman will be lifted to a max height of 6m to place 2 auger pins to secure the connection via the rigs service winch with the use of a Climbing harness, Bosun chair and additional rescue procedure of a fall arrest block. This will be repeated until the auger string is complete.
20. The attendance excavator will be used in lifting operations throughout this activity. De-mobilisation will be a mirror of this process of mobilisation.

## 2.4 Rig Calibration

### When

21. Monthly as a minimum or when a re calibration event occurs
22. At the start of the project and before the first pile is constructed
23. The concrete pump is replaced
24. The auger string extended or reduced
25. The CFA rig is changed or reconfigure

### Items to be calibrated

26. Mast level
27. Depth Gauge
28. CFA DMS concrete filling instrumentation

## 2.5 Setting up to Pile position

Boring of the pile location will only commence once the correct reinforcement cage has been confirmed as arrived or has been made on site and relevant checks against the drawings for that pile have been carried out. Including checking the lifting point on the cage.

29. Secant Wall pile positions will be marked out within a pre-constructed guidewall.
30. The piling rig is tracked into position under the instruction of the banksman/slinger ensuring the auger string is positioned centrally over the pile position.
31. The bores must be installed at the exact position as set out and within our verticality tolerances, which must be checked frequently using either a spirit level or an inclinometer if any deviation, stop work and correct

33. The bore is to be drilled in the exact position identified by the pin or paint, if unachievable the work cannot start and discuss with CP line manager and CFC.
34. A Three Meter exclusion zone will be set up whilst the auger is rotating.

## 2.6 CFA Piling Secant Wall

35. The piling rig is tracked into position under the instruction of the banksman/slinger ensuring the auger string is positioned centrally over the pile position.
36. The hollow stem at the base of the digging head will be closed off with an expendable cap. During this operation the rig operative will immobilise the controls.
37. With the mast in a vertical position and the auger closed, the auger top shall be lowered and maneuvered directly and precisely over the setting out pin. The mast foot shall then be lowered.
38. The pile number shall be confirmed by the banksman and briefed to the rig driver, verbally. The rig driver enters the design depth into the rig instrumentation. Before drilling commences, the mast shall be inspected and checked for verticality in both X and Y axis by reference to the gauges on the side of the mast and by the display on the rig instrumentation.
39. With the auger tip at ground level, the depth gauge is to be zeroed. Pile depth entered the system.
40. Drilling can commence. Bore the augers to the required depth observing the rate of penetration of the auger. Should it not be possible to progress the augers down to the required depth, the auger string shall be reverse screwed out of the pile bore, the shaft backfilled, and further instruction sought.
41. During the boring process the attending excavator shall clear away the spoil from the auger, at no point shall the auger stop for the operation to occur.
42. Upon achieving the required depth, the auger string is withdrawn some 200 to 300mm and a small amount of concrete pumped to allow the expendable cap to be blown clear of the digging head. The pile will be re-bored to full depth to clean the base prior to extraction.
43. Concrete is pumped through the hollow stem to the base of the auger and the pile constructed as the auger is withdrawn at a controlled rate, to the required over-break in relation to the volume of the pile. As necessary, the auger string will be cleaned with the mechanical auger cleaner.
44. As per the above, on extraction of the auger the attending excavator shall clear away spoil, relieving the potential of spoil travelling up the stem auger. At no point shall the auger stop for the operation to occur.
45. Once the auger is extracted the rig is backed away and the top of concrete is carefully cleared off to expose the clean, wet pile shaft. The reinforcement cages will be installed by lifting and plunging the cage in to the pile with the aid of an excavator.
46. Following installation, the cage must be centralised and secured in place with mushroom caps placed over all exposed bars.

## 2.7 CFA Piling Concreting Procedure Setting up & Concreting

47. Prior to the commencement of piling works each day, the concrete pipeline is adequately lubricated with a grout/ primer mix.
48. The primer will be mixed with water and stored in a bulk 200L container.
49. This mix is poured directly into the pipeline before the first 10mm concrete delivery is pumped slowly through the lines until the concrete is flowing through the rig and the augers.
50. This priming process will reduce the chances of the concrete hoses blocking.



51. Each ready-mix delivery note will be checked prior to discharge against the pile design & mix design and accepted or rejected where applicable. Slump testing will be done if the concrete fails a visual inspection.
52. When signaled by the rig operator, concrete shall be pumped to the rig.
53. The concrete will then be dispatched into the hopper and pumped through the delivery pipe into the holding drum, furthermore, pumped into each pile shaft.
54. When the instrument confirms that the auger has been filled. The auger shall be raised the minimum amount to allow successful initial discharge under pressure of the pumped concrete.
55. The rig operator shall be briefed on which technique is to be employed to control the rate of placing concrete: a) Method 1, Positive Pressure. b) Method 2 over-supply (target range is also to be briefed) Generally and unless otherwise informed, method 2 shall be adopted.
56. As the auger is withdrawn, concrete shall be pumped through the auger stem to construct the pile. This stage of the operation shall be controlled by the rig operator using signals to the pumpman. The rig operator shall ensure that the withdrawal rate is not excessive and leads to loss of the auger tip embedment in concrete. The project engineer is to ensure that the rig operator is aware of the minimum and maximum over-supply target. When fitted to the rig, auto-lift for concreting shall be used.
57. The rig operator shall monitor the following parameters: a) Concrete flow, b) Pressure, c) Depth, d) Rate of Extraction.
58. As the auger is nearing the top of the pile, the banksman shall observe that clean concrete is being flighted from the pile, before the appearance of the auger tip.
59. When the concrete placement is complete the rig shall be tracked away from the pile to allow the attendance excavator to clear the spoil. The remainder of the spoil in the head of the pile, shall be removed by way of shovel, by the banksman.

## 2.8 Piling along Party wall elevations

60. CFA piles are constructed by rotating a hollow stem continuous flight auger into the soil to a designed depth. Concrete or grout is pumped through the hollow stem, maintaining static head pressure, to fill the cylindrical cavity created as the auger is slowly removed.
61. The bore is never left open and unsupported using this method. When working on a retaining wall (Secant or Contiguous) we will work in a hit and miss two sequence to avoid any merging of wet pile shafts.

## 2.9 Concrete Line Cleaning Procedure

NOTE: cleaning the lines and clearing blockages is a potentially hazardous task, as workable concrete has a relatively short life. If the operator needs to open the delivery pipeline for any reason, he and others involved in the operation, must treat the line as being pressurised at all times, appropriate hand and eye protection must be worn at all times.

NOTE: Site supervisors and the pumpman are to ensure that ready-mixed concrete lorries do not wash out their chutes into the receiving hopper at any time. This can cause damage to the pump unit and affect concrete quality.

NOTE: at no point shall ground lines and rig lines be blown out together in one go to remove existing concrete.

NOTE: the blowing out process is to always be supervised by the site supervisor, other activities on site will have to wait whilst this is undertaken.

62. At the end of each day, the concrete hoses and augers are washed out after Piling is complete.
63. All operatives will be notified when this sequence of events is taking place and no site personnel will be in this permitted area.
64. The rig operator and pumpman shall ensure that any excess concrete is pumped through the lines in a normal manner, prior to cleaning. The line is then back pumped to relieve pressure, 5 reverse strokes.
65. Prior to using any compressed air, the concrete line is de-pressurised by reverse pumping. Once complete the pipe connection at the hopper can be disconnected as well as the T-piece cap at the rear of the piling rig. Releasing as much concrete via gravity as possible.
66. The compressor is connected to the end of the concrete hose and a pressure (8 bar) is built up to wash and blow out any concrete. This will be carried out in a safe manor. With whip checks and safety pins in

place.

67. The blow out discharge can be controlled, using a blowout chamber this is positioned at the bottom of the auger stem to contain the discharge. A 6m exclusion zone shall be maintained around the blow out chamber.
68. A hard sponge ball will be placed into the concrete hose at the hopper end and is then blown through the pipeline the ball will eject from the pipe at the rear of the machine into a secured blow out chamber, along with the excess concrete. This is repeated for the piling rigs static pipework and augers, the same blowout chamber will be used to cover the auger tip to contain the sponge ball and excess concrete.
69. This process is repeated for a third time using water.
70. All excess concrete will be removed by the attendance excavator.

## 2.10 Reinforcement Site Fixing & Prefabricated Steel – CFA & Rotary Bored Site Fixed

71. Reinforcement steel will be delivered in straight lengths of bar and bundles of helical these will be stored in a designated area on timber bearers.
72. The cage will be fixed with annealed tying wire with sufficient ties to allowing handling and placement.
73. Each cage can be removed from the fixing area by hand or via the attendance excavator.
74. The steel fixers will make the cages on heavy duty stands, whereby a pack of straight bar will be loaded onto. Stands are to be load tested, certified, and tagged.
75. All reinforcement will be placed flush with the piling platform or lower, no steel should project above the level of the piling platform.
76. Waste management will need to be in place by the CFC to accommodate the helical, foam, slings and excess wire waste created by this activity.

## 2.11 Reinforcement Installation - CFA

77. The pile cage will be checked by the banksman before the pile is bored and again before lifting/plunging into the pile shaft.
78. The cage is to be lowered down into the wet pile shaft, concrete cover spacers are to be place at the bottom, middle, and top of the cage.
79. Assistance for the excavator can be used in the way of tapping the cage down to the correct level.

## 2.12 Concrete Testing

80. Cube testing will be carried out to the CFCs and design engineers' specifications.
81. 1 set of 4 cubes will be taken by R.P. Testing Solutions and stored off site, collection of cubes will occur daily.
82. Slump and Flow testing will be carried out to the CFCs and design engineers' specifications. A slump test will also be undertaken during piling to ensure the concrete is in specification on delivery and safe to pump. This will be determined after a visual inspection from the pump operative and the piling supervisor.

3 Risk Assessments				
Risk Assessments to be found in appendix.				
Hazard		Hazard		
Moving Plant		Open Excavations		
Spoil debris		Un-loading Deliveries		
Concrete		Lifting Loads		
Slips trips & falls		Overturning Plant		
Working at height				
Hazard Controls				
Hazard	Controls specified	Task where hazards need to be briefed. (or personnel)		
		Piling operations	Lifting operations	Attendance excavator/banksman
Rig overturning/collapse	<ul style="list-style-type: none"> <li><input type="checkbox"/> A signed and checked working platform certificate must be in place prior to the rig being off-loaded.</li> <li><input type="checkbox"/> Always limit the amount of sprigging of the machine.</li> <li><input type="checkbox"/> Ensure the rig is continually maintained as per the manufacturer's guidance.</li> <li><input type="checkbox"/> Rig can only be operated when banksman of the machine is in attendance.</li> </ul>	X		
Pipe work	<ul style="list-style-type: none"> <li><input type="checkbox"/> All hoses inspected during the start and end of each shift. Part of the pre-start checks.</li> <li><input type="checkbox"/> Flexible hoses on the rig to be connected via whip checks as a fall arrest.</li> <li><input type="checkbox"/> Flexible hoses on the rig to be bagged, should the hose burst at height, concrete shall be contained within the bagged pipework.</li> </ul>	X		
Lifting of cages	<ul style="list-style-type: none"> <li><input type="checkbox"/> Operation to be carried out by trained, briefed and competent person.</li> <li><input type="checkbox"/> All cages to have a dedicated lifting band on the cages.</li> </ul>	X	X	X
Rotation machine parts	<ul style="list-style-type: none"> <li><input type="checkbox"/> Auger cleaners must always be fully operational.</li> <li><input type="checkbox"/> Auger guides to represent guards during rotation.</li> </ul>	X		X
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	Open excavations	<ul style="list-style-type: none"> <li><input type="checkbox"/> Piles to be covered immediately following construction.</li> <li><input type="checkbox"/> Wheeled plant must not travel over wet constructed piles.</li> <li><input type="checkbox"/> Covered and cones to be used in substitution for spoil.</li> <li><input type="checkbox"/> Marker such as spray paint to identify cast pile.</li> </ul>	X	X	X
	Concrete burns	<ul style="list-style-type: none"> <li><input type="checkbox"/> PPE to be worn.</li> <li><input type="checkbox"/> Eye wash points to be identified in the site induction.</li> </ul>	X		X
	Moving plant	<ul style="list-style-type: none"> <li><input type="checkbox"/> All plant to be always accompanied by a banksman.</li> <li><input type="checkbox"/> People plant segregation.</li> <li><input type="checkbox"/> Training and familiarisation.</li> <li><input type="checkbox"/> 'Thumbs up' policy to apply at all times.</li> </ul>	X	X	X
	Falling spoil debris	<ul style="list-style-type: none"> <li><input type="checkbox"/> Auger cleaner to be fully functional at all times.</li> <li><input type="checkbox"/> Auger cleaner to be regularly maintained and inspected (pre-start).</li> <li><input type="checkbox"/> Site and soil specific Auger cleaner.</li> </ul>	X		X
	Un-loading deliveries	<ul style="list-style-type: none"> <li><input type="checkbox"/> Operation to be carried out by trained, briefed and competent operator.</li> <li><input type="checkbox"/> Clients TMP adhered to.</li> <li><input type="checkbox"/> Banksman when manoeuvring vehicles.</li> <li><input type="checkbox"/> Walk the course</li> <li><input type="checkbox"/></li> </ul>	X	X	X
3.1	COSHH: COSHH data sheets within appendix.				
	Risk		Risk		
	Diesel		Ready Mix Concrete		
	Hydraulic Oil		Sprayliner		
	Grease 00EP				
3.2	Manual Handling:				
	Activities such as clearing concrete from top of pile shaft, lifting concrete hoses, light cages and general lifting and carrying of equipment.				
	In-house training provided to all Cannon operatives, where available mechanical lifting aids to be used.				
3.3	Noise:				
	Piling rig, concrete pump and holding drum and Deliveries are primary noisy works, this will be minimised by keep the machine switched off when operations are on break/hold. Using plant on lower revs when available.				
	Hot works activities create noise, this will be monitored when in use through the hot works permit. This activity will be sporadic, and for short periods of time, for exemption using a metal cutting saw to cut a length of re-bar.				
	All noisy works will be undertaken within the site hoarding, between the working hours 8am to 6pm.				
3.4	Hand Arm Vibration:				
	Petrol cutting saw and club hammers, usage will be monitored and recorded.				
	Vibration from the auger drilling is minimal as purely rotary boring techniques are being used.				
	<u>For the limited time a petrol saw, and an impact gun is used during a 10-hour shift from a 4-person crew, HAVS register will not be required.</u>				

3.5	<p>Vibrations:</p> <p>CFA &amp; Bored piles have similar levels of vibration to standard site tracking plant, so the level of vibration anticipated because of the works is considered as negligible. At present we have no plans on this project to use a cage vibrator.</p> <p>CFA &amp; Bored piling is a technique used to minimise vibration, we would expect the site excavators, rollers etc to create greater levels of vibration. Monitoring of ground vibration to be undertaken by the client if required.</p>
3.6	<p>Lifting</p> <p>Sequence for installing reinforcement pile cages</p> <p>All lifting operations will be undertaken in accordance with the agreed excavator lift plan. All lifting operations will be supervised by a competent person and all lifting accessories &amp; equipment will be certified.</p> <p>Whenever possible, the attending excavator shall be used to install the cages into the freshly caged concrete.</p> <p><u>Stage 1.</u> Each cage will be inspected prior to lifting to ensure all connections are intact and secure. Lifting tackle shall be attached to the designated lifting band.</p> <p><u>Stage 2.</u> The cage will then be centered over the wet pile shaft and plunged into the pile to the depth of the top lifting band.</p> <p><u>Stage 3.</u> The lifting chains will be detached, and the cage will be further lowered into the pile to the required depth by means of the attendance excavator, and finally centralised.</p> <p><u>Stage 5.</u> This sequence shall then be repeated for all piles throughout the works.</p> <p>Any piling rig auxiliary ancillary lifts will be covered under the 12 monthly thorough inspection &amp; the piling rigs operators manual.</p> <p>Large Secant Wall pile cages to be lifted under attendance contractors lift plan.</p>
3.7	<p>Working near underground services</p> <p>- See item 8.2</p>
3.8	<p>Site Details</p> <p><u>Address/ Access Gate(s)</u></p> <p>Access is off: Royal College Street</p> <p><u>Deliveries</u></p> <p>Access arrangements for materials &amp; plant:</p> <p>CFC traffic management plan should be adhered to at all times including the use of segregated walkways for access onto and around the site. All deliveries to site must obey any site speed limits or other signage. All deliveries to be pre-slung with flat beds having edge-protection prior to arrival.</p>

The piling rig will be mobilised to site on an articulated abnormal load, low loader and the associated equipment on Rigid Hi-ab wagons x 3 under a permit, following approved transport routes. Please note that due to Highways/ Local authority restrictions, the rig will be subject to out of hours delivery times. Once known, all delivery times will be notified to the CFC in particular the piling rig delivery.

The low loader will park on Higher Drive. Traffic marshalls, road and curb protection to be supplied by CFC. The piling rig will be maneuvered off the trailer and tracked to an area with a firm, level platform suitable for rigging up by the piling crew.

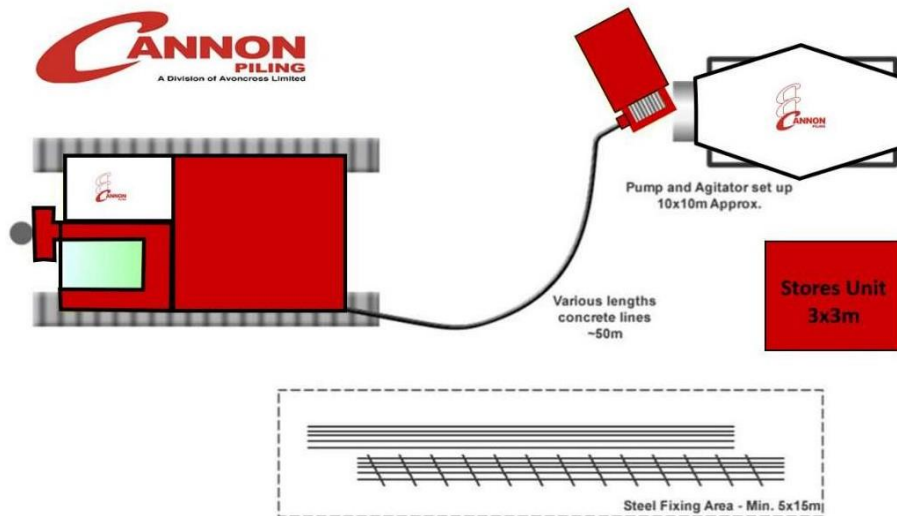
**Pedestrian routes:**

Pedestrian, site plant and their interface to be highlighted in the site induction, where all operatives will familiarise themselves with the new environment.

Site Layout/ Establishment

Details of the location of CP static plant and materials will be discussed following a site visit, by a project manager, and a plan marked to agreed set-down areas.

A general site set up is shown below:



<b>4.0</b>	<b>Resources</b>																											
4.1	<p><b>Cannon Piling Personnel</b></p> <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Chris Ford</td> <td style="width: 40%;">Engineering Director</td> <td style="width: 30%; text-align: right;"><a href="mailto:Chris@cannonpiling.com">Chris@cannonpiling.com</a></td> </tr> <tr> <td>Jeff Newton</td> <td>Commercial Director</td> <td style="text-align: right;"><a href="mailto:Jeff@cannonpiling.com">Jeff@cannonpiling.com</a></td> </tr> <tr> <td>John Scarff</td> <td>Transport + HR Manager</td> <td style="text-align: right;"><a href="mailto:John@cannonpiling.com">John@cannonpiling.com</a></td> </tr> <tr> <td>Leandro Noguchi</td> <td>Design Engineer</td> <td style="text-align: right;"><a href="mailto:Leandro@cannonpiling.com">Leandro@cannonpiling.com</a></td> </tr> <tr> <td>Henry Newton</td> <td>Design + Estimating Engineer</td> <td style="text-align: right;"><a href="mailto:Henry@cannonpiling.com">Henry@cannonpiling.com</a></td> </tr> <tr> <td>Tom Goodchild</td> <td>Commercial Manager</td> <td style="text-align: right;"><a href="mailto:Tom@cannonpiling.com">Tom@cannonpiling.com</a></td> </tr> <tr> <td>George Newton</td> <td>Contracts Manager+ SHEQ Manager</td> <td style="text-align: right;"><a href="mailto:George@cannonpiling.com">George@cannonpiling.com</a></td> </tr> <tr> <td>Shaun Prill</td> <td>Operations Manager</td> <td style="text-align: right;"><a href="mailto:Shaun@cannonpiling.com">Shaun@cannonpiling.com</a></td> </tr> <tr> <td>Ashley Tokley</td> <td>Plant Manager</td> <td style="text-align: right;"><a href="mailto:Ashley@CannonPlant.com">Ashley@CannonPlant.com</a></td> </tr> </table> <p>Site Operatives to be Confirmed on day 1.</p> <ul style="list-style-type: none"> <li>□ 1No. Supervisor – TBC (SSSTS)</li> <li>□ Rig Operator – TBC (SSSTS + CPCS)</li> <li>□ 1No. Concrete Pump Operative – TBC (CPCS)</li> <li>□ 1No. Banksman (Rig) – TBC(CPCS)</li> </ul>	Chris Ford	Engineering Director	<a href="mailto:Chris@cannonpiling.com">Chris@cannonpiling.com</a>	Jeff Newton	Commercial Director	<a href="mailto:Jeff@cannonpiling.com">Jeff@cannonpiling.com</a>	John Scarff	Transport + HR Manager	<a href="mailto:John@cannonpiling.com">John@cannonpiling.com</a>	Leandro Noguchi	Design Engineer	<a href="mailto:Leandro@cannonpiling.com">Leandro@cannonpiling.com</a>	Henry Newton	Design + Estimating Engineer	<a href="mailto:Henry@cannonpiling.com">Henry@cannonpiling.com</a>	Tom Goodchild	Commercial Manager	<a href="mailto:Tom@cannonpiling.com">Tom@cannonpiling.com</a>	George Newton	Contracts Manager+ SHEQ Manager	<a href="mailto:George@cannonpiling.com">George@cannonpiling.com</a>	Shaun Prill	Operations Manager	<a href="mailto:Shaun@cannonpiling.com">Shaun@cannonpiling.com</a>	Ashley Tokley	Plant Manager	<a href="mailto:Ashley@CannonPlant.com">Ashley@CannonPlant.com</a>
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4.2	<p><b>Training of persons involved:</b></p> <p>All operatives to hold relevant qualifications for the tasks within their role.</p> <p>Supervisor to hold SMSTS (Off-site)</p> <p>Working Forman to hold SSSTS</p> <p>All plant operatives to hold valid CPCS cards.</p> <p>Banksmen to hold Slinger/signaler and/or Rig attendant</p> <p>Additional qualifications:</p> <p>In-house manual handling</p> <p>Working at Height</p> <p>Abrasive Wheel</p> <p>IPAF</p> <p>Persons under the age of 18 special requirements:</p> <ol style="list-style-type: none"> <li>1. Proof of Competency</li> <li>2. Copy of Logbook (each site to be logged, collating experience)</li> <li>3. References from Trainers, Project managers and Clients that have had a young person on their site</li> <li>4. Next kin to be made aware when the young person starts work and finishes work for the day</li> <li>5. Young person to read, understand and sign up to the RAMS provided, stating that they are under the age of 18-year-old</li> <li>6. Site supervisor will be briefed on working with an operative within their crew</li> </ol>																											

	<p>7. Site supervisor will offer further assistance if required to the young person</p> <p>8. Site supervisor to have a copy of the young person's contact details and any other specific medical details</p>	
4.3	Supervisor Details	
	George Newton – Project Manager - SMSTS – 07899918617 (Off site)	
	Details of Deputy Supervisor who will cover during absenteeism	
	Ashley Garbould – Site Supervisor – SSSTS - 07885248479	
4.4	Plant / Equipment/ Tools:	
	Plant / Equipment / Tools	Qualifications & Training required
	<p>CFA Bored piling rig (above 20t)</p> <p>Rotary Bored piling rig (above 20t)</p> <p>Trailer mounted concrete pump</p> <p>Compressor</p> <p>Static concrete drum</p> <p>Lifting Accessories</p> <p>Hand Tools</p> <p>Associated piling ancillaries</p>	<p>CPCS</p> <p>CSCS</p> <p>IPAF</p> <p>MH</p>
4.5	Materials:	
	<p>Cannon Piling:</p> <p>Diesel (Lockable 110% banded bowser)</p> <p>Reinforcement CARES certified</p> <p>Ready-Mix Concrete UKAS certified</p> <p>COSHH</p>	
4.6	Technical information:	
	<p>Please refer to:</p> <ol style="list-style-type: none"> <li>1. Cannon Piling Pile design &amp; latest drawing</li> <li>2. CFCs site induction</li> <li>3. Traffic Management Plan</li> <li>4. Soil Investigation(s)</li> <li>5. Piling Platform Design/ Certificate</li> <li>6. Permit to Dig</li> </ol> <p>Info to be kept within the onsite folder</p>	
4.7	Waste Management:	
	<p>Waste management will need to be in place by the CFC to accommodate the helical, foam, slings and excess wire waste created by the fixer. Prefabricated reinforcement cages typically heavy or technical cages will be delivered to site and off loaded with the attendance excavator.</p> <p>Piling Auxiliaries will also generate waste. Skips and bins to be provided, monitors and regularly replaced by others.</p>	



4.8	<p><b>Housekeeping &amp; Storage:</b></p> <p>Housekeeping will be ongoing, and the positioning of materials and equipment will be shown in a site phasing plan. (see example in section 3.8) During our mobilisation, materials will be stocked and stored, on bearing timber and pre-slung.</p> <p>Concrete will be stored in a static concrete holding drum. Located within the allocated laydown area.</p>
4.9	<p><b>Attendances &amp; facilities for subcontract:</b></p> <p>The following attendances and facilities shall be provided and maintained at all times (including additional working hours) for the duration of and in relation to the specialist works, free of charge and in a manner that does not disrupt or restrict the regular progress of the specialist works.</p> <p>Main site attendances to be provided by other as follows:</p> <p>Full list of attendances is attached to CP quotation.</p> <ol style="list-style-type: none"> <li>1. Full Welfare facilities.</li> <li>2. Concrete wash out area.</li> <li>3. Water supply at mains pressure.</li> <li>4. Excavator and dumper in attendance for removal of pile risings. (22ton Zero Tail Swing)</li> <li>5. Task specific and background lighting.</li> <li>6. Setting out to all pile positions.</li> <li>7. Car parking for 1No. Van.</li> <li>8. Secure site hoarding.</li> <li>9. Protection of works, roads, and adjoining buildings.</li> </ol> <p>A more comprehensive list of attendances attached to Cannon Piling Quotation.</p>

<b>5.0 Working Arrangements</b>	
5.1	<p><b>Permits Required:</b></p> <p>Yes – Permit to Break Ground</p> <p><b>Permit Type:</b></p> <p>Prior to commencement of piling works, the following permits must be issued by CFC to CP:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Working platform certificate must be obtained before loading the working platform, renewed weekly and following any reinstatement of the platform, such as following removal of obstructions.</li> <li><input type="checkbox"/> Permit to <b>Break Ground</b> – issued daily by CFC <b>Services Avoidance Coordinator</b> to the piling supervisor, confirming to be no services in the area.</li> <li><input type="checkbox"/> Hot works permit for use of welding equipment or abrasive wheels.</li> <li><input type="checkbox"/> Working at height permit for the use of MEWP.</li> </ul> <p>These documents must be signed by CFC and the CP supervisor prior to undertaking works. A copy of the Working Platform Certificate is attached in Appendix.</p> <p><b>Issued By:</b></p> <p>CFC</p>

<p>5.2</p>	<p><b>Security Arrangements:</b></p> <p>Provided by CFC</p> <p>The site compound will be secured from unauthorised entry when no work is being carried out, i.e. at night and during weekends or holiday periods.</p> <p>Signage will be erected to warn third parties of the dangers associated with unauthorised entry.</p>
<p>5.3</p>	<p><b>MANDATORY SITE PPE (AS PER BRITISH AND EUROPEAN STANDARD):</b></p> <div style="display: flex; align-items: center;"> <div style="flex: 1;"> </div> <div style="flex: 1;"> <p>As a Minimum requirement to meet the CFC site rules the following PPE will be worn by all CP personnel.</p> <p><b>Mandatory PPE:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Safety Boots</li> <li><input type="checkbox"/> Gloves</li> <li><input type="checkbox"/> High Visibility Vests</li> <li><input type="checkbox"/> Trousers</li> <li><input type="checkbox"/> Safety Hat</li> <li><input type="checkbox"/> Eye Protection</li> </ul> </div> </div>
<p>5.4</p>	<p><b>Task Specific PPE</b></p> <p><b>Welding, grinding, or cutting.</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Fire retardant overalls</li> <li><input type="checkbox"/> Ear plugs</li> <li><input type="checkbox"/> Ear defenders</li> <li><input type="checkbox"/> Safety goggles</li> <li><input type="checkbox"/> Welding mask</li> <li><input type="checkbox"/> Task grade gloves</li> </ul> <p><b>Working at height</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Harness &amp; lanyard</li> </ul> <p><b>Concreting</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Long sleeve top</li> <li><input type="checkbox"/> Waterproof gloves</li> <li><input type="checkbox"/> Wellington safety boots</li> </ul>

<b>6</b>	<b>Emergency Arrangements</b>
6.1	<p>Nearest Hospital</p> <p>See Site Welfare.</p>
6.2	<p>First Aid</p> <p>Provided by CFC</p> <p>There will be a full time first aider on site for the duration of our works</p> <p>The first aid box will be located in the site office.</p> <p>First Aiders to be identified during the site induction.</p>
6.3	<p>Pedestrian / Traffic Rerouting Arrangements:</p> <p>Provided by CFC</p> <p>Traffic marshal/(s) will coordinate interactions with traffic and pedestrians.</p> <p>People plant interface to be discussed daily in prestart meeting.</p>
6.4	<p>Fire Safety Arrangements:</p> <p>Provided by CFC</p> <p>In the event hearing the fire alarm: -</p> <p>Turn off all plant and equipment and make your way to the designated assembly point for roll call by your Company's fire Marshal. This can be located using the Company sign board displayed for this purpose. Stay at the assembly point until you are released by your Company fire Marshall</p> <p>In the event of finding a fire: -</p> <p>Leave the area and raise the alarm immediately. Do not attempt to fight the fire, and only use a fire extinguisher if you need it to help you get to a position of safety. Move to the assembly point and report the location of the fire and any details that may help brief the fire services.</p>
6.5	<p>Responsibility for Task and Safety Lighting:</p> <p>CFC to supply safety and task lighting.</p>

<b>7</b>	<b>Communication of information</b>			
7.1	<p>Induction, Site safety plan briefing, daily briefing &amp; toolbox talks</p> <p>All personnel will attend an induction by the CFC, the site foreman/ supervisor will brief the crews on initial induction. All information training and briefings will be communicated verbally daily. The site supervisor/ foreman will brief the crews daily in their duties on site and their activities for the day including interaction with other trades. This will refer to any changes on site as appropriate. Toolbox talks will be carried out weekly and a training record will be made. These TBT generally follow a schedule which is common across foundation sites, made site specific.</p>			
7.2	<p>Confirmation of operatives briefing:</p> <p>Signed briefing sheets to be submitted prior to commencement of works.</p> <p>All operatives to sign attendance contractors lift plan</p> <p>All operatives to sign CP RAs, MSs and site safety plan located at the end of this form.</p>			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Site Safety Plan</td> <td style="width: 33%;">Page 19 of 23</td> <td style="width: 33%;">Form: 5.6.4.2 Method Statement: Version 1 1 January 2020</td> </tr> </table>		Site Safety Plan	Page 19 of 23	Form: 5.6.4.2 Method Statement: Version 1 1 January 2020
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8 Environmental															
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8.2	<p><b>For the avoidance of damage to sub surface drainage</b></p> <ul style="list-style-type: none"> <li>- The main contractor to ensure all existing sewer connections are terminated outside of the line of piling.</li> <li>- The proposed methodology of pile construction ensures that the pile is installed in manner that ensures that the sides of the pile excavation are always supported, as per section 2.7 CFA Piling Concrete Procedure.</li> </ul>														

9 Monitoring									
9.1	<p><b>Monitoring</b></p> <p>The permit system requires suitable supervision and monitoring to ensure that the conditions of the permit are complied with.</p> <p>Alteration to piling platform will be logged.</p>								
9.2	<p>Person Responsible for monitoring / review of the safe system of work and ensuring compliance.</p> <table border="1"> <tbody> <tr> <td>Project Manager: responsible for overall project management, infrastructure, monitoring of works including safe systems of work on a day-to-day basis.</td> <td>George Newton</td> </tr> <tr> <td>Contracts Manager:</td> <td>Tom Goodchild</td> </tr> <tr> <td>Project Manager:</td> <td>George Newton</td> </tr> <tr> <td>Health and safety manager/ advisor:</td> <td>John Scarff</td> </tr> </tbody> </table>	Project Manager: responsible for overall project management, infrastructure, monitoring of works including safe systems of work on a day-to-day basis.	George Newton	Contracts Manager:	Tom Goodchild	Project Manager:	George Newton	Health and safety manager/ advisor:	John Scarff
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9.3	<p><b>Review Dates:</b></p> <p>Every 6 Weeks from start of site works.</p>								
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<b>10 Authorisation</b>					
Date:			Revision:		
Status:	Accepted		Not Accepted		
<b>10.1 - Cannon Piling Approval</b>					
The document has been prepared by G. Newton, based on the scope of works and a visit to site on TBC. I can confirm this document will cover all aspects of our contract, forming our safe system of work and titled Site Safety Plan.					
Sign:	George Newton				
Position:	Operations Manager				
Date:	20/01/2023				
<b>10.2 - CFC/ Client approval</b>					
By signing below, you have read and accepted the method of works, and what is required by the Principle contractor.					
Name:					
Position:					
Sign:				Date:	

11	Risk assessment/ Method statement sign off		
The undersigned confirm they have been briefed on the enclosed health and safety pack and are aware of all the risks and procedures detailed therein.			
	Name:	Signature:	Date:

11 - Weekly Tool Box Talk sign off

The undersigned confirm they have been briefed on the enclosed health and safety pack and are aware of all the risks and procedures detailed therein.

Training and development plan short term raining attendance sheet.

Subject:		
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Location:		
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Date:		
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Duration (mins)		
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Supervisor Presenting TBT:		
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Supervisors Signature:		
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Name:	Signature:	Position:
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