



**Franki
Foundations**

Contract Management Plan for CFA Piling Works

**8 New Lane
Havant
Hampshire**

Date Prepared	22/05/17
Prepared by	Harry Shaw
Issued and Approved by	Jim Rath
Document Ref	F15923 - CMP - 00
Distribution	

Revision and Status Log					
00	22/05/16	HS	JR		First Draft
Rev	Date	By	Approval	Approval (signature)	Description of modifications

Key Contacts			
Client Days Estates		Principal Contractor	
Piling Contractor Franki Foundations UK 76 Powdermill Lane Questor Estate Dartford DA1 1JA Tel: 01322 479000		Consulting Engineer Hamill Davies Limited	
Site Address		8 New Lane, Havant, Hampshire	
	Name	Contact Number	Email address
PC Site Manager	TBC	TBC	
Operations Manager	Jim Rath	07972 870780	jim.rath@frankifoundations.co.uk
Construction Manager	Mick Findlay	07512 377369	michael.findlay@frankifoundations.co.uk
Foreman	TBC	TBC	
Safety Team			
Managing Director	Craig Macklin	07887 758197	craig.macklin@frankifoundations.co.uk

Scope of Work (Typical requirements)	
Foundation Piles	TBC
Retaining Wall Piles	TBC
Integrity Pile Testing	100% for Bearing piles constructed with a CFA machine
Pile Load Testing	TBC
Concrete Compliance Testing	1 set of cubes to be made per day

<u>Schedule of Attendances</u>	Principal Contractor Responsible	Franki Foundations UK Ltd Responsible
All attendances scheduled on the FPS Schedule of Attendances are assumed to be provided by the Principal Contractor unless specifically mentioned below.		
A clear area for pump and agitator to sit and remain for the whole duration of the job, if not then contractor responsible for the cost of moving equipment.	X	
Removal of spoil arising, including waste concrete, from site.	X	
Setting out of pile positions by numbered steel pin.	TBC	TBC
Service Drawings & CAT Scan of area	X	
Welfare Facilities	X	
Task Lighting (if required)	X	
Provision of attendant excavator with competent operator	X	
Provision of Debonding Foam	TBC	TBC

Site Specific Briefing Notes

Working Hours (Assumed at the time of compiling this document; Contract Management Plan for Piling Operations)

The normal working hours is 0800 to 1730 Monday to Friday. Saturday work is available 0800 to 1300.



Site Specific Contract Management Plan

Briefing Record

Name	Signature	Name	Signature
Briefed by:		:Date	

Piling Risk Assessment – the Top Ten hazards - All the risk factors that have been considered are scheduled the main Risk Assessment; however the 10 risk factors scheduled here cover 90% of the risks on a piling site so these are the controls that are important

	Hazard	Uncontrolled Risk Rating (RR)			Controls	Controlled Risk Rating (RR)		
		L	S	RR		L	S	RR
1	Blockage in the concrete delivery system	2	5	10	- Follow the documented safe system of work for clearing a blockage in the concrete delivery system - Competent trained personnel only are authorised to undertake this work - Ensure that the expected aggregate is delivered in the RMC on site prior to lading the pump / agitator	1	5	5
2	Spoil falling off Auger causing injury	4	4	16	- Effective mechanical auger cleaner - Protection of areas outside site - Wear adequate PPE	2	4	8 ALARP
3	Work at Height; risk of falling	2	4	8	- Use of MEWP to be planned by site supervisor prior to operation start - Don't climb on plant - Wear Fall Arrest Equipment - All personnel to be appropriately qualified	1	4	4
4	Cement burns and dermatitis	4	2	8	- Wear Gloves - Wash splashes off	2	2	4
5	Manual Handling	3	3	9	- Use mechanical assistance. - Avoid muscular strain	1	3	3
6	Hydrocarbon pollution	3	3	9	- Containers capped and kept on trays - Prompt mopping and bagging of spillages	1	3	3
7	Rig instability	2	5	10	- Piling Platform certificate in place - Ramps to 1 in 10 or less. - Piling platform maintained	1	5	5
8	Reversing ready-mixed trucks	2	5	10	- Banksman to be in attendance at all times - Site traffic plan to be followed at all times - Site speed limit to be complied with at all times	1	5	5
9	Trips and Slips	3	3	9	- Keep piling platform in good condition - Use of step to climb and demount tracks - Keep working area around pump clean and un-slippery	1	3	3
10	Concrete hose bursts	2	3	6	- ALWAYS avoid hoses being tracked or driven over - Use slings to move around, avoiding damage by teeth - Use newest sections of hose next to the rig and pump - Daily walk along hose, weekly inspection and record	1	3	3

CONTENTS

1.0	PURPOSE
2.0	RESPONSIBILITIES
2.1	General
2.2	Principal Contractor
2.3	Site Person-in-Charge
3.0	PROCEDURE
3.0	General
3.1	Labour Force
3.2	Training
3.3	Lifting Equipment
3.4	Portable Tools
3.5	Mechanical Plant
3.6	Track Mounted Vehicles, Pressures and Working Platform Certificate
3.7	Protection of Services and adjacent property
3.8	Materials
3.9	Working at Heights
3.10	Temporary Lighting and Power
3.11	Storage
3.12	First Aid
3.13	Emergency Procedures, Hospital Plan and Contact Numbers
3.14	Personal Protective Equipment
3.14	Noise
3.15	Access and Egress
3.16	Working Area
3.17	Welfare
3.18	Pile Test Set-ups
4.0	Methodology CFA Piling
5.0	Methodology Integrity Testing
6.0	Methodology Load Testing
Appendix A	Hazard Assessment
Appendix B	Risk Assessment
Appendix C	COSHH Assessment
Appendix D	Quality Plan and Inspection & Test Plan.
Appendix E	Lifting Plan
Appendix F	Rig Bearing Pressures, Working Platform Certificate & Permit To Dig
Appendix G	Safety Responsibilities for Site Staff
Appendix H	Emergency Response

1. PURPOSE

The purpose of this document is to define a method of working for piling work to ensure a safe environment for all working personnel, members of the public, plant and property. It is designed to incorporate standard practices and procedures.

2. RESPONSIBILITIES

2.1 General

Competent personnel will perform the installation works detailed within this method statement.

2.2 Principal Contractor

The Principal Contractor is responsible for:

- 2.2.1 Preparing any method statements for enabling works required to allow the pile installation to take place.
- 2.2.2 Distributing copies for use by all personnel engaged on site.
- 2.2.3 Preparing a matrix of works processes and activities, with their associated health, safety and environmental hazards, legislation and preventive measure
- 2.2.4 Providing the agreed facilities and attendances

2.3 Franki Foundations UK Ltd Site Person-in-Charge

The Site Person-in-Charge shall:

- 2.3.1 Ensure that upon arrival to site that all site conditions are appropriate for the equipment to be used and the provisions detailed in the method statement this may include but is not restricted to
 - Piling mat / cws
 - Welfare facilities
 - First aid facilities
 - Accident reporting / recording procedures
 - Site access
 - Rig and equipment certificates and condition
 - All services within the Franki Foundations UK Ltd work area are identified and suitable controls in place to prevent any site operations coming into contact with them
- 2.3.2 Keep a copy or have ready access to the approved method statement whilst carrying out the work.
- 2.3.3 Ensure that the site team members are suitably briefed on the requirements of the approved method statement before work commences and that all work is carried out in accordance with this statement, including any approved revisions.
- 2.3.4 Identify any change, which may be required to the method statement risk assessment and submit to the Contracts Manager for amendment as necessary, before submission to the Principal Contractor.
- 2.3.5 Ensure that Franki Foundations personnel wear full PPE at all times (hard hat, gloves, hi-viz vest, safety boots and safety glasses)
- 2.3.6 Conduct Franki Foundations piling work area and daily plant checks, complete LOLER and PUWER inspection records.
- 2.3.7 Present to Site Manager with copies of all plant operators CPCS or NVQ licenses and training certificates.

3. PROCEDURE

3.0 General

All Franki Foundations UK Ltd staff working on site will be inducted by the Principal Contractor.
The Principal Contractor will give site specific toolbox talks to all operatives involved in the works concerning safety of the site.

3.1 Labour force

Number	Competency
1	Site Supervisor (Visiting)
2	Rig drivers (of which 1 is nominated working supervisor)
2	Banksmen
2	Pump operator / Concrete charge hand

3.2 Training

All operatives will hold a Construction Skills Certification Scheme card (CSCS) or an appropriate level of training for the operation they are involved in.

3.3 Lifting Equipment

Competent personnel using approved techniques and the appropriate equipment will carry out all lifting operations. The lifting plan is detailed in Appendix E.

3.4 Portable Tools

Equipment	Power
Stihl Saw	Petrol
Pressure washer	Petrol

3.5 Mechanical Plant

Plant	Power
2No CFA Hydraulic Piling Rig	Diesel/Hydraulic
2No. Compressor (CFA Piling)	Diesel/Hydraulic
2No. Concrete pump (CFA Piling)	Diesel/Pneumatic
1No. MEWP ("Cherry Picker")	Diesel/Hydraulic
2No. Concrete Agitators (Holding Drums)	Diesel

3.6 Track Mounted Vehicles, Pressures and Working Platform Certificate

The piles will be constructed using a track mounted piling rig as noted above. The calculation for bearing pressure and Working platform certificate (to be signed off by the Principal contractor or appointed Engineer) are shown in **(Appendix F)**.

3.7 Protection of services, structures and public Highways.

Protection of services, structures and public highways will be provided by the Principal Contractor. These will include but not be limited to:-

- 3.7.1 Identification, excavation and or protection of all services (chartered or un-chartered) within the site access route and site area. These included but are not limited to electricity, water, telecoms, gas and sewerage.
- 3.7.2 Protection / excavation and capping of all ducts, pipes, channels, culverts and sewers to prevent damage and or loss of concrete.
- 3.7.3 Protection to adjacent buildings, pathways, highways from spoil, concrete slurry and bore spoil debris.
- 3.7.4 Provision of service drawings (relevant to pile locations). Identification and maintenance of service locations and easements zones on site.
- 3.7.5 The Principal Contractor will provide a permit to pile, confirming pile positions are clear of all site services. (chartered or un-chartered)
- 3.7.6 **Franki Foundations UK Ltd will submit their own Permit to Dig for the Principal Contractor**

Note that if the piling works are within 15m of a live gas main, the principal Contractor should contact the gas supplier and seek guidance.

3.8 Working at Heights

All operatives working at height will use MEWP access plant. All operative required to operate MEWPS have IPAF training and relevant accreditation. A restraint harness will be worn at all time during the operation of said plant.

3.9 Temporary Lighting and Power

General background and site safety lighting will be provided by the Principal Contractor with specific task lighting by Franki Foundations UK Ltd. (If required)

24 hr power will be provided by the Principal Contractor for concrete cube curing facilities.

3.10 Storage

All materials will be stored in accordance with the manufactures instructions as detailed in the COSHH assessments held on site by the site supervisor. No materials to be stored on site within 5.0m of Controlled Waters.

Upon completion of piling all materials will be removed from site as appropriate.

3.11 First Aid

The Principal Contractor will provide first aid facilities as required. Franki Foundations UK Ltd personnel will be made aware of the identity and location of these facilities during the site induction.

3.12 Emergency Procedures, Hospital Plan and Contact Numbers

The nearest accident and emergency hospital together with direction is to be provided to site operatives during the site induction by the Principal Contractor. (Indicated in Construction Phase Health & Safety Plan)

3.13 Personal Protective Equipment (mandatory)

- Safety boots / protective helmets and high-visibility vests will be worn at all times are site.
- Hearing protection to be worn as necessary.
- Gloves /eye protection to be worn as required

3.14 Noise

A survey has been undertaken to identify and establish noise levels emitted from the piling plant whilst operating at maximum output. The findings of the survey revealed that personnel are required to wear hearing protection **within 10m** of the working plant i.e. the

- Piling Rig
- Concrete Pump
- Concrete Holding Drum / Agitator
- Attending excavator

3.15 Access and Egress

Access on to site will be via the designated routes identified by the Principal Contractor. (In accordance with all local agencies i.e. Police, L.A. etc.)

The track mounted piling rig will be delivered to site on a load loader. The maximum gross weight of the rigs in transit is between 50-80 Tonnes.



The Principal Contractor will provide clear and direct access into site for low loaders, wagons and cranes as required. Where the rig must be unloaded on the outside the site, the Principal Contractor shall provide any protection to paved surfaces and underground services, and will provide "tracking boards" as required.

The remaining plant and equipment will be delivered to site on 20/24ft or 40ft rigid flatbed vehicles.

Ancillary piling equipment will be unloaded using a 20/24ft Hiab flatbed vehicle and the attendant excavator provided by the Principal Contractor with suitably identified (SWL) on day of mobilisation.

NOTE the rig is designed to travel up and down a slope no steeper than 1m in 12m with the mast erected. Any ramps must not exceed this gradient.

3.16 Working Area

All machinery will be operated on a prepared and maintained, level working platform capable of safely supporting the piling rig. This will be a certified working platform which will be signed off by the Principal Contractor or their appointed Temporary Works designer, prior to commencement of the piling works.

No rig movements or piling operations will commence until this is in place.

Any services must be clearly marked, protected and or diverted by the Principal Contractor and will be covered by a permit to dig signed off by the Principal Contractor.

No piling operations will commence until this is in place.

A prepared area for the pump and agitator to sit and remain for the whole duration of the job, if this is not possible then main contractor is responsible for arranging the moving of equipment, and the costs related to doing so.

3.17 Welfare

Franki Foundations UK Ltd crew will make use of the shared welfare facilities and drying rooms provided by the Principal Contractor as agreed under the Contract.

3.18 Test Pile Set-ups

No test piles are envisaged for this contract.

4. METHODOLOGY – CFA Piling

4.0 Methodology

4.1 Rigging up

Check that the piling mat is adequate to safely support the rig and all components and that the working platform certificate (WPC) has been completed and signed by the Principal Contractor (or their appointed representative).

In the absence of a signed (WPC), 'rigging up' will not commence.

The rigging area will be checked for stability and clearance from adjacent structures and any overhead obstructions

The rig will be erected by authorised competent personnel only.

4.2 Concrete

Ready Mixed Concrete will be delivered to site in 6m³ or 8m³ trucks and discharged into a concrete holding drum or directly into the hopper of a trailer mounted concrete pump.

The concrete delivery vehicles will reverse on to the ramp (supplied and installed by the PC) in front of the holding drum (Agitator) and discharge directly into the drum. (A qualified banks man will be in attendance at all times)



Concrete will be discharged from the concrete holding drum using a mobile concrete pump via rubber concrete hosing "ground lines" as required. Maximum pumping distance will be in the order of 60 m.

The concrete will be delivered as a pump mix for CFA piling @ 175mm slump (S4)

4.3 Drilling of CFA piles

The piling rig sets up over the pile position and is adjusted so that the auger is pitched both centrally and vertically over the setting out pin. (Reference markers will be installed 1.0m from pile pin and at approximately 90 degrees)

Either a disposable bung / cap are inserted into the end of the lead auger or alternatively an attached flap at the auger tip is closed and secured to prevent pile spoil entering the hollow stem.

The auger is rotated in a clockwise direction and ground conditions permitting, is made to penetrate the ground with the rotary drive head operating under maximum torque.

The auger position will be checked using the reference markers during the first few metres of drilling

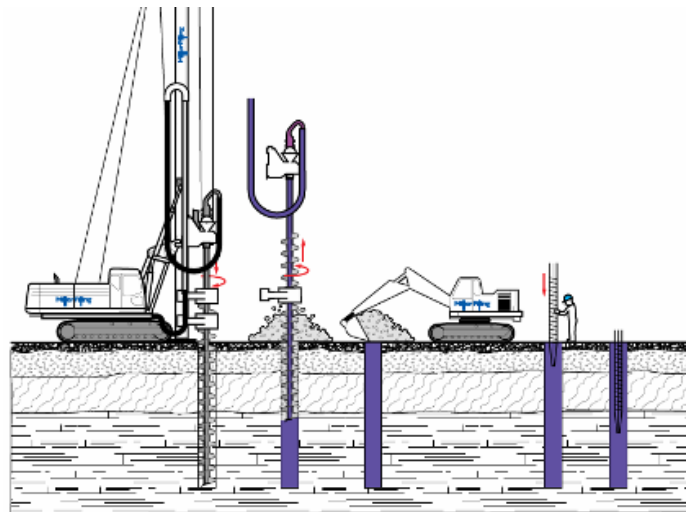
The position and verticality of the mast is checked and adjusted as necessary, particularly as the auger passes through the made ground. Thereafter, the mast is checked periodically to ensure that it remains within the specified tolerance of 1 in 75 without forcible correction.

Pile bore stability is maintained due to the spoil being compacted between the continuous flights. Some spoil will inevitably arise at the head of the pile (approximately equivalent to the volume of the auger flights and stem) as it is displaced upwards.

Boring continues until the auger reaches its design depth.

4.4 Construction of CFA piles

Concrete is pumped through the hollow stem to “blow” off the disposable cap or open the attached flap. This complete, the auger is extracted at a controlled rate to ensure that an oversupply of concrete is delivered to maintain an integral pile shaft.



During the injection process, loose spoil between the auger flights is removed by auger cleaners until the pile shaft has been concreted up to piling platform level.

As the auger is withdrawn, a mechanical auger cleaner will be used to remove adhering soil. Where very stiff clay is encountered that the auger cleaner has difficulty dealing with, withdrawal will be paused and the clay removed with the assistance of the excavator bucket.

After the piling rig has withdrawn from the position, the attendant excavator immediately clears away the pile spoil.

The reinforcement cage is inserted centrally into the fluid concrete manually by 2 No operatives or using the winch on the piling rig or alternatively using the attendant excavator with a short drop chain secured to a lifting point on the dipping arm or grading bucket.

The piling rig will then set up over the next pile position and the sequence of operations repeated.

4.5 Withdrawal of Auger without Concreting

There may be circumstances where it is necessary to abort the pile without concrete being injected. Causes of this may include: a concrete blockage within the auger, concrete pump breakdown, etc. Because it is the auger loaded with spoil that is providing support within the bore, it is important the auger is back screwed to leave the spoil on the auger within the ground and backfill any resulting voids with freely flowing material (granular material or clay chippings). This is particularly important in drilling through made ground or granular material and where there is a group of piles within a limited area.

5. METHODOLOGY – Integrity Testing of Piles

5.0 Integrity Testing of Piles

The integrity of the pile shaft is tested by a sonic pulse. A transient wave is generated by striking the pile head and measuring the characteristics of the wave rebounded off the pile base. The rebounded wave shows up any major discontinuities in the pile shaft which can then be investigated further.

To enable the technician to carry out this test, the Principal Contractor needs to ensure:

- The pile head has been trimmed down to cut-of level and free from any surface laitance.
- The technician has a safe area at the pile cap to carry out the test.
- No pile cap reinforcement must be in position which will obstruct the wave generating hammer or detecting geophone receiver.
- The pile cap must not have been cast.

A Pile Integrity Testing Method Statement from TCS Ltd can be provided upon request.

Visits of the test Technician is to be arranged through Franki Foundations UK Ltd.

6. METHODOLOGY – Load testing Piles

6.0 Load Testing of Piles

A Pile Load Testing Method Statement from NDT Services Ltd can be provided upon request.

**APPENDIX A
PROJECT HAZARD ASSESSMENT**

ERECTING AND USING THE RIG	
Persons being struck or trapped by the piling plant	<i>Erect and use machinery in accordance with manufacturer's instructions or company procedures.</i>
Hand Injuries	<i>Provide and ensure persons involved wear suitable gloves</i>
Falls from the mast	<i>Ensure safe access by fixed ladders. Use safety inertia reel and full body harness when climbing or working on mast. (If possible MEWPS to be used)</i>
MACHINE GUARDING	
Injury from unguarded dangerous parts	<i>All dangerous parts of machinery to be securely guarded</i>
Persons trapped / injured by machinery, electricity and or hydraulic systems during maintenance operations	<i>Ensure all machinery and associated equipment is isolated before work starts. Ensure all clamps and temporary supports in place before work starts</i>
MOVING THE PILING RIG	
Overturning	<i>Ensure piling platform is suitable for the stability of the rig. Advise the Main Contractor when maintenance required. Plan the route. Avoid travelling close to buildings, excavations and slopes. Prepare access ramps to not steeper than 1 in 10 Do not travel off the piling platform without first checking the ground conditions</i>
NOTE the rig is designed to travel up and down a slope (gradient 1:10) with augers attached. Where appropriate the augers may be removed and the rotary table positioned at the base of the mast to lower the centre of gravity and increase stability.	
WORKING ADJACENT TO RAIL LINES (where appropriate)	
Work prejudice to the safe operation of the railway.	<i>All work is to be carried out in accordance with Network Rail Standard Procedure (available from Network Rail)</i>
ENTRAPMENT	
Working adjacent to hoardings, structures or other obstructions	<i>Position rig to allow a distance of 600mm between machine and adjacent structures. Where not possible, area to be barriered off. Banksman to check around the rig prior to moving.</i>
FLAT BED VEHICLE WITH HIAB FACILITY (Loading and off Loading)	
Overturning or failure of the Hiab	<i>Order correct size of Hiab for maximum load at maximum radius required. Check test and inspection certificates are in date Check operators certificate of competence valid Safe load indicator should be in good working order Ensure outriggers fully extended and sat on firm ground Do not allow the Hiab to be overloaded</i>
SLINGING & RIGGING	
Failure of equipment, fall or displacement of load	<i>Current test & thorough examination certificates valid for all slinging and rigging equipment. Equipment marked with SWL Hooks fitted with a safety catch or shaped in such a way that the load cannot be easily displaced Structural members to be inspected before they are used to support slings or rigging equipment and ensure that they will withstand the load Slings should not be brought into contact with sharp edges</i>

	<i>Slings not to be shortened by unauthorised methods</i>
TEST & EXAMINATIONS	
	<i>Ensure inspection and tests are carried out at the prescribed intervals and records are kept. Inspect current certificates of any plant delivered to site</i>
MACHINE CONTROLS	
	<i>Ensure all controls are maintained in good condition and that operators are fully conversant with their use</i>
PILE CONSTRUCTION	
Person struck by falling spoil off auger	<i>All loose spoil to be cleaned off auger All operatives to wear hard hats and safety footwear Keep unauthorised persons away from front of piling rig Stand clear of rig whilst machine travelling</i>
Concrete hose parting	<i>Safety chains to be used for all overhead couplings. Ensure all clamps securely fastened.</i>
Persons struck by excavator	<i>Keep unauthorised persons away from front of rig. Excavator operator to take directions from Banksman only.</i>
Concrete splashing	<i>Stand clear of rig upon completion of pile. Keep unauthorised persons away from rig.</i>
Injury from projecting reinforcement	<i>Protect / clearly mark projecting reinforcement (Main Contractor to provide and maintain traffic cones and mushroom caps). Where possible leave reinforcement flush with top of concrete. Reinforcement bar to be cut / bent as required to provide safe access.</i>
CONTAMINATED SPOIL	
Personal injury	<i>Be alert to petroleum or gaseous odours Avoid direct skin contact; wear overalls and gloves as appropriate Do not eat and drink on site, only in canteen Maintain personal hygiene, wash hands before eating, drinking and using toilet facilities</i>
SITE TRAFFIC	
Person struck by delivery wagons	<i>Site speed limit of 5mph (or as specified by Main Contractor) Wear high visibility waistcoat Banksman to direct wagon when reversing and remain in driver's sight at all times</i>

APPENDIX B RISK ASSESSMENT

Franki Foundations UK

RISK ASSESSMENT PROCEDURE

The Company's Health, Safety & Protection of The Environment Policy places the duty to carry out risk assessment on two Groups of Individuals, these are:

The Contracts Manager, whom has to ensure that the initial risk assessment is completed at contract award. This is in effect a "desk study" that may or not have involved a site visit.

The Site supervisor / Foreman, who on arriving at the site for the first time, checks the actual site situation against the initial assessment. If the two do not match he adjusts the document and may, where risks not covered by this document arise, write in totally new sections in the space provided using Part 3 for guidance.

This is not simply a paper exercise; the main aim of this process is the better planning of the work to ensure both the safety of persons, the avoidance of pollution and unnecessary environmental damage.

Not all the hazards and Controls in this Schedule will be present on all sites; however where they are present, the controls stated need to be in place and enforced.

Item	WORK ACTIVITY & HAZARD	PERSONS AT RISK (tick as appropriate)			INITIAL LEVEL OF RISK			PRECAUTIONS TO REDUCE THE RISK	RESIDUAL RISK	Who provides the precautions FFUK or other persons (write in name)	Name of FFUK person responsible for precautions (write in name)
		APL	Other Contractors	Members of Public	H	M	L				
1	VEHICULAR AND PEDESTRIAN ACCESS Interface between pedestrians and vehicles, danger of bodily injury.	X	X	X		X		- Plan the main vehicle, plant/pedestrian access routes. - Aim for barrier segregation and the avoidance of reversing, where possible. - Banksman to direct vehicles when necessary, particularly reversing vehicles. - Cause high visibility garments to be worn.	Low	the Principal Contractor the Principal Contractor Franki Foundations UK Ltd Franki Foundations UK Ltd	FFUK Foreman
2	OVERHEAD SERVICES Machines coming into contact with services whilst passing under, working close by or working underneath services leading to possible electrocution.	x				x		- Visually check service locations. - Request 6m clearance, physical barriers and signs from the Principal Contractor. - Lower the mast when travelling. - Ensure precautions are maintained, - Do not proceed unless precautions are in place.	Low	Franki Foundations UK Ltd	FFUK Foreman

Item	WORK ACTIVITY & HAZARD	PERSONS AT RISK (tick as appropriate)			INITIAL LEVEL OF RISK			PRECAUTIONS TO REDUCE THE RISK	RESIDUAL RISK	Who provides the precautions FFUK or other persons (write in name)	Name of FFUK person responsible for precautions (write in name)
		APL	Other Contractors	Members of Public	H	M	L				
3	UNDERGROUND SERVICES Machines coming into contact with services including electricity, gas, water, sewers and chemical pipelines.	x	x			x		▪ Cause the APL Permit to Pile to be completed. ▪ Ensure that the routes of services have been traced located and clearly marked before work begins. ▪ Advise machine drivers of cable/services locations. ▪ Monitor progress and cause re-tracing of services, if necessary.	Low	Franki Foundations UK Ltd Principal Contractor Principal Contractor Principal Contractor	FFUK Foreman
4	SOFT GROUND Rig becoming unstable.	x	x			x		▪ Cause a suitable access route and piling mat to be constructed capable of supporting the intended load. ▪ Travel rig with mast down. ▪ Cause the mat to be maintained throughout the work period. ▪ Cause the rig to remain on the safe area.	Low	Principal Contractor Franki Foundations UK Ltd Franki Foundations UK Ltd Franki Foundations UK Ltd	FFUK Foreman
5	SLOPING GROUND Rig becoming unstable, overturning	x	x			x		▪ Assess gradient against machine manufacturers' data. ▪ Ensure the gradient is suitable for travelling. Travel, mast down ▪ Counter weight down hill. ▪ Slew lock engaged. ▪ Only raise mast on level ground.	Low	Franki Foundations UK Ltd Franki Foundations UK Ltd Franki Foundations UK Ltd Franki Foundations UK Ltd Franki Foundations UK Ltd	FFUK Foreman

Item	WORK ACTIVITY & HAZARD	PERSONS AT RISK (tick as appropriate)			INITIAL LEVEL OF RISK			PRECAUTIONS TO REDUCE THE RISK	RESIDUAL RISK	Who provides the precautions FFUK or other persons (write in name)	Name of FFUK person responsible for precautions (write in name)
		APL	Other Contractors	Members of Public	H	M	L				
6	CONTAMINATED LAND Operative's health affected by exposure to substances.	x	Not Applicable					- Request soil information. - Provide a method statement and training. - Provide suitable hygiene facilities. - Prepare COSHH assessment - Ensure identified PPE is provided and worn. - Seek advice from Health, Safety & Environment Dept.	Low	Franki Foundations UK Ltd Franki Foundations UK Ltd Primary Contractor Franki Foundations UK Ltd Franki Foundations UK Ltd Franki Foundations UK Ltd	FFUK Foreman
7	WORKING ON AGRICULTURAL LAND Not applicable										
8	RAILWAY WORKING Possible contact with trains. Personal injury and damage Not applicable							Work to be carried out in accordance with Network Rail Standard NR/L3/INI/CP0063; "Piling Adjacent to the Running Line"			
9	WORK OVER WATER Possible drowning incidents. Not applicable										
10	WORK NEAR WATER COURSES / CANAL Not applicable										

Item	WORK ACTIVITY & HAZARD	PERSONS AT RISK (tick as appropriate)			INITIAL LEVEL OF RISK			PRECAUTIONS TO REDUCE THE RISK	RESIDUAL RISK	Who provides the precautions FFUK or other persons (write in name)	Name of FFUK person responsible for precautions (write in name)
		APL	Other Contractors	Members of Public	H	M	L				
11	HIGHWAY WORKING Persons being struck by vehicles. Persons and vehicles unintentionally becoming involved with the Piling operations. Not applicable										
12	PILING ADJACENT TO UNSTABLE STRUCTURES Not applicable										
13	WORKING FROM TEMPORARY PLATFORMS Not Applicable										
14	CONFINED SPACES Not Applicable										

Item	WORK ACTIVITY & HAZARD	PERSONS AT RISK (tick as appropriate)			INITIAL LEVEL OF RISK			PRECAUTIONS TO REDUCE THE RISK	RESIDUAL RISK	Who provides the precautions FFUK or other persons (write in name)	Name of FFUK person responsible for precautions (write in name)
		APL	Other Contractors	Members of Public	H	M	L				
15	USE OF CRANES/LIFTING OPERATIONS Cranes becoming unstable. Overturning. Damage to plant. Injury to persons.	x	x		X			• Ensure that a lifting plan is in place. • Cause lifting operations to be under the control of a competent person. • Ensure that a current test, through examination certificate is available and that the weekly inspection of the crane is recorded. • Ensure current certification is available for all lifting accessories. ▪ Ensure that the Driver's CPCS card is current. ▪ Ensure that the machine is capable of lifting the intended load at the required radius and that the ground conditions are adequate. (This is particularly important for extracting pile casings where the crane <u>must be</u> rigged for maximum loads). ▪ Ensure outriggers are fully out and a level set up. • Cause Operatives not to approach cranes unless they have made their presence known to the driver/operator.	Low	Franki Foundations UK Ltd	FFUK Foreman

Item	WORK ACTIVITY & HAZARD	PERSONS AT RISK (tick as appropriate)			INITIAL LEVEL OF RISK			PRECAUTIONS TO REDUCE THE RISK	RESIDUAL RISK	Who provides the precautions FFUK or other persons (write in name)	Name of FFUK person responsible for precautions (write in name)
		APL	Other Contractors	Members of Public	H	M	L				
16	UNLOADING OF PLANT AND MATERIALS Contact with plant being unloaded. Materials falling onto persons. Falls from height	x	x			x		▪ Cause Lifting Plan to be in place. ▪ Release lorry load restraints carefully, stand clear. ▪ Cause plant to be slung and unloaded by competent persons only, in an area away from site operatives or pedestrians. ▪ Where large single reinforcing bars are lifted use webbing sling with bulldog clip or rope sling with rolling hitch. ▪ Ensure that the ground conditions are sufficient to support the load, use skids, where appropriate. ▪ Minimum number of persons to stand on vehicle being unloaded. ▪ Introduce fall prevention measures.	Low	Franki Foundations UK Ltd	FFUK Foreman
17	OFF LOADING AND STACKING OF PILES Not Applicable										

Item	WORK ACTIVITY & HAZARD	PERSONS AT RISK (tick as appropriate)			INITIAL LEVEL OF RISK			PRECAUTIONS TO REDUCE THE RISK	RESIDUAL RISK	Who provides the precautions FFUK or other persons (write in name)	Name of FFUK person responsible for precautions (write in name)
		APL	Other Contractors	Members of Public	H	M	L				
18	ERECTION OF RIGS AND CRANES Failure or overturning of the rig during erection. Incorrect erection Adding augers to the rig	x	x			x		- Ensure that the ground is firm and level and has been compacted. - Ensure that the outriggers, if fitted, are extended fully. - Work to the manufacturers instructions. - Rig Erector must be trained/competent. - Cause augers to be slung correctly. - Ensure all guards are fitted and working. - Check for excessive wear on auger joint pins. - Cause Operatives not to enter the auger danger zone unless they are absolutely clear that the Driver/Operator knows they are there and he has isolated all drive mechanisms. - Use Mobile Elevated Work Platform (MEWPS) for access to high level auger joints	Low	Franki Foundations UK Ltd	FFUK Foreman

Item	WORK ACTIVITY & HAZARD	PERSONS AT RISK (tick as appropriate)			INITIAL LEVEL OF RISK			PRECAUTIONS TO REDUCE THE RISK	RESIDUAL RISK	Who provides the precautions FFUK or other persons (write in name)	Name of FFUK person responsible for precautions (write in name)
		APL	Other Contractors	Members of Public	H	M	L				
19	ADDITIONAL EQUIPMENT & ACCESSORIES FITTED TO PILING RIGS/CRANES ETC. e.g. CASING CLAMPS/ OSCILLATORS A lack of compatibility and appropriate fixing lugs etc. leading to instability and other interface problems. A lack of information and training in respect of the additional equipment and its interface with the rig/crane etc. The effect of the introduction of the additional equipment/accessory on the established safe system of work.	x	x		X			• Cause these matters to be considered when the work is being planned. Consult with the Plant department and the manufacturers/suppliers of the equipment. Take other actions as are appropriate by welding on suitable lugs etc. • Cause information and training to be provided and recorded. The training must e appropriate to the level of experience of the persons involved and the complexity and level of risk associated with the equipment. • Cause the impact of the additional equipment/accessory on the system of work to be assessed. Where the system of work is significantly affected, introduce additional measures to ensure safety. (Additional measures could include exclusion zones, improved signalling etc.) • Cause the revised safe system of work to be properly implemented.	Low	Franki Foundations UK Ltd	FFUK Foreman

Item	WORK ACTIVITY & HAZARD	PERSONS AT RISK (tick as appropriate)			INITIAL LEVEL OF RISK			PRECAUTIONS TO REDUCE THE RISK	RESIDUAL RISK	Who provides the precautions FFUK or other persons (write in name)	Name of FFUK person responsible for precautions (write in name)
		APL	Other Contractors	Members of Public	H	M	L				
20	MECHANICAL FAILURE OF PLANT Operatives being injured by defective plant or when carrying out unauthorised repairs.	x	x		X			• Cause daily visual inspections to take place this must include the condition and operation of guards. • Weekly inspection of plant to be recorded in the register. • Recorded defects must be made known to the Plant Department. • In the event of plant breakdown or failure make the area safe. • Inform the Supervisor/ Plant Manager. • Do not carry out unauthorised repairs.	Low	Franki Foundations UK Ltd	FFUK Foreman

Item	WORK ACTIVITY & HAZARD	PERSONS AT RISK (tick as appropriate)			INITIAL LEVEL OF RISK			PRECAUTIONS TO REDUCE THE RISK	RESIDUAL RISK	Who provides the precautions FFUK or other persons (write in name)	Name of FFUK person responsible for precautions (write in name)
		APL	Other Contractors	Members of Public	H	M	L				
21	SPOIL FALLING FROM AUGERS AND ENTRY INTO THE AUGER/ DRIVING Falling spoil from augers. Injuries to operatives during auger cleaning operation. Table danger zone	x	x			x		• Cause Operatives not to enter the danger zone associated with the auger or driving table/piling helmet unless they are absolutely clear that the Driver/Operator has seen them and he has isolated all driver mechanisms. • Cause the auger to be clean of spoil above head height. • Use mechanical means to clean the auger where possible. • Auger must be stationary before operatives enter the danger zone to clean off material. • Cause the auger to be guarded or trip mechanisms to be fitted. • Where working adjacent to the site boundary, ensure persons or property vulnerable to debris falling off the auger is excluded or protected	Low	Franki Foundations UK Ltd Principal Contractor	FFUK Foreman

Item	WORK ACTIVITY & HAZARD	PERSONS AT RISK (tick as appropriate)			INITIAL LEVEL OF RISK			PRECAUTIONS TO REDUCE THE RISK	RESIDUAL RISK	Who provides the precautions FFUK or other persons (write in name)	Name of FFUK person responsible for precautions (write in name)
		APL	Other Contractors	Members of Public	H	M	L				
22	OPERATIVES WORKING AT HEIGHT Falls of operatives from heights, piling rig masts in particular.	x			X			- Use a Mobile Elevated work platform (MEWPS) - Only IPAF trained operatives to use MEWPS - Cause the fall arrest harness and lanyard to be available and used - If ladders are required ensure access is adequate and ladders are in good condition and secured. - Cause equipment to be inspected daily and a current test certificate are in place. - Cause all work platforms to be in good condition.	Low	Franki Foundations UK Ltd	FFUK Foreman
23	PILE BORE HOLES Operatives and other persons falling into holes	x	x		X			- Place signs, "Piling Operations Taking Place". - Remove spoil from around the bore holes. - Cover the bore hole. - Backfill or leave the auger in the bore hole or place a temporary casing 1m above the ground level. - Re-bar to be protected at ground level.	Low	Franki Foundations UK Ltd	FFUK Foreman

Item	WORK ACTIVITY & HAZARD	PERSONS AT RISK (tick as appropriate)			INITIAL LEVEL OF RISK			PRECAUTIONS TO REDUCE THE RISK	RESIDUAL RISK	Who provides the precautions FFUK or other persons (write in name)	Name of FFUK person responsible for precautions (write in name)
		APL	Other Contractors	Members of Public	H	M	L				
24	HANDLING OF REINFORCEMENT CAGES Injury through collapse of trestles.(If cage fixed on site) Poor lifting techniques. Collapse of cages.	x				x		• Cause operatives to wear leather palmed gloves. • Trestles should be strong and stable. • Tying wire should not be left lying around. • Ensure lifting procedures are under the control of a competent person. • Cause large/heavy cages to have properly designed and fabricated lifting points with fully welded bands as necessary. • Cause Operatives to stand clear of lifting operations.	Low	Franki Foundations UK Ltd	FFUK Foreman
25	INSERTING THE BUNG OR CLOSING FLAP AT THE BASE OF THE AUGER Rotating auger. Spoil falling from above.	x				x		• Ensure safe access. • Cause Operatives not to enter the danger zone associated with the auger unless they are absolutely sure that the Driver / Operator is aware of their presence and has isolated all drive mechanisms. • Ensure flights are clear of spoil. • Ensure that the flap is physically held in the closed position.	Low	Franki Foundations UK Ltd	FFUK Foreman

Item	WORK ACTIVITY & HAZARD	PERSONS AT RISK (tick as appropriate)			INITIAL LEVEL OF RISK			PRECAUTIONS TO REDUCE THE RISK	RESIDUAL RISK	Who provides the precautions FFUK or other persons (write in name)	Name of FFUK person responsible for precautions (write in name)
		APL	Other Contractors	Members of Public	H	M	L				
26	CONCRETE MIXER VEHICLES Overshooting ramps etc.	x				x		- Remove requirement for ramps by use of cyclic pump/drum or hydraulic lifting drum. - Cause the ramp to be of sufficient dimensions to prevent the rear wheels overhang the sides. - Cause a Banksman to be available to direct reversing vehicles in a safe location. - Ensure wheel stops are placed in position to prevent vehicles getting to close to the edges of excavations and or ramps.	Low	Franki Foundations UK Ltd	FFUK Foreman
27	REMOVING CONCRETE FROM PLANT & EQUIPMENT Persons removing guards over dangerous parts of machinery which are still in motion. Persons poking bars and other "cleaning devices" through mesh screens into areas where they could be struck by moving parts of machinery.	x				x		- Cause action to be taken so that on no account shall machine guards be removed whilst dangerous parts are in motion. - Cause the practice of poking bars and other cleaning devices to be actively discouraged through tool box talks. - Cause other cleaning methods, such as jet washers, to be made available.	Low	Franki Foundations UK Ltd	FFUK Foreman

Item	WORK ACTIVITY & HAZARD	PERSONS AT RISK (tick as appropriate)			INITIAL LEVEL OF RISK			PRECAUTIONS TO REDUCE THE RISK	RESIDUAL RISK	Who provides the precautions FFUK or other persons (write in name)	Name of FFUK person responsible for precautions (write in name)
		APL	Other Contractors	Members of Public	H	M	L				
28	USE OF COMPRESSED AIR TO BLOW OUT PIPEWORK CONTAINING CONCRETE Failure of a pressure system. Burst pipes Sudden pressure release at end of blow out system.	x	x			x		• Ensure all suspended concrete hoses have safety chains fitted. • Ensure that compressors are in good condition. • Ensure that pressure gauges etc. are working correctly. • Attach whip chains to large hose couplers. • Use blowout ball catcher or blowout box. • Blow out into pilot hole made by auger • Ensure operatives are in a safe position. • Ensure that the blow out gun is properly maintained. • Follow the concrete pump/line cleaning procedure. • Clean out into the “wash out pit”. • All operatives involved to wear the necessary PPE. (Glasses or face shield).	Low	Franki Foundations UK Ltd	FFUK Foreman

Item	WORK ACTIVITY & HAZARD	PERSONS AT RISK (tick as appropriate)			INITIAL LEVEL OF RISK			PRECAUTIONS TO REDUCE THE RISK	RESIDUAL RISK	Who provides the precautions FFUK or other persons (write in name)	Name of FFUK person responsible for precautions (write in name)
		APL	Other Contractors	Members of Public	H	M	L				
29	ROTARY PILING ONLY USING CRANAGE TO WITHDRAW TEMPORARY CASING Refer to FPS "Guidance Notes on the Extraction of Temporary Casing and temporary piles."	x	x	x		x		Appendix B of the Guide calculates for a typical London site having 5m made ground and gravel and 1m penetration into clay, a 900mm casing will require a line pull of 40 tonne. As a general guide therefore, the casing should be loosened prior to extraction by applying rotation to loosen the gravel and withdrawing the casing partially from the London clay	Low	Franki Foundations UK Ltd	Foreman
29A	USE OF CASING VIBRATOR	x			X			- When holding casing on clamps, casing to be independently tied back to Crane Hook - To avoid shackles vibrating loose, shackles to be wired closed	Low	Franki Foundations UK Ltd	Foreman/Piling Operatives
30	WORKING ADJACENT TO EXISTING STRUCTURES Damage to the fabric of nearby buildings	x	x	x		x		- Where possible fence the work area of from adjacent properties. - Keep pile arisings and concrete away from existing structures - Splash Barriers to be provided to protect against Bore Spoil Splashing - Cause a structural assessment to be made with regard to the stability of the structure and free standing walls. - Cause all info from the structural assessment to be made available to Franki Foundations UK Ltd	Low	Principal Contractor	Site Manager

Item	WORK ACTIVITY & HAZARD	PERSONS AT RISK (tick as appropriate)			INITIAL LEVEL OF RISK			PRECAUTIONS TO REDUCE THE RISK	RESIDUAL RISK	Who provides the precautions FFUK or other persons (write in name)	Name of FFUK person responsible for precautions (write in name)
		APL	Other Contractors	Members of Public	H	M	L				
31	EXCAVATIONS AND OPEN EDGES Collapse of side / edges during plant movement. Collapse of excavations onto persons.	x	x			x		• Cause operatives not to enter excavations 1.2m or more unless the sides are either shored or battered back. ▪ Cause machines to be given adequate clearance from the edge of the excavation when moving. ▪ Cause barriers and signs to be erected. ▪ Cause the excavations in close proximity to the work area to be inspected by a competent person. And his observations to be recorded in the excavation register.	Low	Principal Contractor	FFUK Foreman

Item	WORK ACTIVITY & HAZARD	PERSONS AT RISK (tick as appropriate)			INITIAL LEVEL OF RISK			PRECAUTIONS TO REDUCE THE RISK	RESIDUAL RISK	Who provides the precautions FFUK or other persons (write in name)	Name of FFUK person responsible for precautions (write in name)
		APL	Other Contractors	Members of Public	H	M	L				
32	<u>USE OF EXCAVATORS</u> Excavator becoming unstable. Collision with operatives.	x	x			x		- Ensure that the machine is in good condition. 12 monthly thorough examination certificate is current - Driver CPCS certification is current. - Weekly Register and inspections being completed and up to date. - Ensure that the driver is made aware of the close proximity of operatives. - If used for lifting, seek advice from the Health and Safety Department. - Cause Operatives not to approach an excavator unless they are absolutely clear that the Driver/Operator knows that they are there. - Where provided by the Principal Contractor, ensure that any defects or competency issues are immediately addressed. Stop work if necessary	Low	Principal Contractor	FFUK Foreman

Item	WORK ACTIVITY & HAZARD	PERSONS AT RISK (tick as appropriate)			INITIAL LEVEL OF RISK			PRECAUTIONS TO REDUCE THE RISK	RESIDUAL RISK	Who provides the precautions FFUK or other persons (write in name)	Name of FFUK person responsible for precautions (write in name)
		APL	Other Contractors	Members of Public	H	M	L				
33	USE OF DUMPERS Overturning. Collision with site operatives.	x	x			x		- Ensure that the machine is in good condition. - Ensure that a maintenance schedule is in place. - Visually inspect the machine daily. - Check the operator has a current CPCS card. - Cause ground conditions, particularly slopes, to be suitable for the machine. - Cause the operator to adhere to speed limits.	Low	Principal Contractor	Site Manager
34	WORK ACTIVITY WORKING CLOSE TO PLANT The risk of noise induced hearing loss.	x	x			x		- Cause all engine covers and acoustic screens to be kept closed. - Cause all Operatives to be made aware of the need to wear ear defenders in the noise protection zone associated with rigs and other items of plant. - Challenge any Operative observed not wearing hearing protection in the noise protection zone. - Cause ear defenders and other suitable hearing protection devices to be made available for the Operatives' use.	Low	Franki Foundations UK Ltd / Principal Contractor	FFUK Foreman

Item	WORK ACTIVITY & HAZARD	PERSONS AT RISK (tick as appropriate)			INITIAL LEVEL OF RISK			PRECAUTIONS TO REDUCE THE RISK	RESIDUAL RISK	Who provides the precautions FFUK or other persons (write in name)	Name of FFUK person responsible for precautions (write in name)
		APL	Other Contractors	Members of Public	H	M	L				
35	MOVEMENT OF MOBILE PLANT	x	x		x			- Where practicable demark exclusion zone around piling rig with warning signs and barriers. - Enforce exclusion zone for all none piling personnel. Zone to be controlled by Banksman - Before entering exclusion zone, operatives are to be acknowledged by the plant operator or controlling Banksman. - Entry into the exclusion zone to be kept to a minimum. - Advise Principal Contractor of the requirements for an exclusion zone for other activities on site. - Stop piling operations if unauthorised persons enter unsafe areas.	Low	Franki Foundations UK Ltd	FFUK Foreman
36	MANUAL HANDLING Sprain or strain injures.	x				x		- Avoid manual handling, if possible. Significant load = risk of injury. - Note the Company's manual handling assessment. - Use mechanical aids if practicable. - Reduce the weight of the load to be handled when practicable. - Train the operatives carrying out the task.	Low	Franki Foundations UK Ltd	FFUK Foreman

Item	WORK ACTIVITY & HAZARD	PERSONS AT RISK (tick as appropriate)			INITIAL LEVEL OF RISK			PRECAUTIONS TO REDUCE THE RISK	RESIDUAL RISK	Who provides the precautions FFUK or other persons (write in name)	Name of FFUK person responsible for precautions (write in name)
		APL	Other Contractors	Members of Public	H	M	L				
37	SUBSTANCES HAZARDOUS TO HEALTH Health hazards caused by exposure to substances.	x	x			x		- Comply with the precautions in the assessment. - If in doubt contact the Health & Safety Department.	Low	Franki Foundations UK Ltd	FFUK Foreman
38	PERSONAL PROTECTIVE EQUIPMENT Inadequate or unsuitable equipment.	x				x		- Cause the operatives to be supplied with and to wear suitable, Head, Foot, Ear & Hand protection, Overalls and any other protective equipment identified in a risk assessment associated with the work. - Replace as necessary.	Low	Franki Foundations UK Ltd	FFUK Foreman
39	WELFARE FACILITIES Inadequate, unclean welfare facilities leading to unhealthy conditions.	x	x		x			- Cause the welfare/toilet facilities to be adequate for the numbers employed on site. - Cause them to be maintained in a clean, tidy condition. - Provide hot, cold or warm running water. - Basin large enough to allow the forearms to be washed. - Soap, towels to be made available. - Fires and electrical installations to have been inspected and certificated at 3 monthly intervals.	Low	Principal Contractor	FFUK Foreman

Item	WORK ACTIVITY & HAZARD	PERSONS AT RISK (tick as appropriate)			INITIAL LEVEL OF RISK			PRECAUTIONS TO REDUCE THE RISK	RESIDUAL RISK	Who provides the precautions FFUK or other persons (write in name)	Name of FFUK person responsible for precautions (write in name)
		APL	Other Contractors	Members of Public	H	M	L				
40	ABRASIVE CUTTING TOOLS Fragmentation of the disc. Eye, face, hands and arm injuries. Fire	x				x		- Ensure the machine is in good condition with, if electrical, current 3 month PAT test. - Cause trained person only to change the cutting disc. - Ensure all guards are in place and in good condition. - The operative using the tool must wear leather palmed gloves and eye protection to BS EN 166B standard. - All works must be carried out under "hot works" permit control	Low	Franki Foundations UK Ltd	FFUK Foreman
41	OXY ACETYLENE CUTTING EQUIPMENT Not applicable										
42	FIRST AID Lack of treatment leading to infection and health complications.	x				x		- Cause a person trained in first aid to be present if there are more than 5 persons on site. - Cause suitable first aid equipment to be provided. - Cause the Group's internal accident report form to be completed after treatment. - Make an emergency telephone number available.	Low	Principal Contractor	FFUK Foreman

Item	WORK ACTIVITY & HAZARD	PERSONS AT RISK (tick as appropriate)			INITIAL LEVEL OF RISK			PRECAUTIONS TO REDUCE THE RISK	RESIDUAL RISK	Who provides the precautions FFUK or other persons (write in name)	Name of FFUK person responsible for precautions (write in name)
		APL	Other Contractors	Members of Public	H	M	L				
43	FIRE PRECAUTIONS Injury and damage caused by fire.	x	x				x	• Provide gas equipment with flame failure devices. • Where gas is used ensure high and low level ventilation. • Provide an adequate number of dry powder fire extinguishers. • Cause them to have been serviced during the past 12 months. • Site them in suitable positions. • Train operatives in their use. • Display the Franki Foundations UK Ltd "Flammable Gases" and "Fire Extinguishers" posters.	Low	Principal Contractor / Franki Foundations UK Ltd	FFUK Foreman
44	Water Contamination Loss of concrete to aquifer in range of piles			x			x	• Monitor Pumping Pressures. • Stop work if there are any abnormalities.	Low	Principal Contractor	Principal Contractor

APPENDIX C
COSHH Assessment Summary

Product	Hazard	Control mechanism	Storage Requirements	First Aid	Comments
Ready Mixed Concrete in fluid/un set condition	Irritant and alkaline burning to skin	PVC or waterproof gloves to be worn Splashes to be washed off with water.	Normally stored in agitator drum	Wash off concrete with warm soapy water.	Concrete mixes used in piling have a high cement content to give durability and are thus particularly alkaline and thus hazardous.
Diesel/Gas Oil	1) Skin Irritant 2) Flammable Product	1) Gloves to be used when handling	2) Double skinned tank and in accordance with the Petroleum Regulations	1) Was off product with warm soapy water.	
Mould Oil	Skin Irritant	Gloves to be used when handling	5 litre container	Was off product with warm soapy water.	
Engine Oil	Skin Irritant	Gloves to be used when handling	25 litre container	Was off product with warm soapy water.	Precautions applies to both new and used oil, which is to be returned to the plant yard as "Hazardous Waste"
Hydraulic Oil	Skin Irritant	Gloves to be used when handling	25 litre container	Was off product with warm soapy water.	Precautions applies to both new and used oil, which is to be returned to the plant yard as "Hazardous Waste"
Concrete pumping lubricant 'Prime-a-pump'			Dry powder in 1 litre bottle	Non toxic	

APPENDIX D QUALITY PLAN and INSPECTION & TEST PLAN

NO:	ACTIVITY	INSPECTION FOR TEST		REFERENCES e.g.	RESPONSIBLE	OTHER		Records			
		OPERATION	FREQUENCY	Clause		CHECKS TYPE	BY WHOM	Type	To	Frequency	
1	DRAWINGS/SPECS	CHECK IF CURRENT	BEFORE USE	Franki Foundations UK Ltd CIS	Franki Foundations UK Ltd SUPERVISOR	REGISTER REVIEW	the Principal Contractor	CHECK SHEET	Franki Foundations UK Ltd	EACH TIME	HOLD POINT
2	SAFETY	SAFETY	EACH TIME	STATEMENT & RISK ASSESSMENT	ALL	WEEKLY INSPECTION	Franki Foundations UK Ltd	SAFETY INSPECTION SHEET	the Principal Contractor	WEEKLY	ENSURE WORK CAN BE DONE SAFELY
3	SETTING OUT	SERVICES	EACH TIME	CAT SCAN	the Principal Contractor	UTILITIES INFORMATION	the Principal Contractor	PERMIT TO DIG	the Principal Contractor	EACH TIME	HOLD POINT PERMIT MUST BE ISSUED TO GANGER/FOREMAN
4	SETTING OUT	CALCULATIONS	EACH TIME	CONTRACT DRAWINGS/SPEC	the Principal Contractor	CALCULATIONS	the Principal Contractor	CHECK SHEET	the Principal Contractor	EACH TIME	
5	SETTING OUT	INDEPENDENT CHECK	EACH TIME	CONTRACT DRAWINGS/SPEC	the Principal Contractor	AS BUILT SURVEY	the Principal Contractor	SURVEY DATA	Franki Foundations UK Ltd	DAILY (EACH PILE)	
6	AS-BUILT RAMPS AND MATS	DIMENSION FROM PROFILES	DAILY	GRADIENTS FOR PILING RIG TO WORK	the Principal Contractor	VISUAL	Franki Foundations UK Ltd SITE SUPERVISOR	Working Platform certificate	Franki Foundations UK Ltd	PER AREA	HOLD POINT-AVAILABLE FOR INSPECTION BEFORE RIG MOVES
7	EXCAVATION OF FORMATION	PLATE BEARING TESTING	ONCE	TW DESIGN	the Principal Contractor	VISUAL CHECK FOR SOFT SPOTS	Franki Foundations UK Ltd SUPERVISOR				SOFT SPOT TO BE EXCAVATED AND BACKFIELD USING SUITABLE MATERIAL
8	CONSTRUCTION OF PILING MAT	METHOD COMPACTION	EACH TIME	HIGHWAYS SPEC	the Principal Contractor	PLATE BEARING as req'd	TESTING HOUSE	Working Platform certificate	Franki Foundations UK Ltd	PER AREA	
9	MOVING PILING RIG	CHECK TO MOVE	EACH TIME	METHOD STATEMENT	Franki Foundations UK Ltd SUPERVISOR	VISUAL	Franki Foundations UK Ltd SUPERVISOR				HOLD POINT-CHECK MAT IS SOUND, LEVEL AND CLEAR OF OBSTRUCTIONS
10	CONCRETE MIX DESIGN	MIX DESIGN	EACH MIX TYPE	SPEC	Franki Foundations UK Ltd C MANAGER	APPROVAL/ COMMENT	the Principal Contractor	MIX DESIGN	the Principal Contractor	EACH MIX TYPE	HOLD POINT-MIX TO BE ISSUED TO CONSULTING ENGINEER
11	PITCHING AUGER	ACCURACY	EACH PILE	Franki	LEADING HAND	Inclinometer	RIG DRIVER	NONE			

		MAST VERTICALLY		Foundations UK Ltd QMS							
12	BORING PILE	OBSTRUCTIONS	EACH PILE	Franki Foundations UK Ltd QMS	LEADING HAND	OBSERVE AS REQUIRED	SITE ENGINEER	DAILY REPORT	the Principal Contractor	DAILY (EACH PILE)	
13	BORING PILE	STRATA CHECK DEPTH	EACH PILE	Franki Foundations UK Ltd QMS	PILING RIG DRIVER	OBSERVE AS REQUIRED	SITE ENGINEER	DAILY REPORT	the Principal Contractor	DAILY (EACH PILE)	
14	CONCRETING	CONCRETE TICKET MATERIAL CHECK	EACH TIME	APPROVED MIX DESIGN	Franki Foundations UK Ltd SUPERVISOR	VISUAL INSPECTION	PUMP MAN	CONCRETE TICKET	Franki Foundations UK Ltd	WEEKLY	
15	CONCRETING	PRE-CHARGE OVERSUPPLY	EACH PILE EACH DAY	Franki Foundations UK Ltd QMS	RIG OPERATOR	VOLUMETRIC CHECK	Franki Foundations UK Ltd SUPERVISOR	SITE CONCRETE DELIVERY RECORD	Franki Foundations UK Ltd	WEEKLY	
16	CONCRETING	VOLUME SUPPLIED PILE HEAD LEVEL	EACH PILE EACH DAY	Franki Foundations UK Ltd QMS	Franki Foundations UK Ltd SUPERVISOR	OBSERVE AS REQUIRED	SITE ENGINEER				
17	REINFORCEMENT	CAGE CONSTRUCTION	EACH PILE	DRAWING/SCHEDULE	Franki Foundations UK Ltd SUPERVISOR	OBSERVE AS REQUIRED	SITE ENGINEER				
18	REINFORCEMENT	COVER TO REBAR CENTRALLY	VISUAL EACH PILE	CIS/CONTRACT DRAWINGS/SPECS	LEADING HAND	OBSERVE AS REQUIRED	SITE ENGINEER				
19	REINFORCEMENT	LEVEL	LEVEL	CIS/CONTRACT DRAWINGS/SPECS	Franki Foundations UK Ltd SUPERVISOR	LEVEL CHECK IF req'd	the Principal Contractor	Survey			
20	SAMPLING CONCRETE	CONCRETE MIX DESIGN	CONCRETE MIX DESIGN	Franki Foundations UK Ltd QMS	Franki Foundations UK Ltd PUMPMAN	VISUAL	Franki Foundations UK Ltd SUPERVISOR	CUBE RESULTS	the Principal Contractor	1@7/2@28/1@56	
21	SAMPLING CONCRETE	WORKABILITY	WORKABILITY	Franki Foundations UK Ltd QMS	Franki Foundations UK Ltd PUMPMAN	VISUAL	Franki Foundations UK Ltd SUPERVISOR	SITE CONCRETE DELIVERY RECORD	Franki Foundations UK Ltd OFFICE	weekly	
22	PILE TESTING	INTEGRITY	INTEGRITY	CONTRACT SPECS	the Principal Contractor	VISUAL	Franki Foundations UK Ltd SUPERVISOR	TEST REPORT	the Principal Contractor	As tested	
23	PILE TESTING	STATIC LOAD	CONTRACT SPECS	CONTRACT SPECS	Franki Foundations UK Ltd	VISUAL	Franki Foundations UK Ltd SUPERVISOR	TEST REPORT	APOLLO GROUP LTD	As tested	

APPENDIX E: LIFTING PLAN

This Lifting Plan has been drawn up to meet the requirements of the Federation of Piling Specialists (FPS) Code of Industry Best Practice guide to LOLER, the LOLER Regulation's(1998) ACoP and BS7121, "Safe use of Cranes.

A Platform Certificate will be requested for the site

Please note that one third of Dangerous Occurrences reported by Piling Companies to the HSE are related to inadequate working platforms leading to a piling rig or crane overturning, each one of which is a potential fatality. The HSE has worked closely with the piling industry on this initiative and supports the principle of reducing accidents by the certification of properly designed constructed and maintained working platforms.

Lift Supervisor	Site Foreman		Prepared by	Jim Rath	
Brief Description of the Work	Loading and unloading Plant and Equipment delivered to and loaded away from the site. Lifts by lorry Hiab (specified below) and excavator. Lifting of equipment and materials during piling operations by excavator. Lifting equipment and materials using the Piling Rig auxiliary Winch. See notes regarding restrictions on this equipment. Tandem lifts are not permitted under this Lifting Plan. If a tandem lift is required, it must be the subject of a separate Lifting Plan, authorised by an Appointed Person. This lift plan is for Basic Lifts (BS 7121). Tandem lifts require an additional lift plan				
Schedule of 'Routine' Lifts					
Description of load	Approx. Weight (Kg)	Load Characteristic	Method of Lifting	Centre of gravity	Lifting points/or method of slinging
Reinforcing Cages	T16, 1.6kg/m T20, 2.5kg/m T25, 4.0kg/m T32, 6.5kg/m T40, 10.0kg/m Add 10% for helicals.	Cylindrical	Horizontal lift: two chain lift; Vertical lift: Secure lifting points to be provided.	Central	2 leg chains / Nylon slings Vertical lift, secure at tied intersection of helical and main bar. Heavy cages require a welded lifting band.
Reinforcement	As above	Bundled steel bars Or Helical	Horizontal lift: two chain lift. Sling or chain hook to attach to bag handles	Central	2 leg chains Chain to pass through, helicals, bundling wires not to be used. Helicals may be bagged.
Drilling Auger	3.5t max depending on diameter	Up to 7.5m long Spiral	Two chain choke lift (horiz). Single choke for vertical lift to connect auger to rig	Central	2 leg chain.
Concrete pump	4.2 tonnes	Engine/hopper	Lifting point on top	Central	Chain
Agitator [Hiab]	6 – 9 tonne	Cylinder on frame	4No. lifting points	Central	4 leg chain

Diesel bowser	3 tonnes	Large cylindrical	Pair of nylon Strops	Central to tank	Single chain to nylon strops
Generator, compressor, power-pack etc.	3.5 tonnes	Steel box	Lifting Points (on top)	Central	Single chain
Welfare cabins and containers. [Hiab lift only]	7 tonnes	3m x 3m cabin or container	Lifting points Ensure container loads are evenly	Central	4 leg chains
Extracting temporary casings from bores	Extraction friction plus weight as below.(15mm wall) 450=150kg/m 600=200kg/m	Cylindrical, with pair of lifting holes for lifting shackles and slings	Rig or Crane only	Central	Casing is only to be hoisted by crane or rig after it has been freed by other means (Refer to FPS/HSE Guidance on the extraction of temporary casings)

Equipment to be used for the Lift		1) Excavator
Make, Model, Attachments, Test Certificates, etc.	Excavator supplied by Principal Contractor who is responsible for Checking all Documentation before releasing it to work for Franki Foundations UK Ltd	
Equipment to be used for the Lift		2) Hiab (Lorry Loader)
Make, Model, Attachments, Test Certificates, etc.	Hiabs supplied by Haulage Contractor who is responsible for Checking all equipment and documentation before releasing it to work for Franki Foundations UK Ltd	
	See Above, depending on Rig Capacity	
Equipment to be used for the Lift		3) Piling Rig Auxiliary Hoist
Note: The ancillary winch on the Piling Rig is designed to assist in “normal piling operations”, including assembling and de-rigging the auger string and lifting rebar cages into the bore. The operational capacity of the winch is as follows: CM48 = 3.6 t; CM50 = 3.0t; CM70 = 6.0t; R312 = 4.2 t. It is not designed for general crane duties.		
Date of Last inspection:	See LOLER Book.	
Date of Last Examination	Covered by Rig Annual Examination; Certification is retained by the Rig Operator or available from the Plant Yard]	
Max Safe Working Load(Kgs)	The operational capacity of the winch is as follows: CM50 = 3.0t; CM70 = 6.0t.	
Equipment to be used for the Lift		4) Crawler Crane
Crane to be 50 tonne capacity crane, Hino H07CT or similar.		
Date of Last inspection:	See LOLER Book.	
Date of Last Examination	Covered by Crane Annual Examination; Certification is retained by the Crane Operator or available from Office	
Max Safe Working Load(Kgs)	See Duty Charts with Crane	

Operator Competence	
Excavator Driver:	The competence of the driver supplied by the Principal Contractor or his subcontractor will be checked by the Principal Contractor prior to releasing the operative to attend Franki Foundations UK Ltd
Hiab Operator:	The Haulage Contractor is responsible to ensure the driver supplied is competent to operate the Hiab on his machine.
Rig Driver:	The Rig Driver will be a holder of a CPCS or CSCS (Piling Operations) card. The card will be available from the rig driver
Crane Driver:	The Rig Driver will be a holder of a CPCS card. The card will be available from the crane driver
Slinger Signaller:	All the site crew involved in slinging and signalling operation will be holders of a CSCS Slinger/Signaller Card, which will be presented on request.

Use of Fabric Slings					
Types of Sling	Fabric slings come in two types; Flat Web Slings and Round Slings A flat sling is made of woven polyester and can be Simplex, Duplex or Quadplex depending on the number of layers. A Round Sling has an abrasion resistant outer cover				
Capacity and Markings	The lifting capacity of a sling is given by a colour code and the number of black stripes woven or printed onto the sling. The number of stripes gives the SWL in tonnes, up to a maximum of 8 stripes.				
	Purple	1 tonne		Red	5 tonne
	White	1.5 tonne		Brown	6 tonne
	Green	2 tonne		Blue	7 tonne
	Yellow	3 tonne		Orange	8 tonne and over (check the tag)
	Grey	4 tonne			

Configuration	The load you can lift with the sling depends on the method of slinging. The above SWL refers to a vertical lift with one end fixed to the hook and the other fixed to a lifting eye. In other situations, the SWL is increased or decreased as below.				
	Vertical lift	Choke lift	U basket	Basket meeting at 45°	Basket meeting at 90°
	100%	80%	200%	140%	100%
Use of Slings	- Do not use a damaged sling for lifting - The sling must not be used on loads with sharp edges unless the edge is protected. - Do not knot slings or use a sling with a knot. - Do not use a sling to “snatch” a load.				
Inspection and Testing	Polyester slings are not load tested (unlike chains) when issued but have to be manufactured to a Quality Assurance scheme. A representative sample from each batch is tested to destruction to ensure that batch is safe to use. Because fabric slings can be easily damaged, it is important they are regularly inspected and if damaged, discarded, preferably by cutting off the lifting loops. In carrying out the inspection, take note; - Carry out the inspection in good light. - Inspect the length of the sling, both sides, including the inside of the eye. - In a flat sling, the following are grounds to discard the sling; cutting of the longitudinal strands, oil or diesel impregnation, damage to the stitching. - In a round sling, the outer covering does not take any load, but damage may suggest damage to the inner core which does the work.				
Use of Slings to drag hoses	Worn slings not suitable for lifting can be looped onto the concrete hoses and used to drag hoses using the digger bucket to avoid damage to the hose braiding by any sharp edges on the bucket. Under no conditions are these slings to be used to lift the hose.				

"One-way" slings

One way slings must not be reused for lifting purposes although they can be used as drag slings as above.

APPENDIX F: Rig Bearing Pressures, Working Platform Certificate and Permit to Dig

A Working Platform must be provided designed and installed in accordance with the methodology provided by the FPS/BRE. Full details are available on the FPS website: <http://fps.org.uk/fps/platforms/platforms.php>

Prior to work commencing, Franki Foundations UK Ltd must be issued with a "Permit to Dig", confirming there are no services within the area to be piled.

APPENDIX G: Site Safety Responsibilities**Foreman**

- Read the Method Statement/Risk Assessment and ensure it is briefed out to the workforce, including subcontractors and signed for, at the beginning each contract and following any amendments.
- Ensure the WPC and Permit to dig is signed before piling work starts.
- Ensure that the Franki Foundations UK Ltd work area is well maintained with adequate housekeeping maintained at all times particularly in any storage areas
- Ensure that all site deliveries are carried out in a safe manner and in line with the site traffic management procedures
- Daily liaison with the Principal Contractor on all site operations.
- Carry out a weekly Tool box talk for all Franki Foundations UK Ltd and Construction site operatives.
- Ensure that all accidents, incidents and near misses are reported as per the Franki Foundations UK Ltd procedures
- Daily 5-minute briefing about the day's activities prior to the start of daily operations
- Ensure PPE and proper work-wear is worn at all times.
- Carry out pre-shift inspections on all plant and equipment
- Ensure the site team carries out their safety duties as detailed below.

Rig Driver

- Daily and weekly inspection of rig, including documentation
- Maintenance of rig, fuel, lubes, cleaner brushes
- Shutting and securing the rig at the end of the day, parking in a safe location.

Pump Operator

- Ensure the area around the pump is kept tidy and safe
- Ensure all hose joints are fitted with safety clips.
- Ensure the pump ramp is in good condition and rails fitted if necessary
- Ensure the daily and weekly checks on the Agitator and Pump are carried out and recorded.
- Ensure any defective hoses are reported to the Foreman.
- Walk the hose route every morning before work commences and inspect condition of hoses. On **Mondays** do a thorough check and record it in the inspection book.

Banksman

- Ensure piling work area is kept barriered off
- Ensure unauthorised persons are kept out of piling area.
- Ensure the area is safe before the rig is signaled to move.
- Ensure the rig work area is kept scraped clean and level.
- Ensure completed piles are left in a safe condition (backfilled, mushroom caps, covered, as appropriate)
- Alert the rig driver to any spoil being left on the auger and pause extraction so it can be dealt with.

And as a general rule, if you see anything amiss; remember **"Sort it or Report it"**

APPENDIX H: Emergence Response

Emergency Situation	Response
Severe Injury	Seek First Aider. Call Ambulance by dialling 999. Advise Principal Contractor.
Fire	Raise the Alarm. Advise Principal Contractor. Call Fire Brigade by dialling 999.
Uncovering Asbestos or other dangerous substance.	Stop work. Advise Principal Contractor for Instructions.
Suspect unexploded ordinance	Stop work... Clear the immediate area... Advise the Principal Contractor.
Underground or overhead Electric cable strike	Stop work... Driver to stay in cab. Advise the Principal Contractor immediately.
Gas main Strike	Stop work. Switch off plant. Prohibit smoking. Advise Principal Contractor immediately.
Data cable or BT cable strike	Stop work. Advise Principal Contractor.
Sewer strike	Stop work. Advise Principal Contractor.
Water main strike.	Stop work. Use bunding to keep water from vulnerable areas and guide flow towards drainage or waterway. Advise Principal Contractor.
Uncovering suspected archaeological or human remains	Stop work. Advise Principal Contractor for instructions.
Gross pollution Incident	Advise Principal Contractor Contact Adler and Allan on 0800 592827 for assistance
Subsidence of piling platform threatening rig stability	Stop work and attempt to stabilize the rig immediately by among other methods: • Use available diggers to hold down the tracks. • Screw the auger into the ground. • Track away from subsiding area. • Lean the mast back to vertical.

.....then phone the Office