



		Operation / Task:		<b>Piling Rig Access and Egress</b>					Prepared by:		HSEQ / Operational Teams		Rev 2 Date:		Rev 1 Date:	
Location:		Various Sites/ Yard		Department:		CANNON PILING - H&S					Issue Date:		Feb-20			
H&S Consequence, C		Env. Consequence, C		Likelihood, L		Likelihood					Acceptance Criteria					
1	Mino Injury	Minor impact/ operational		Improbable							<div style="display: flex; flex-direction: column; align-items: center;"> <div style="width: 15px; height: 15px; background-color: red; margin-bottom: 5px;"></div> <div style="width: 15px; height: 15px; background-color: yellow; margin-bottom: 5px;"></div> <div style="width: 15px; height: 15px; background-color: green;"></div> </div> <p style="font-size: 8px; margin-top: 5px;">           Red - Intolerable take immediate action            Yellow - Tolerable with additional controls            Green - Tolerable no further action required         </p>					
2	First Aid injury	Community complaints		Remote		1	2	3	4	5						
3	Major injury	Major impact		Possible		2	4	6	8	10						
4	Permanent consequence	Legal impact		Probable		3	6	9	12	15						
5	Potential Fatality	Major impact and cost		Almost certain		4	8	12	16	20						
						5	10	15	20	25						
TASK	HAZARD		Persons at Risk	Degree of Risk			Control Measures					Residual Risk			Person Responsible	Monitoring Responsibility
				C	L	RR						C	L	RR		
	General Note.															
<b>A</b>	<b>Climbing onto and off piling rigs</b>															
A1	Slipping off steps / tracks		Anyone	3	3	9	(PUWER reg 5&6) All rig operators must carry out daily checks and record on the weekly plant return forms (this must include checking the steps). Anyone climbing onto the rig steps must ensure the step is in good order and not covered in mud / debris. Any debris on boots should be kicked off prior to climbing up. Check steps not icy during winter months. De-icer is available in work vans. Tools must never be stored on the steps. Use permanent fixtures on rig to grab hold off if necessary, to aid climbing up onto tracks. (Working at height Rgs 3 &14) No-one is to climb onto back of rig without the handrails being in place. If access is required to the mast then a MEWP or equivalent must be utilised.					3	1	3	Rig operator/ any person wishing to climb onto rig	Site Supervisor / Forman
A2	Complacency		Anyone	3	3	9	Anyone climbing on rigs must remain vigilant and concentrate at all times. Foreman / Supervisors to carry out daily briefings highlighting any specific hazards. (H&S@W act 1974 section 2)					3	2	6	Rig operator/ any person wishing to climb onto rig	Site Supervisor / Forman
A3	Poor Weather conditions		Anyone	3	3	9	Extra care must be taken during heavy wind or rain. Snow must be brushed off prior to climbing. Use de-icer or something equally effective to thaw out any ice when required. Boots must be kicked against tracks prior to climbing.					3	1	3	Rig operator/ any person wishing to climb onto rig	Site Supervisor/ Forman
A4	Storage of tools on steps		Anyone	3	3	9	Ganger must ensure that no tools are left on the steps. Plant dept. are fitting tool trays to all rigs to store the hammer, screwdriver, plastic caps, etc.					3	1	3	Rig operator / Ganger	Site Supervisor / Forman
A5	Unable to climb into rig due to shape, size, posture, fitness level.		Anyone	3	2	6	Cannon Piling will ensure that any one required to climb onto any piling rig is in good physical health. The supervisor must ensure that everyone is capable of climbing into the Cab of the Piling Rig when it is set to its maximum footprint. The company has a programme for carrying out regular health surveillance.					3	1	3	Rig operator/ Ganger	Site Supervisor/ Forman



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<p><b>Welding cutting and associated work on site</b></p> <p><b>Acceptance Criteria</b></p> <p>Red - Intolerable take immediate action            Yellow - Tolerable with additional controls            Green - Tolerable no further action required</p>											
<p><b>General Note.</b></p> <p>Note: This assessment covers cutting and welding work using electrical arc welding and oxygen / flammable gas equipment on various construction sites. Welding activities are only to be undertaken by trained, competent and authorised personnel.            A hot works permit must be issued by the main contractor or a Cannon Piling Foreman/ supervisor before any welding is carried out.</p>											
<b>A Use of welding equipment</b>											
A1	Fire and explosion from the ignition of gas cylinders	Welder/ Site staff	5	3	15	Gas cylinders and hoses to be checked for leaks, etc. Arc welding equipment to be examined by electrician regularly. Cylinders to be kept upright and secured. Valves to be closed when not in use. Cylinders to be fitted with appropriate regulator and gauge. fitted on all Flash-back arrestors to be fitted on all lines. Cylinders must be stored in a cool dry place away from any direct heat source.	5	1	5	Welders	Mobile plant manager, site foreman
A2	Fire from other flammable materials	Welder/ Site staff	5	3	15	Hot work permit must be in place prior to carrying out any hot work operations. Flammable materials must be removed from working area. Fire extinguisher must be available and close by at all times. Welder to check condition of welding equipment before use and to ensure that equipment is safe after use. Cutting and welding of drums or tanks that have contained flammable materials is prohibited with out following the appropriate procedure. This must include producing a separate HA in conjunction with the Workshop Manager.	5	1	5	Welders	Mobile plant manager, Supervisors
A3	Fumes from rods, coatings and metals.	Welder/ Site staff	4	4	16	Welding etc. must be undertaken in well-ventilated areas. Local exhaust ventilation may also be required in certain circumstances to remove fumes. Health checks must be undertaken at set timescales arranged by line management/ HR.	4	2	8	Welders	Mobile plant manager, Supervisors
A4	Hot metal surfaces.	Welder/ Site staff	2	3	6	Hot work permit must be in place prior to carrying out any hot works on site. Welder to exclude other persons from the working area. Barriers and signs may be required. Welder must wear welding gloves.	2	1	2	Welders	Mobile plant manager, Supervisors
A5	Flying splatter	Welder/ Site staff	3	3	9	Welder to exclude other persons from the working area. Barriers and signs may be required. Welder must wear flame retardant overalls, appropriate apron and welding gloves.	3	1	3	Welders	Mobile plant manager, Supervisors
A6	Excessive light/radiation for the welder.	Welder/ Site staff	4	4	16	Approved welding Face shield must be worn by the welder	4	1	4	Welders	Mobile plant manager, Supervisors
A7	Excessive light/radiation for others nearby.	Welder/ Site staff	4	4	16	Fireproof screens to be placed around working area. Welder to exclude other persons from the working area. Barriers and signs may be required	4	2	8	Welders	Mobile plant manager, Supervisors
<b>B Storage of used hot welding rods</b>											
B1	Burns/ Scalds	Welder/ Site staff	2	4	8	Used weld rods should be immediately placed in a small steel bucket or such like receptacle.	2	1	2	Welders	Welder, Supervisor
<b>C Storage of gas cylinders</b>											
C1	Fire and explosion.	Welder/ Site staff	5	3	15	Cylinders must be stored in dedicated locked labelled cages and secured. Cylinders in use in the workshop must be stored on trolleys and isolated when not in use. Any vans carrying gas bottles must be ventilated, carry appropriate fire extinguishers and display the correct hazard warning signs.	5	1	5	Welders	Mobile plant manager, Supervisors
<p><b>General Note.</b></p> <p>Note: Relevant parts of the above assessment for the use of welding equipment shall apply for the use of burning gear except where amended below</p>											
<b>D Use of burning gear for cutting steel</b>											
D1	Excessive Light	Welder/ Site staff	4	4	16	Goggles to EN 166 class 3,4,9-B fitted with a filter to EN169 to be worn.	4	1	4	Welders	Mobile plant manager, Supervisors



Operation / Task:		Site Crane works 1 of 2					Prepared by:	HSEQ / Operational Teams	Rev 2 Date:	Rev 1 Date:																																										
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	General Note.					Note: Cranes are only to be operated by trained and competent persons. When applicable, operatives shall hold a current CPCS card. Operatives under training shall be supervised by an authorised employee. All lifts are to be properly planned and supervised by suitably trained and competent persons.																																														
A	All Activities																																																			
A1	Overloading of crane.	Operator / Site workers	5	3	15	Project Manager to arrange for a suitable and sufficient crane to undertake required lifts. A suitable lift plan must be prepared by an Appointed person, this must be reviewed by an appointed person prior to any mobilisation of cranes. The site must be visited before preparing lift plan. Supervisor to ensure that weights of loads are known and are within the capacity of the					5	1	5	Appointed Parson	Project Manager/ Supervisor																																					
A2	Trips, slips and falls	Operator / Site workers	3	4	12	The work area must be kept clean and tidy at all times. All lifting accessories must be stored off the ground in the correct storage areas whilst not in use.					3	1	3	Operator/ Site workers	Supervisor																																					
A3	Adverse ground.	Operator / Site workers	5	3	15	A suitable lift plan must be prepared by an Appointed person, this must be reviewed prior to commencing on site. The site must be visited before the lift plan is prepared. Platform certificate to be completed to confirm that platform is adequate before work commences. Platform to extend at least half a machine width beyond crane. Extra consideration to be given when					5	1	5	Appointed Parson	Project Manager/ Supervisor																																					
A4	Contact with overhead electric cables.	Operator / Site workers	5	3	15	If overhead cables are present the Energy company provider must be contacted for assistance. No further work must continue until suitable control measures have been documented and agree. The Supervisor must confirm on the site hazard assessment that the overhead lines do not affect the crane or to arrange for improvements to be implemented before work commences.					5	1	5	Appointed Parson	Project Manager/ Supervisor																																					
A5	Collision with persons.	Operator / Site workers	5	3	15	Only trained and competent persons to operate cranes. The crane operator must ensure 360 degree vision is available at all times. Flashing beacon must always be switched on whilst plant in use. Safe exclusion zones must be provided and all non-essential personnel kept out of the immediate work area. A trained Banks man must be in place supervising all crane activities.					5	1	5	Operator/ Banksman	Supervisor																																					
A6	Failure of lifting appliance or lifting accessories.	Site Workers	5	3	15	Current inspection certificate, not more than 12 months old, and test certificate not more than four years old, to be provided with crane. Inspection certificates, not more than six months old to be provided for lifting accessories with hired crane. CP-owned accessories to be correctly colour-coded and to have an identification mark stamped on. Supervisor must inspect the machine on delivery. Operator to inspect the crane daily before use and to carry out routine servicing in accordance with the operators manual. Daily inspection to be made by operator and recorded on the weekly inspection report.					5	1	5	Operator/ Banksman	Supervisor																																					

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A7	High Winds.	Operator / Site workers	5	2	10	In the event of extreme weather conditions, it may sometimes be necessary to review any lifting operation until such time as it is safe to proceed. A competent person, AP or crane supervisor along with the crane driver needs to assess the wind speed and cease work if it is considered too high. (If able) using an anemometer unit, readings are to be taken every 30mins and constantly monitored. Once both the AP or crane supervisor and the crane driver are comfortable with the wind speed and the fact that it is not gusting and the wind speeds are within the crane manufacturers guidelines the lift will be further assessed with regard to weight and radius. Should all parties be satisfied with the wind conditions and deem the lift to be safe, a tag line will be placed on the load prior to lifting. If the load is a cage, the cage will not be lifted until the pile is concreted to further mitigate any risks. Once the pile is concreted the cage will be lifted to the vertical and steadied with one or more tag lines and guided to the pile for placement. The pile cage is full of holes and as such the wind tends to pass through it rather than making the cage uncontrollable. The crane supervisor and the crane driver will constantly monitor the situation and abort works should they deem it to be beyond acceptable limits, or exceed the crane manufacturers operational limits. Although the safe workable wind speed varies from crane to crane, as a guide ONLY, the maximum wind speed at which lifting operations can take place is 10 metres per second (22 mph)	5	1	5	Operator/ Banksman	Appointed Person / Supervisor
A8	Uncontrolled fall of load.	Banks man/ Slinger/Operator	5	2	10	Exclusion zone must be in place and adhered to	5	1	5	Banks man	Appointed Person
A9	Fall of load caused by damage to strop being used on loads of small diameter.	Banks man /Slinger/ Operator	5	3	15	Soft eyed strops are not to be used except for lifting drive tubes or for lifting CFA augers	5	1	5	Banks man	Appointed Person
A10	Movement of load on ground while slings being attached or removed.	Banks man / Slinger/ Operator	3	3	9	Loads to be placed on suitable timbers to allow access or strops underneath and chocks.	3	1	3	Banks man	Appointed Person
A11	Fall of load caused by incorrect slinging.	Banks man / Slinger/ Operator	5	3	15	Loads to be attached to the crane by a trained and component slinger. All lifting equipment used must be inspected prior to use and within it six monthly periodic inspection.	5	1	5	Banks man	Appointed Person
B	<b>Working alongside railways</b>										
B1	Interference with adjacent railways.	All site workers	5	3	15	The contract manager shall ensure that approval for the method of working has been obtained from the railway authority, prior to arranging any crane work. The site foreman shall ensure that the approval has been received prior to carrying out any work, which is in accordance with the agreed procedure.	5	1	5	Appointed Parson	Project Manager/ Construction Manager
C	<b>Lifting near to or over adjacent buildings</b>										
C1	Load falling onto building.	Building occupiers	5	2	10	Loads are not to be lifted over buildings, unless this is unavoidable. In this case, consent of the building controller to be obtained. Building to be unoccupied during the lift. Site specific Hazard Assessment must be completed prior to any works commencing.	5	1	5	Appointed Parson	Project Manager/ Construction Manager

Site Crane works 2 of 2



		Operation / Task:		<b>Pile and Zone tests 1 of 2</b>					Prepared by:	HSEQ / Operational Teams	Rev 2 Date:	Rev 1 Date:																																						
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	General Note.						Note: This assessment covers both pile tests using anchors and pile tests with Kentledge. It also covers where relevant zone tests of treated or untreated ground.																																											
<b>A</b>																																																		
A1	Construction of test pile and anchor pile (if applicable)			N/A	N/A	N/A	See separate risk assessments for the construction of the type of pile.					N/A	N/A	N/A																																				
<b>B</b>																																																		
B1	Crane work.			N/A	N/A	N/A	See separate risk assessment for crane work . The contract specific Appointed Person must specify size of crane. Crane to have a minimum capacity of 50 tonnes.					N/A	N/A	N/A																																				
<b>C Rigging of kentledge test</b>																																																		
C1	Ground bearing failure under kentledge.		Operat or/Site Workers	5	3	15	Project manager or design engineer to confirm that the ground is suitable for loads to be applied and to confirm minimum size of platforms. An appointed person must be prepare a separate lift plan if cranes are being used. Supervisor to assess ground before commencing to rig the test.					5	1	5	Appointed Person	Project Manager / Construction Manager/ Supervisor																																		
C2	Stability of kentledge.		Site Workers	5	3	15	Grillage to be suitable and sufficient for the test load. Kentledge to be suitable and stacked on the grillage in suitable manner, uniformly over the load with each layer at 90O to the layer below. Each block to rest on at least two blocks below.					5	1	5	Operator	Project Manager / Construction Manager/ Supervisor																																		
C3	Collision of kentledge with person on blocks		Site Workers	5	3	15	Person working on the kentledge blocks must be a trained and competent slinger / signaller and to be in control of crane movements. If necessary a second person to relay signals to the crane operator.					5	1	5	Banksman	Appointed Person /Supervisor																																		
C4	Fall from height		Site Workers	5	3	15	Suitable ladder access to the top of the kentledge to be provided at all times. . Top of kentledge to be flat without trip hazards. A safety harness, fitted with a 1.5m lanyard shall be worn. The lanyard shall be secured to the lifting eye on the top of a kentledge block on the layer upon which the slinger is working.					5	1	5	Operator	Appointed Person /Supervisor																																		
<b>D Rigging of anchor pile test</b>																																																		
D1	Failure of tensile rods		Operative setting up	5	15	15	Rods to be designed to carry loads. Anchor plates to be suitable. Welding to be carried out by authorised personnel.					5	1	5	Operator	Supervisor																																		
D2	Collapse of beams.		Operative setting up	5	3	15	Minimum of four anchors to be used. Beams to be supported by a suitable cradle.					5	1	5	Operator	Supervisor																																		
<b>E Rigging of test equipment</b>																																																		
E1	Manual handling of jack, etc.		Operative setting up equipment	3	3	9	All employees must have undergone suitable manual handling training prior to commencing works on site. Suitable manual handling assessments must be carried out for tasks carried out on site. Mechanical means to be used to transport item where reasonably practicable. Two men to lift jack, pump etc. into position, if necessary.					3	1	3	Pile Tester	Supervisor																																		

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F	Undertaking test										
F1	Working alone	Pile tester	5	3	15	If working alone on the site, the person carrying out the test shall be provided with a mobile phone and ensure an adequate lone worker procedure is in place. It must include a reporting in procedure at set times / durations. This procedure must be checked to confirm there is suitable mobile phone reception.	5	1	5	Pile Test company	Supervisor
F2	Working at night	Pile tester	5	3	15	Working alone at night should be prohibited at all times unless all other means of pile testing options have been considered. A site specific RA must be undertaken by the pile test company. This must be reviewed and agreed with the Cannon Piling Project Manager and Main Contractor site manager. Cannon Piling Supervisor must ensure the control measures are adhered to. Suitable welfare provisions must be provided by the pile test company.	5	1	5	Pile Test company	Project Manager / Main Contractor/ Supervisor
F3	Failure of test beams	N/A	N/A	N/A		Test equipment, suitable and certified as sufficient for the test load, labelled and in good condition, shall be used.	N/A	N/A	N/A		
F4	Failure of hydraulic hoses	Pile tester	3	3	9	Hydraulic hoses to have capacity rated for pressures. Hoses to be routed to avoid loads being placed on them, buried if necessary. Hoses to be inspected before test commences.	3	1	3	Pile Tester	Supervisor
F5	Lifting of kentledge blocks under load.	Pile tester	3	3	9	Total weight of kentledge and test beams to exceed maximum test load by a minimum of 10%.	3	1	3	Pile Tester	Supervisor

**Pile and Zone tests 2 of 2**



		Operation / Task:		<b>CFA Piling 1 of 4</b>					Prepared by:		HSEQ / Operational Teams		Rev 2 Date:		Rev 1 Date:																																									
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	General Note.						Note: Piling rigs and associated equipment are to be operated only by trained and competent people who are authorised on the company skills matrix. Operatives to hold current CPCS and CSCS cards (where applicable). Operatives under training shall be supervised by an authorised employee.																																																	
A	All Activities																																																							
A1	Inadequate lighting		Site workers	3	2	6	Site hazard assessment to confirm that lighting is adequate or to ensure artificial light is available when necessary.					3	1	3	Supervisor	Supervisor																																								
A2	Trips, slips and Falls		Site workers	3	3	9	Before commencing on site the Construction Manager must liaise with the Main Contractor to ensure we are provided with a clean and tidy work area with adequate space for unloading. Good housekeeping practises must be encouraged by Cannon Piling site personnel at all times. Rubbish, lifting equipment, re-bar, steel off cuts, etc must not be allowed to build up. If the pedestrian routes or our immediate work area become uneven, this must be raised with the main contractor site manager.					3	2	6	All CP employees / Main Contractor	Project Manager / Construction Manager / Supervisor																																								
A3	Leptospirosis / Weils disease		Site workers	5	3	15	Food and drink must only be consumed in designated canteens. All rubbish must be disposed of correctly. Rubbish bins must not be allowed to overflow. Mess rooms must be cleaned daily. Good hygiene practises must be adhere to at all times. Hands must be washed before eating, drinking and smoking. Where there is an Identified hazard, tool box talk 13 (Weils Disease) is to be briefed out. Any cuts are to be dressed immediately, cleanliness to be encouraged. Awareness cards are available from HSEQ admin office if required					5	1	5	All CP employees.	Project Manager / Construction Manager / Supervisor																																								
A4	Excessive noise exposure for operators		Site workers	4	3	12	Noise levels for all operations have been assessed items of plant with an average noise levels of above 85DB(a) have ear protection zone signs requiring people to wear the correct ear protection. Where reasonably practicable, noise reduction methods to be adopted to reduce noise level. Cannon Piling employees must ensure all other site workers are aware of the risk of noise exposure if working close by.					4	2	8	All CP employees.	Supervisor																																								
A5	Excessive noise exposure for other site workers and general public adjacent to the site.		Other workers / neighbours	4	2	8	Noise survey to be made available to the main contractor if required. Construction Manager should ask for dedicated piling area with sufficient exclusion zone / segregation.					4	1	4	Main Contractor	Project Manager/ Construction Manager/ Supervisor																																								
A6	Dust		Site workers	3	3	9	Project Manager/ Construction Manager to liaise with Main Contractor prior to starting work on site to ensure adequate dust controls are in place. Cannon Piling may have to request that the main contractor has given consideration to spraying/damping down the site surface to reduce the dust. In dusty conditions suitable eye protection and dust masks must be available and worn.					3	1	3	Main Contractor	Project Manager/ Construction Manager/ Supervisor																																								

TASK	HAZARD	Persons at Risk	Degree of Risk			Control Measures	Residual Risk			Person Responsible	Monitoring Responsibility
			C	L	RR		C	L	RR		
<b>B Rigging and dismantling on site</b>											
B1	Inadequate piling platform causing plant to topple	Rig operator / ganger / banksman	5	3	15	Platform certificate to be completed to confirm that platform is adequate before work commences. This must be reinspected and signed off by the main contractor when ever the platform has been disturbed, or at intervals not exceeding 7 days. Platform to extend at least half a machine width beyond probe positions. Extra consideration to be given when working adjacent to site boundaries or hoardings.	5	1	5	Main Contractor	Project Manager/ Construction Manager/ Supervisor
B2	Ropes falling from track when rigging.	Rig operator / ganger /	5	3	15	Ropes to be strapped into channel on mast when machine is being de-rigged to prevent the need for worker to climb the mast.	5	1	5	Banksman	Supervisor
<b>C Moving about the site</b>											
C1	failure of piling rig.	Any site worker	5	3	15	All rigs on site must be within their respective 4 year test and current LOLER inspection, the certificate must be provided with the machine. The rig operator and supervisor must inspect the machine on delivery and ensure the rig is within it current periodic examinations. Operator is to inspect the machine daily and record on the weekly plant inspection form. Exclusion zones must be provided by the main contractor and enforced by the Cannon Piling Ganger man and or supervisor	5	1	5	Rig operator/ Ganger	Supervisor
C2	Collision with worker or equipment	Any site worker	5	3	15	Construction Manager to request dedicated piling area with segregation before commencement on site. Movement of piling rig to be controlled by a trained banksman with a slinger/signaller CPCS card. All rigs must be fitted with rear view mirrors and reversing camera's, movement to be controlled by a trained banks man. No-one must be allowed to be close enough to the piling rig which will enable contact.	5	1	5	Rig operator/ Ganger	Project Manager/ Construction Manager/ Supervisor
C3	Contact with overhead power line.	Any site worker	5	3	15	Construction Manager/ Supervisor to confirm on permit to dig that overhead lines do not affect the rig or to arrange for the correct required improvements to be implemented before the work continues or commences.	5	1	5	Rig operator/ Ganger	Project Manager/ Construction Manager/ Supervisor
C4	Inadequate piling platform	Rig operator / ganger/ banksman	5	3	15	Platform certificate to be completed to confirm that platform is adequate before work commences. This must be reinspected and signed off by the main contractor when ever the platform has been disturbed, or at intervals not exceeding 7 days. Platform to extend at least half a machine width beyond probe positions. Extra consideration to be given when working adjacent to site boundaries or hoardings.	5	1	5	Main Contractor	Project Manager/ Construction Manager/ Supervisor
<b>D Connecting flight string (All sites must have copies of the Task instruction available for Rigging / De rigging)</b>											
D1	Fall from height	Telehandler operative	5	2	10	Only trained operators are allowed to use the man riding basket. All persons in the basket shall wear a safety harness secured to a stable point in the basket. Never over reach from the basket, the MEWP must be positioned as close as possible to the item being worked on.	5	1	5	Operators	Supervisor
D2	Entrapment or nipping by auger	Rig operator / ganger/ banksman	3	3	9	Person in basket who is making the connection shall not hold the flights until the flight being lowered is touching the remainder of the string. When inserting pins ensure they are just located in the auger socket, once done ensure hands are out of the way. All limbs must be kept well away from the augers until it is lowered to its final position. When re-driving the pins with force ensure hands are out of the way.	3	1	3	Operators	Supervisor
D3	Fall of tools from height	Rig operator / ganger/ banksman	3	3	9	Pins; Podger; Hammer; Lifting chains must be stored in the basket in a way to prevent them falling. All non essential personnel must be kept away from the immediate work area around the augers whilst rigging is in process.	3	1	3	Operators	Supervisor
<b>CFA Piling 2 of 4</b>											



TASK	HAZARD	Persons at Risk	Degree of Risk			Control Measures	Residual Risk			Person Responsible	Monitoring Responsibility
			C	L	RR		C	L	RR		
<b>E Boring into the ground</b>											
E1	Contact with underground services	Site Workers	5	3	15	Permit to excavate must be completed and issued by the main contractor before any work commences. Services to be traced by a cable avoiding tool by a trained and competent person (main contractor). Any located utility apparatus must be uncovered by the main contractor. No mechanical excavator can be used with in 500mm of any live utility apparatus. (HSG47)	5	1	5	Main Contractor, Supervisor Operator Banks man	Construction Manager Supervisor
E2	Entanglement personnel in auger	Site Workers	5	3	15	All site staff must wear Hi VI vests. Liaise with Main Contractor to ensure designated exclusion zone is provided. Consider installing metal crowd barriers if there are other site workers located close by. A trained and competent banks man must co-ordinate all rig movements. Persons wishing to approach or to pass the rig must make eye contact with the machine operator/ banksman. No -one shall be located within the exclusion zones of the rig. Augers must be guarded in accordance with the requirements of the Provision and Use of Work Equipment Regulation, 1998 and the FPS Guidance Note.	5	1	5	Main Contractor/ Operator / Ganger/ Ganger/ Banksman	Operators / Ganger / Banksman /Supervisor
E3	Inadequate piling platform	Rig operator / ganger/ banksman	5	3	15	Platform certificate to be completed to confirm that platform is adequate before work commences. This must be reinspected and signed off by the main contractor when ever the platform has been disturbed, or at intervals not exceeding 7 days. Platform to extend at least half a machine width beyond probe positions. Extra consideration to be given when working adjacent to site boundaries or hoardings.	5	1	5	Main Contractor	Project Manager/ Construction Manager/ Supervisor
<b>F Setting up of concrete pump and pipes</b>											
F1	Refer to separate Hazard assessment		N/A	N/A		<b>See separate Hazzard Assessment</b>	N/A	N/A	N/A		
<b>G Pumping concrete</b>											
G1	Contact with concrete/ cement	Site workers	3	3	9	Chemical Suites must be available and worn whenever there is a risk of concrete or grout coming into contact with clothing. Waterproof gloves, a long sleeved top and trousers must be worn at all times whilst working with any cement based product. Sleeves and trousers must be tucked into the gloves and boots respectively. Suitable footwear must be provided and worn at all times. If standing in concrete you must always ensure suitable water tight and chemical resistant wellington boots are worn. Begin each day wearing clean clothing and finish each day with a bath or shower. Apply a protective barrier hand cream before each working shift starts. Reapply every time hands are washed. Eye protection to EN166 3,4,9 - B must be worn when working with cement based products. If cement, concrete or grout gets into the eyes, it must be dealt with immediately by flushing with clean water. Seek immediate medical attention if persistent or severe discomfort is suffered.	3	2	6	Cannon Piling employees/ sub-contractors	Supervisor
<b>H Extracting auger from the ground</b>											
H1	Spoil falling from auger	All site workers	3	4	12	During extraction the auger must be cleaned by a mechanical cleaner fitted to the rigs. All non essential personnel must stand clear. If it is not practical to use a mechanical cleaner, then written permission of the contracts director must be obtained before a device attached to an excavator arm is used to clean the auger. Cleaning by hand is forbidden. (A hazard assessment for excavator, including requirements for changing buckets to be used is to be obtained and included in the site file.) Supervisors must ensure this is understood and the correct measures are followed.	3	2	6	Rig operator/ Ganger	Supervisor
<b>CFA Piling 3 of 4</b>											

TASK	HAZARD	Persons at Risk	Degree of Risk			Control Measures	Residual Risk			Person Responsible	Monitoring Responsibility
			C	L	RR		C	L	RR		
I	Manufacture of reinforcing cage										
I1	Use of inappropriate bolt crops for cutting steel.	Steel fixer/ site operatives	3	2	6	Bolt crops to be used for 12mm. diameter steel. For 16 mm diameter or greater the snail saw is to be used. When using bolt crops, the operator is to ensure that the bolt crops are in good condition with straight arms and the cutting jaws are suitable	3	1	3	Steel fixer/ site operatives	Supervisor
J	Use of excavator to insert reinforcing cage										
J1	Cage falling from excavator.	Site Operatives	5	3	15	All excavator drivers must be trained, competent and familiar with quick hitch attachments. Semi - automatic quick hitch attachments are prohibited from being used on Cannon Piling activities. All lifting equipment used to lift the cages must be within its six monthly periodic inspection. The chain must be attached to the dedicated lifting eye of the excavator. All non essential personell must be kept away from the work area. The lifting operation must be controlled by the ganger man.	5	1	5	Steel fixer/ Operator/ site operatives	Supervisor
J2	Underside of excavator bucket striking personnel when pushing cage into pile.	Site Operatives	5	3	15	All non essential personell must be kept away from the work area. The lifting operation must be controlled by the ganger man.	5	1	5	Steel fixer/ operatives/ Operator	Supervisor
K	Lift rebar into pile										
K1	Rebar slipping out of fibre strop.	Any site worker	5	3	15	A coupler must be attached to the top end of the rebar to give the rebar an edge. The coupler shall act as an edging where the fibre strop can tighten on to.	5	1	5	Ganger	Supervisor
L	Removal of spoil from pile position by excavator										
L1	Collision with worker, plant or structures.	All site workers	5	2	10	All site staff must wear Hi VI vests. Operator must ensure 360 degree vision is available at all times. Liaise with Main Contractor to ensure designated exclusion zone is provided. Consider installing metal crowd barriers if there are other site workers located close by. When setting up on site, ensure consideration is given to storage of materials minimising the risk of crossing pedestrian routes. A trained and competent banks man must co-ordinate all excavator movements whilst working in tight enclosed work area. Persons wishing to approach or to pass the excavator must make eye contact with the machine operator. No -one shall be located within 1m of the excavator. Excavators must always adhere to site traffic plan and never work over designated pedestrian route. Always ensure flashing beacon is used.	5	1	5	Main Contractor/ Operators / banksmen	Main Contractor/ Supervisor
M											
M1	Fall from height.	Rig operator / Ganger	3	2	6	(PUWER reg 5&6) All rig operators must carry out daily checks and record on the weekly plant return forms (this must include checking the steps). Anyone climbing onto the rig steps must ensure the step is in good order and not covered in mud / debris. Any debris on boots should be kicked off prior to climbing up. Check steps not icy during winter months. De-icer is available in work vans. Tools must never be stored on the steps. Use permanent fixtures on rig to grab hold off if necessary, to aid climbing up onto tracks. (working at height Rgs 3 & 14) No-one is to climb onto back of rig without the handrails being in place. If access is required to the mast then a MEWP or equivalent must be utilised. (see separate assessment rig access and egress)	3	1	3	Rig operator/ Ganger	Supervisor



		Operation / Task:	<b>Lifting and installation of pile reinforcement</b>					Prepared by:	HSEQ / Operational Teams	Rev 2 Date:	Rev 1 Date:			
Location:		Various Sites/ Yard	Department:					CANNON PILING - H&S						
		H&S Consequence, C	Env. Consequence, C	Likelihood, L		Severity	Likelihood					Acceptance Criteria		
		1 Mino Injury	Minor impact/ operational	Improbable			1	1	2	3	4	5	<b>R</b> <b>Y</b> <b>G</b>	Red - Intolerable take immediate action Yellow - Tolerable with additional controls Green - Tolerable no further action required
		2 First Aid injury	Community complaints	Remote			2	2	4	6	8	10		
		3 Major injury	Major impact	Possible			3	3	6	9	12	15		
		4 Permanent consequence	Legal impact	Probable			4	4	8	12	16	20		
		5 Potential Fatality	Major impact and cost	Almost certain			5	5	10	15	20	25		
TASK	HAZARD	Persons at Risk	Degree of Risk			Control Measures	Residual Risk			Person Responsible	Monitoring Responsibility			
			C	L	RR		C	L	RR					
	General Note.					Note: All pile reinforcement is to be correctly designed. The designer shall provide details of the position of lifting points for horizontal, vertical and lifting from the horizontal to the vertical, the designer shall consider the bending moment and shear force induced as the cage is lifted from horizontal to vertical. The designer must hold adequate professional indemnity insurance. Further information can be found in the FPS guidance note – the design and lifting of pre-fabricated and site fabricated reinforcement cages for piling and walling works.								
<b>A</b>														
A1	Vehicle/pedestrian interface	Site Staff	5	3	15	All deliveries to site are to follow the site traffic management plan, this is to be communicated to the supplier prior to delivery. All deliveries are to be directed by a banksman with suitable training and certification all other persons are to use pedestrian walkways and be kept out of the work area.	5	1	5	Supervisor	Contract Manager			
<b>B</b>														
B1	Injury through incorrect unloading of reinforcement.		N/A	N/A	N/A	For unloading of reinforcement please refer to HA Unloading and Loading of Lorries.	N/A	N/A	N/A	N/A	N/A			
B2	Slips, trips and falls.	Operatives	3	4	12	The offloaded reinforcement is to be stored in a predetermined area, good housekeeping of the storage area is to be carried out at all times. The reinforcement is to be placed in such a manner to avoid having to step over items to retrieve the needed reinforcement. If it is necessary to manual handle the reinforcement to the pile position a clear walkway is to be created.	3	2	6	Supervisor	Contract Manager			
B3	laceration's from manual handling reinforcement.	Operatives	2	5	10	Where possible the manual handling of reinforcement is to be avoided. Suitable gloves and Cannon Piling PPE requirements must be worn at all times when handling reinforcement.	2	1	3	Supervisor	Contract Manager			
B4	musculoskeletal injury from manual handling reinforcement.	Operatives	4	3	12	Where possible a mechanical means of moving the reinforcement is to be used. Where this is not practicable then a manual handling assessment is to have been carried out.	4	2	8	Supervisor	Contract Manager			
<b>C</b>														
C1	Striking of operative during lifting from horizontal to vertical.	Operatives	3	3	9	All personnel are to be cleared from the area of the lift. If it is required to hold tail end of reinforcement during lifting a mechanical means should be used, if this is not possible then the area is to be clear of all obstructions, the distance to lift is to be as short as possible and a constant line of sight is to be kept between operator and operative holding the tail end.	3	1	3	Supervisor	Contract Manager			
C2	Fall of single rod reinforcement during connection.	Operatives	3	4	12	Reinforcing rod to be suspended by winch using swivel coupler that connects into rod connector. All lifting equipment is to have been inspected and have a six monthly inspection certificate. Rope lashings or stops are not to be used. Lower rod to be held by coupler resting on spanner while connection is made. Rod is not to be gripped and suspended by spanner.	3	2	6	Supervisor	Contract Manager			
C3	Fall of reinforcing cage into casing when being lowered in.	Operatives	3	4	12	All lifting equipment is to have been inspected and have a six monthly inspection certificate. Cage is to be lifted into position from the pre determined lifting points as per the design. Cage to be lowered in using mechanical means. When cage is being lowered into hole, hands to be kept clear of the casing. Bar to suspend cage is to be suitable for the diameter of casing used.	3	2	6	Supervisor	Contract Manager			



		Operation / Task:		<b>Loading &amp; unloading of lorries</b>					Prepared by:		HSEQ / Operational Teams		Rev 2 Date:		Rev 1 Date:																																						
Location:		Various Sites/ Yard		Department:		CANNON PILING - H&S					Issue Date:		Feb-20																																								
H&S Consequence, C		Env. Consequence, C		Likelihood, L		Likelihood					Acceptance Criteria																																										
1 Mino Injury		Minor impact/ operational		Improbable		<table border="1"> <tr><td>1</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> <tr><td>2</td><td>2</td><td>4</td><td>6</td><td>8</td><td>10</td></tr> <tr><td>3</td><td>3</td><td>6</td><td>9</td><td>12</td><td>15</td></tr> <tr><td>4</td><td>4</td><td>8</td><td>12</td><td>16</td><td>20</td></tr> <tr><td>5</td><td>5</td><td>10</td><td>15</td><td>20</td><td>25</td></tr> </table>					1	1	2	3	4	5	2	2	4	6	8	10	3	3	6	9	12	15	4	4	8	12	16	20	5	5	10	15	20	25	<table border="1"> <tr><td>R</td></tr> <tr><td>Y</td></tr> <tr><td>G</td></tr> </table>					R	Y	G	Red - Intolerable take immediate action Yellow - Tolerable with additional controls Green - Tolerable no further action required				
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			C	L	RR		C	L	RR																																												
	General Note.					Note: All lifting operations on site, including loading and unloading from lorries are to be properly planned and supervised by trained and competent persons. The unloading and loading of lorries are to be undertaken by trained and competent persons only. Operators under training shall be supervised by an authorised employee. To eliminate the requirement for working on the back of the lorry, it shall be requested that where possible items are pre slung.																																															
A	<a href="#">Loading or unloading on site</a>																																																				
A1	Crane / Forklift / Telehandler usage	Operator/banks man/site staff	5	3	15	Before any lifting operations take place, the work area must be assessed by a trained and competent person. If site specific lift plans are required these must be produced prior to any lift commencing. Ground conditions must be assessed for stability. Loading and unloading must only be carried out in the agreed designated loading/unloading areas. Exclusion zones may be required and suitable warning signs and barriers put in place.					5	1	4	Operator	Supervisor																																						
A2	Working from the truck bed/trailer Falls from height.	Operator/banks man/site staff	4	3	12	Supervisor to ensure that if a person is required to work from a truck/trailer, the edge fall protection / bean bag system must be in place, on the truck/trailer. Where it is not practicable to have the edge fall protection in place due to the loading/ off loading procedure. A fall arresters system must be used and connected to a fixed point.					4	1	4	Operator	Supervisor																																						
A3	Manually moving load around the truck bed. Strain and sprain injuries	Operator/banks man/site staff	4	3	12	Where possible all loads shall be positioned on the truck with either a vehicle mounted hi-ab or telehandler/forklift. If a crane is required a lift plan must be utilised. Where mechanically means are not possible due to the load, the weight of the item must be available.					4	1	4	Operator	Supervisor																																						



		Operation / Task:		Site establishment 1 of 2					Prepared by:		HSEQ / Operational Teams		Rev 2 Date:		Rev 1 Date:																																						
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General Note.																																																					
<b>A Access to site</b>																																																					
A1	Parked cars	All	5	3	15	The Supervisor shall ensure that access roads, including, if necessary, public roads are cleared of parked cars before vehicles arrive. Movement to be controlled by a competent banksman.					5	1	5	Site Supervisor	Contracts Manager																																						
A2	Adverse ground	All	3	3	9	Supervisor to confirm on the hazard assessment form that platform is adequate or to arrange for required improvements to be implemented before the work commences.					3	1	3	Site Supervisor	Contracts Manager																																						
A3	Vehicle Movements for persons on site.	All	5	3	15	Movement to be controlled by a competent banksman, if visibility is restricted. High visibility clothing must be worn. All lorries reversing need to have a banksman. All electrical systems shall be installed by the company electrician or by a qualified appliances are delivered.					5	1	5	Site Supervisor	Contracts Manager																																						
A4	Vehicle Movements for pedestrians outside site.	Public	5	3	15	Movement to be controlled by a competent banksman, if visibility is restricted. High visibility clothing must be worn. All lorries reversing need to have a banksman.					5	1	5	Site Supervisor	Contracts Manager																																						
<b>B Unloading cabins</b>																																																					
B1	Trip Hazards	All	3	3	9	Site area to be kept clear of trip hazards.					3	2	6	Site Supervisor	Contracts Manager																																						
B2	Adverse ground	Banksman	5	2	10	Supervisor to confirm on site hazard assessment form that platform is adequate or to arrange for required improvements to be implemented before the work commences.					5	1	5	Site Supervisor	Contracts Manager																																						
B3	Collision with persons	All	5	3	15	Movement to be controlled by a competent banksman. All other people must be kept clear.					5	1	5	Site Supervisor	Contracts Manager																																						
B4	Fall from height	Operatives	3	3	9	Cabins to be provided with slings to allow slinging from ground level.					3	1	3	Site Supervisor	Contracts Manager																																						
<b>C Electrical connections of cabins and other plant</b>																																																					
C1	Electrocution	Electrician	5	2	10	Inspection certificates for internal wiring, plugs and appliances are to be provided when the cabin and its electrical contractor. On completion of the installation a certificate of installation will be completed. User checks, formal visual checks and combined inspections and tests to be carried out in accordance with the table in the safety instruction: Inspections Of Electrical Equipment On Site.					5	1	5	Site Supervisor	Contracts Manager																																						

<b>D</b> Crane work										
D1	Crane work in General	Operatives	N/A	N/A	N/A	Please refer to a separate risk assessment for crane work.	N/A	N/A	N/A	
<b>E</b> Site clearance										
E1	Puncture wound from a needle stick	Operatives	4	3	12	On site (railway embankments with access for the public alongside parks etc.) where needle sticks might reasonably be expected to be found, a sharp box, tongs and specialist gloves shall be provided. Tool box talks to be given explaining the hazards of needle sticks and the correct procedure for disposal. No person is to touch a needle stick without the required protective clothing. Any person who suffers a needle stick puncture will be required to seek medical attention.	4	1	4	Site Supervisor Contracts Manager
E2	Asbestos	Operatives	4	3	12	Work is to cease on the discovery of asbestos. The affected area is to be cordoned off. Work is only to re-commence upon the written instruction with the correct management systems in place.	4	1	4	Site Supervisor Contracts Manager
<b>F</b> Unloading plant or equipment in the street outside a site										
F1	Trip hazards for members of the public	Public	3	3	9	Trip hazards to be protected or a man to stand guard. If unloading is occurring after dark, the trip hazard need to be protected or lit. All vehicles reversing must have a competent banksman.	3	2	6	Site Supervisor Contracts Manager
<b>G</b> Erecting tower scaffold platforms										
G1	Working platforms	Operatives	N/A	N/A	N/A	Please refer to a separate risk assessment: tower scaffold.	N/A	N/A	N/A	
<b>H</b> Erecting scaffolding for working platforms										
H1	Erecting Scaffolding	Operatives	3	3	9	Scaffolding will be erected by a sub-contractor, from which a risk assessment will be required. Scaffolders must have CPCS cards. Scaffolding to be erected in accordance with the requirements of SG4: The use of fall arrest equipment whilst erecting altering & dismantling scaffolding. All scaffolding is to be inspected weekly by a competent person.	3	2	6	Site Supervisor Contracts Manager
<b>I</b> While using a ladder										
I1	Ladder use inside or outside	Operatives	N/A	N/A	N/A	Please refer to the risk assessment: use of ladders.	N/A	N/A	N/A	
<b>J</b> Access to site cabins										
J1	Slipping on steps/ stairs	All	3	3	9	Steps are meant to have an anti-slip surface. In particular, plywood sheeting is to be covered with chicken mesh or similar and must be kept free from mud etc.	3	2	6	Site Supervisor Contracts Manager

**Site establishment 2 of 2**



		Operation / Task:		<b>Mobile elevated work platform</b>					Prepared by:	HSEQ / Operational Teams		Rev 2 Date:	Rev 1 Date:																																							
Location:		Various Sites/ Yard		Department:		CANNON PILING - H&S					Issue Date:	Feb-20																																								
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	General Note.						Note: only trained/ competent persons to operate the Mobile Elevated work platform (MEWP). MEWP operator shall read the MEWP operating & safety manual. Safe working load to be marked.																																													
<b>A</b>	<b>Travelling to point of work</b>																																																			
A1	Operator not trained or unauthorized to use the MEWP.		Site Workers	5	2	10	Only trained and unauthorised person shall use the mobile elevated work platform. Mobile elevated work platform ignition keys to be taken out of the ignition when not in use.					5	1	5	Operator	Supervisor																																				
A2	Failure of machine		Site Workers	5	2	10	All users must carry out pre-use checks daily and fill in the daily plant inspection form. The MEWP must be maintained and serviced as per operators manual. The MEWP SWL must never be exceeded. 6 mthly periodic inspections must be carried out by a trained and competent person.					5	1	5	Operator	Supervisor																																				
A3	Over turning due to inadequate surface		Site Workers	5	3	15	Regular inspections of the work area and traffic routes must be undertaken by the main contractor and Cannon Piling site foreman. Route to working area must be in good condition without pot holes. Mobile elevated work platform boom must be in a safe mode position when travelling over a distance.					5	1	5	Principal Contractor / Operator	Supervisor																																				
<b>B</b>	<b>Using the MEWP</b>																																																			
B1	Fall from height.		Operator	5	2	10	Only trained operators are allowed to use the MEWP. All persons in the mobile elevated work platform basket shall wear a safety harness secured to a stable point in the basket. Never over reach from the basket, the MEWP must be positioned as close as possible to the item being worked on.					5	1	5	Operator	Supervisor																																				
B2	Operating moving mobile elevated work platform without a clear vision		Site Worker	5	2	10	The operator must assess the area to be worked in prior to positioning the MEWP. Before the operator moves the mobile elevated work platform a banks man shall be utilised to ensure a clear and safe movement.					5	1	5	Operator	Supervisor																																				
B3	Working in the vicinity of electricity.		Site Workers	5	3	15	The on site hazard assessment must make note of any overhead electric cables. If there is the need to work close by to any overhead electric cables, the local electricity provider must be contacted for advice. A request for the Electricity to be switched off and locked out before work is carried out may be required.					5	1	5	Construction Manager	Project Manager																																				
B4	Falling equipment.		Site Workers	5	3	15	All equipment within the MEWP is to be properly secured to prevent them falling. All non essential personnel must be kept away from the immediate work area around the augers whilst rigging is in process.					5	1	5	Construction Manager	Project Manager																																				
<b>C</b>	<b>Storing of MEWP</b>																																																			
C1	Theft/ Vandalism		Anyone	4	3	12	Keys must always be removed form all items of plant when the operator is away from the machine. Always lock up machines at night.					4	1	4	Operator	Supervisor																																				



Operation / Task:		Forklift truck and telescopic handlers 1 of 3				Prepared by:	HSEQ / Operational Teams		Rev 2 Date:	Rev 1 Date:																																			
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	General Note.					Note: Forklift trucks and telescopic handlers are only to be operated by trained and competent persons. Operatives under training shall be supervised by an authorised employee. Telehandlers are not to be used on the highway unless they are road legal and the operator holds a current UK driving licence. Operator of forklift truck or telescopic handler to wear seat belt. Forklift truck or telescopic handler to have rollover protection.																																							
<b>A</b>	Use of forklift truck of telescopic handler on site																																												
A1	Overturning of truck due to inadequate surface	Operator	5	3	15	Supervisor to confirm on site hazard assessment form that platform is adequate or to arrange for required improvements to be implemented before work commences. Loads to be carried with forks at lowest practicable level.				5	1	5	Operator	Supervisor																															
A2	Overturning of truck on sloping surface	Operator	5	3	15	No travelling across the gradient. Load to be on uphill side of truck when travelling up or down a gradient.				5	1	5	Operator	Supervisor																															
A3	Overturning truck due to overloading.	Operator	5	3	15	Weight of loads to be carried to be known (unless clearly not near the capacity of the truck or telescopic handler) and within the capacity of the truck or telescopic handler. Load centre distance not to be exceeded.				5	1	5	Operator	Supervisor																															
A4	Failure of truck or hydraulics.	Operator / site workers	5	2	10	Current inspection certificate, not more than 12 months old to be provided with the machine. Foreman to inspect the machine on delivery. Operator to inspect the machine daily before use and carry out routine servicing in accordance with the operators handbook. Daily inspection to be made by operator and a weekly inspection report completed and returned to plant dept.				5	1	5	Operator	Supervisor																															
A5	Impact or collision.	Operator / site workers	5	3	15	Forklift truck or telescopic handler to be fitted with flashing beacon and audible reversing warning. 360 degree visibility assessment must be carried out on all plant. Forklift and telehandler must always stick to designated traffic routes. Banksman to be used for manoeuvring operations in restricted areas, or when visibility is restricted and when others are working nearby. When travelling unloaded make sure forks face downhill with tilt to suit gradient.				5	1	5	Operator	Supervisor																															
A6	Displaced or falling loads.	Operator / site workers	5	3	15	Machine to be suitable for loads to be lifted. The SWL must never be exceeded. Forks to be correctly spaced. Cement and other bagged materials to be shrink wrapped where practicable. Loose loads on pallets to be secured.				5	1	5	Operator	Supervisor																															
A7	Door swinging	Operator / site workers	3	3	9	Doors of cab to be closed when machine is in motion.				3	1	3	Operator	Supervisor																															
A8	Movement of unattended machine.	Operator / site workers	5	2	10	Machine to be parked on level ground when ever possible. Hand brake to be on with machine in neutral. Forks to be tilting forward and lowered to the ground. The machine must be switched off and the keys removed when the operator leaves the vehicle.				5	1	5	Operator	Supervisor																															
A9	Theft/ Vandalism	Operator/ site workers / Intruder	4	3	12	Keys must always be removed form all items of plant when the operator is away from the machine. Always lock up machines at night, if available always place shutters over windows and doors.				4	1	4	Operator	Supervisor																															



A10	Movement of load on ground while slings being attached or removed.	Operator/ site workers	3	3	9	Loads to be placed on suitable timbers to allow access for strops to go underneath and chocks, if movement of load is possible, to be used to prevent movement as load is taken by timbers.	3	1	3	Operator	Supervisor
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<b>B</b> Persons standing on forks or a platform on the forks to work											
B1	Person falling off forks or platform.	Operator / site workers	5	4	20	Working on the forks or any platform other than a purpose built man rider is strictly forbidden at all times. Only trained and competent persons are to operate the man rider. Purpose built man rider to have certificate of thorough examination issued not more than 6 months previously. Daily inspections must be carried out and recorded on the Weekly plant inspection form. All operators involved in any quick hitch attachments must be adequately trained and competent.	3	1	3	Operator	Supervisor
<b>C</b> Storing of quick fit man-rider											
C1	Hydraulics and electrical cable damaged or blocked with grit/mud.	Operator / site workers	4	3	12	When not in use the man-rider hydraulic hoses and electrical cable shall be stored in a purpose-made bracket. Man-rider cage shall be stored on level ground, this will enable easy adaptation.	4	1	4	Operator	Supervisor
<b>D</b> Adapting quick fit man-rider to telehandler											
						Note: For heights greater than 6 meters, a man rider controlled from its platform must be used. Operator to have received training in its use.					
D1	Fault in man-rider.	Operator/ site workers	5	3	15	Man-rider to have a 6-month certificate of thorough examination. Foreman to inspect the machine on delivery. Operator to inspect the machine daily before use and to carry out routine servicing in accordance with the operators manual. Daily inspection to be made by operator and recorded on the weekly inspection report.	5	1	5	Operator	Supervisor
D2	Locking pin not engaging.	Operator/ site workers	5	3	15	All operators must be trained and competent in quick hitch attachments. Man-rider operator shall ensure that locking pin is engaged in the man rider bracket.	5	1	5	Operator	Supervisor
D3	Incorrect connection of electrical cables/hydraulic pipes.	Operator / site workers	5	3	15	All operators must be trained and competent. All hydraulic pipes and electrical cables shall be connected to enable the man-rider to be operated independently from the telehandler cab controls. Controls on platform to be tested before platform is lifted above the ground.	5	1	5	Operator	Supervisor
<b>E</b> Positioning of man-rider											
E1	Untrained operative positioning telehandler.	Operator/ site workers	5	3	15	Only operatives holding a current CPC card and trained in the use of the remote controlled platform shall operate the telehandler with the platform.	5	1	5	Operator	Supervisor
E2	Over riding or not using hydraulic stabilisers.	Operator / site workers	5	3	15	Hydraulic stabilisers shall be used so that the front wheels are lifted off the ground. Safety measures are in place to make the man-rider un-operative from inside, if the stabilisers are not firmly on the ground.	5	1	5	Operator	Supervisor
<b>F</b> Operating the man-rider											
F1	Persons operating man rider from telehandler cab.	workers	5	3	15	Once in position, telehandler operator shall engage switch in cab to make telehandler controls inactive and the man rider controls active. The man riding basket is only allowed to be controlled by the operator in the basket.	5	1	5	Operator	Supervisor
F2	Untrained person operating the man rider.	workers	5	3	15	Only person trained and competent shall operate the quick fit man rider.	5	1	5	Operator	Supervisor
F3	Working on uneven ground or soft ground.	Operator / site workers		3	15	Telehandler with quick fit man rider must only be used on a firm and level platform.	5	1	5	Operator	Supervisor
F4	Fall from height.	Operator/ site workers	5	3	15	Persons in man rider to wear harness with lanyards clipped to anchor positions provided. The lanyard must be short enough to prevent contact with the ground or other objects. Door to be secured and shut.	5	1	5	Operator	Supervisor
<b>G</b> Working in slewed position over extended time											
G1	Man-rider turned right or left.	Operator / site workers	5	3	15	Safety pin must be used when the man-rider is turned left or right to stop it from moving, there are purpose-made eye holes on the man-rider and bracket for this function.	5	1	5	Operator	Supervisor
<b>H</b> Descending/ lowering man-rider											
H1	A person disembarking the man-rider before it is lowered to the ground.	Operator	5	3	15	Safety harness shall be worn and persons to remain in the man-rider, until it is safe to disembark. The man riding basket must only be controlled by the person in the basket.	5	1	5	Operator	Supervisor
<b>I</b> Use of quick hitch attachments											
I1	Fall of attachment.	Operator / site workers	5	3	15	Operators to be trained in quick hitch for the particular machine, 6 month through examination certificate required for the attachment.	5	1	5	Operator	Supervisor
<b>Forklift truck and telescopic handlers 2 of 3</b>											

J Use/ fitting of forks												
J1	Not attaching the fork mounted hook correctly.	Site Workers	5	3	15	All persons using the folk mounted hook shall be trained in the correct fitting.	5	1	5	Operator	Supervisor	
J2	The fork mounted hook slipping of the folks.	Site Workers	5	1	5	The fork mounted hook is designed in such away that when attached to the fork, the locking bar automatically engages behind the folks.	5	1	5	Operator	Supervisor	
J3	Using a damaged fork mounted hook.	Site Workers	5	2	10	The fork mounted hook and frame must be examined before use and weekly. A 6 monthly certification inspection must be carried out by a competent person. If damaged in anyway the fork mounted hook must not be used.	5	1	5	Operator	Supervisor	
J4	Manual Handling caused injuries	Operatives	3	3	9	All Cannon Piling personnel have been trained in the correct procedure when carrying out manual handling. If needed a second or third person must be used to aid any lifting or carrying operations.	3	1	3	Operator	Supervisor	
K Fuel storage/ refuelling												
K1	Fuel Spillage causing pollution	Environment	5	2	10	Always store diesel bowser away from any water course and surface water drainage systems. Ensure adequate drip trays and spill kits are located close by. Ensure plant nappies are used when ever filling up items of plant. Ensure diesel bowsers are locked when not in use. Only store fuel in appropriate fuel cans. Oil and fuel must be stored with in adequate bunds in the stores units.	5	1	5	Supervisor Operator Banks man	Supervisor	
K2	Flammable liquid causing fire	Environment Site Workers Members of Public	5	4	20	Ensure any fuel stored is away from a direct heat source with in an appropriate bowser or fuel can. All refuelling must only be carried out when the item of plant is switched off. Appropriate fire extinguishers must be close by to any item of plant being refuelled. Always ensure the correct PPE is being warn. i.e. Gloves, Overalls, Glasses.	5	1	5	Supervisor Operator Banks man	Supervisor	

**Forklift truck and telescopic handlers 3 of 3**



		Operation / Task:		<b>Excavator operation</b>					Prepared by:		HSEQ / Operational Teams		Rev 2 Date:		Rev 1 Date:																																						
Location:		Various Sites/ Yard		Department:		CANNON PILING - H&S					Issue Date:		Feb-20																																								
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	General Note.						Plant operators shall have a CPCS card. All hand tools shall be visually inspected by the user, for damage. PPE to be worn at all times. High Visibility vests, Hearing protection to EN 352-2, hand protection to EN 388 (mechanical hazards) and EN 374-3 (re-fuelling), protective footwear to EN 345, eye protection to EN166, head protection to EN397.																																														
A Access & Egress																																																					
A1	Slipping off steps / tracks		Anyone	3	3	9	Anyone climbing onto the machine steps must ensure that the step is in good order and not covered in mud / debris. Any debris on boots should be kicked off prior to climbing up. Check steps not icy during winter months. De-icer is available in work vans. Tools must never be stored on the steps. Use permanent fixtures on rig to grab hold off if necessary to aid climbing up onto tracks. No-one is to climb onto back of rig without the handrails being in place. If access is required to the mast then a MEWP or equivalent must be utilised.					3	1	3	Excavator operator	Site Supervisor																																					
A2	Visual Obstructions		Anyone	3	3	9	Anyone climbing on to machines must remain vigilant and concentrate at all times. Supervisors to carry out daily briefings highlighting any specific hazards.					3	2	6	Excavator operator	Site Supervisor																																					
A3	Poor Weather conditions		Anyone	3	3	9	Extra care must be taken during heavy wind or rain. Snow must be brushed off prior to climbing. Use de-icer or something equally effective to thaw out any ice when required. Boots must be kicked against tracks prior to climbing.					3	1	3	Excavator operator	Site Supervisor																																					
A4	Storage of tools on steps		Operatives	3	3	9	Ganger must ensure that no tools are left on the steps. Plant dept. to look at possibility of placing a tool tray in a suitable position to store the hammer, screwdriver, plastic caps, etc.					3	1	3	Excavator operator	Site Supervisor																																					



		Operation / Task:		<b>Air compressors</b>					Prepared by:	HSEQ / Operational Teams	Rev 2 Date:	Rev 1 Date:																																				
Location:		Various Sites/ Yard		Department:		CANNON PILING - H&S					Issue Date:	Feb-20																																				
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<b>A Use of air compressor</b>																																																
A1	Compressor moving across site.	Site workers	3	3	9	Compressor to be placed on firm, level ground. Hand brake is to be engaged and if necessary, wheels chocked.	3	1	3	Operator	Supervisor																																					
A2	Blast of air caused by the air valves not being closed.	Site workers	3	3	9	Operator to ensure valves are closed and hoses are connected before start up.	3	1	3	Operator	Supervisor																																					
A3	Hose disconnecting striking person.	Site workers	5	3	15	Whip checks to be fitted to all connections in the airline. Air compressor to be switch off and stored air released before joints are disconnected, end of line remote from compressor must be attached to equipment to be used whilst compressor is running. Air must only be turned off at valve. Ensure non essential personnel are kept away from our work area where ever possible.	5	1	5	Operator	Supervisor																																					
<b>B Re fuelling</b>																																																
B1	Slippery site caused by spillage.	Site workers	3	3	9	All spillages to be immediately cleared up. Drip tray to be placed underneath compressor.	3	1	3	Operator	Supervisor																																					
B2	Fuel splashing on skin.	Site workers	2	3	6	Persons fuelling compressor to wear rubber gloves, eye protection.	2	1	2	Operator	Supervisor																																					
B3	Fire.	Site workers	5	3	15	Hot refuelling is prohibited, Refuelling of plant and equipment must only take place when made dead "switched off".	5	1	5	Operator	Supervisor																																					
<b>C End of shift or prolonged break</b>																																																
C1	Leaving compressor running allowing unauthorised use.	Site workers	4	3	12	Compressor to be switched off at end of shift or prolonged breaks; equipment must be locked out preventing the use by unauthorised persons.	4	1	4	Operator	Supervisor																																					
C2	Air left in receiver when hoses are disconnected.	Operator	4	3	12	Before disconnecting hoses or equipment, operator to ensure that air is purged out of receiver and hose.	4	1	4	Operator	Supervisor																																					
<b>D Breakdown of compressor</b>																																																
D1	Breakages or Lack of maintenance may run the compressor to destruction	Operator	4	3	12	In order to reduce the risk of injury from a breakdown, the operator shall carry out daily pre-user checks.	4	1	4	Operator	Supervisor																																					
<b>E Location of compressor</b>																																																
E1	Noise.	Site workers	4	3	12	Compressor to have a noise rating as low as is reasonable practicable. All operators and persons in the immediate work area must wear suitable ear protection. Persons not wearing ear protection to be excluded from the immediate work area.	4	1	4	CP employees/subcontractors	Supervisor																																					
E2	Fumes.	Site workers	5	3	15	Compressor to be positioned in a well ventilated area. The exhaust should be pointed away from any office, mess room or stores units.If it is necessary to work in an area that is not well ventilated, fume extraction measures are to be provided.	5	1	5	CP employees/subcontractors	Supervisor																																					



Operation / Task:		Dumpers 1 of 2				Prepared by:	HSEQ / Operational Teams	Rev 2 Date:	Rev 1 Date:		
Location:		CANNON PILING - H&S				Issue Date:	Feb-20				
H&S Consequence, C		Env. Consequence, C		Likelihood, L		Acceptance Criteria					
1 Mino Injury		Minor impact/ operational		Improbable		<div style="display: flex; align-items: center;"> <div style="width: 15px; height: 15px; background-color: red; margin-right: 5px;"></div> R  <div style="width: 15px; height: 15px; background-color: yellow; margin-right: 5px;"></div> Y  <div style="width: 15px; height: 15px; background-color: green; margin-right: 5px;"></div> G         </div> <p style="font-size: small; margin-top: 5px;">           Red - Intolerable take immediate action            Yellow - Tolerable with additional controls            Green - Tolerable no further action required         </p>					
2 First Aid injury		Community complaints		Remote							
3 Major injury		Major impact		Possible							
4 Permanent consequence		Legal impact		Probable							
5 Potential Fatality		Major impact and cost		Almost certain							
						Likelihood					
						1	2	3	4	5	
						1	2	3	4	5	
						2	4	6	8	10	
						3	6	9	12	15	
						4	8	12	16	20	
						5	10	15	20	25	
TASK	HAZARD	Persons at Risk	Degree of Risk			Control Measures	Residual Risk			Person Responsible	Monitoring Responsibility
			C	L	RR		C	L	RR		
	General Note.					Note: Dumpers are only to be operated by trained and competent persons authorised on the company skills matrix. Operatives shall hold a current CPCS card. Operatives undergoing training shall be supervised by an authorised employee. Never operate the controls unless seated on the machine.					
A	All Operations										
A1	Failure of working parts of dumper. Failure of brakes	Operator/ Site Staff	5	3	15	Dumper must be in good working order before being used. Foreman to inspect machine on delivery. Operator to inspect the machine daily before use and to carry out routine servicing in accordance with operators manual. Daily inspections must be carried out and recorded on the weekly plant return sheet. Supervisor to arrange for faults identified to be rectified or for the					
A2	Cuts to tyres, insufficient tread or incorrect tyre pressures	Operator / Site Staff	5	3	15	As for hazard A1. Operators to check tyre pressure if there is doubt whether or not the pressure is correct. Supervisor to carry compressor attachments to allow the inflation of tyres on site. If the tyre is damaged the tyre must be repaired or replaced immediately.					
B	Loading of dumper										
B1	Dumper moving.	Site Workers & Operator	3	2	6	Driver to switch off engine apply brake and to dismount from dumper before loading. Driver to ensure that during loading other persons stand back.					
B2	Overloading of dumper.	Site Workers & Operator	5	3	15	Load to be applied evenly into dumper skip. Load in skip not to exceed dumper capacity. Load not to impair vision.					
B3	Load spilling from dumper or loading equipment.	Site Workers & Operator	3	3	9	Load in skip not to exceed dumper capacity. Operator/ banks man to ensure that other persons stand clear, during loading.					
C	Travelling across site										
C1	Collision with other plant	Site Workers & Operator	4	3	12	Only trained and competent persons to operate dumpers. The machine operator must ensure 360 degree vision is available at all times. Flashing beacon must always be switched on whilst plant in use. Allow for wet brakes not working as well as dry brakes. A trained Banksman may be required to supervise dumper movements. Always adhere to site traffic management plan.					
C2	Unsuitable surface.	Operator	3	3	9	Supervisor to confirm on site hazard assessment that routes and roads are suitable for dumpers or to arrange for improvements necessary to be implemented before work commences. Operator must always adhere to designated site traffic routes and speed limits. Foreman to supervise speeds of dumper during use on site.					
C3	Harm caused to operator by dumper overturning	Operator/ Site Staff	5	3	15	Anti roll bar to be fitted to all dumpers. The site speed limits and traffic routes must be adhered to at all times. The dumper must never be used on gradients which are too steep. The dumper must travel on slopes with the load facing uphill. Maximum gradient 1 in 10. Low gear to be engaged when traveling down slopes. If unsure stop and seek clarification from the site					
C4	Dust	Operator/ Site Staff	2	4	8	Speeds to be kept down. Supervisor to supervise speeds of dumper during use on site. Dust to be suppressed by main contractor. If the dust cloud becomes dangerous or is hard to control then the dumper work must be stopped until the Principal Contractor has solved the problem. In the yard the road sweeper will carry out regular sweeping operations.					
C5	Fall from dumper.	Operator	5	3	15	Dumper must be fitted with safety belt which is to be worn while the dumper is moving. Never operated the controls unless seated on the machine.					

D Storage of Plant											
D1	Theft/ Vandalism	Site Workers Members of Public	5	3	15	Keys must always be removed form all items of plant when the operator is away from the machine. Always lock up machines at night, if available always place shutters over windows and doors.	5	1	5	Operator	Supervisor
D2	Dumper rolling way.	Site Workers Members of Public	5	3	15	Dumper to be parked on flat ground with the handbrake on. Always use stop blocks when tipping into excavations. Allow for wet brakes not working as well as dry brakes.	5	1	5	Operator	Supervisor
E Refuelling											
E1	Fuel Spillage causing pollution	Environme nt	5	2	10	Always store diesel bowser away from any water course and surface water drainage systems. Ensure adequate drip trays and spill kits are located close by. Ensure plant nappies are used when ever filling up items of plant. Ensure diesel bowsers are locked when not in use. Only store fuel in appropriate fuel cans. Oil and fuel must be stored with in adequate bunds in the stores units.	5	1	5	Foreman Supervisor Operator Banks man	Supervisor
E2	Flammable liquid causing fire	Environme nt Site Workers Members of Public	5	4	20	Ensure any fuel stored is away from a direct heat source with in an appropriate bowser or fuel can. All refuelling must only be carried out when the item of plant is switched off. Appropriate fire extinguishers must be close by to any item of plant being refuelled. Always ensure the correct PPE is being warn. i.e. Gloves, Overalls, Glasses. Fuel must be stored in the correct containers when not being used.	5	1	5	Foreman Supervisor Operator Banks man	Supervisor

**Dumpers 2 of 2**



		Operation / Task:		<b>Concrete breakers &amp; scrabblers on site</b>					Prepared by:		HSEQ / Operational Teams		Rev 2 Date:		Rev 1 Date:	
Location:		Various Sites/ Yard		Department:		CANNON PILING - H&S					Issue Date:		Feb-20			
H&S Consequence, C		Env. Consequence, C		Likelihood, L		Severity	Likelihood					Acceptance Criteria				
1	Minor Injury	Minor impact/ operational		Improbable			1	1	2	3	4	5	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="width: 15px; height: 15px; background-color: red; margin-bottom: 5px;"></div> <div style="width: 15px; height: 15px; background-color: yellow; margin-bottom: 5px;"></div> <div style="width: 15px; height: 15px; background-color: green;"></div> </div> <p style="font-size: 8px; margin-top: 5px;">           Red - Intolerable take immediate action            Yellow - Tolerable with additional controls            Green - Tolerable no further action required         </p>			
2	First Aid injury	Community complaints		Remote			2	2	4	6	8	10				
3	Major injury	Major impact		Possible			3	3	6	9	12	15				
4	Permanent consequence	Legal impact		Probable			4	4	8	12	16	20				
5	Potential Fatality	Major impact and cost		Almost certain			5	5	10	15	20	25				
TASK	HAZARD		Persons at Risk	Degree of Risk			Control Measures					Residual Risk			Person Responsible	Monitoring Responsibility
				C	L	RR						C	L	RR		
General Note.																
<b>A Use of breaker or scrabblor</b>																
A1	Noise.	Site workers	4	4	16	All operators and persons in the immediate work area must wear suitable ear protection. Persons not wearing ear protection to be excluded from the immediate work area, a distance of at least 20 metres from the noise producer.					4	2	8	Main Contractor/ CP employees/ sub-contractors	Supervisor	
A2	Vibration.	Operator	4	4	16	Scabblor to be selected that will give a vibration acceleration dose as low as reasonably possible. If quoted root mean square vibration acceleration level is above 2.5 m/s <sup>2</sup> , then the contract manager shall arrange for the operator to have exposure reduced, e.g. by job rotation. i.e. maximum 10 mins on then 10 mins off. Thermal gloves may be required. Maximum daily dose over eight hours shall not exceed 5.0 m/s <sup>2</sup> . If the daily dose remains above 2.5 m/s <sup>2</sup> , health surveillance to be arranged by the Construction / General Manager.					4	2	8	CP employees/ sub-contractors	Supervisor/ Construction Manager/ General Manager	
A3	Flying particles	CP Operative	4	3	12	All non essential personnel must be kept away from the immediate area whilst cutting is being carried out. Suitable eye protection must be worn at all times by all personnel whilst cutting is being carried out.					4	1	4	CP employees/ sub-contractors	Supervisor	
A4	Inhalation of dust	Site workers	4	3	12	Dust suppression must be used at all times. E.g. Water to dampen down any concrete being cut. Suitable dust mask must be worn when ever there is a risk of dust being produced and inhaled.					4	1	4	CP employees/ sub-contractors	Supervisor	
<b>B Use of air line</b>																
B1	Breakage of air line.	Site workers	3	2	6	The user shall check the condition daily before use and complete a weekly inspection form for the airline and the tool being used. Whip checks to be fitted to all joints and between the air tool and the line. All non essential personnel should be excluded from the immediate work area.					3	1	3	CP employees/ sub-contractors	Supervisor	
B2	Trip Hazard	Site workers	3	3	9	Before commencing on site the Construction Manager must liaise with the Main Contractor to ensure we are provided with a clean and tidy work area with adequate space for unloading. All airlines and leads must be laid to ensure the chance of a trip hazard is minimised, this may require it to be hung in the air or covered over. Good housekeeping practises must be encouraged by Cannon Piling site personnel at all times. Rubbish, lifting equipment, re-bar, steel off cuts, etc. must not be allowed to build up.					3	2	6	All CP employees/ Main Contractor and other site workers.	Construction Manager/ Supervisor	
<b>C Use of compressor</b>																
C1	Noise	Site workers	4	3	12	Compressor to have a noise rating as low as is reasonable practicable. All operators and persons in the immediate work area must wear suitable ear protection. Persons not wearing ear protection to be excluded from the immediate work area.					4	1	4	CP employees/ sub-contractors	Supervisor	
C2	Fumes	Site workers	5	3	15	Compressor to be positioned in a well ventilated area. The exhaust should be pointed away from any office, mess room or stores units. If it is necessary to work in an area that is not well ventilated, fume extraction measures are to be provided.					5	1	5	CP employees/ sub-contractors	Supervisor	





		Operation / Task:			Concrete Pumping 1 of 2					Prepared by:		HSEQ / Operational Teams		Rev 2 Date:		Rev 1 Date:																																					
Location:		Various Sites/ Yard			Department:					CANNON PILING - H&S					Issue Date:		Feb-20																																				
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	General Note.						NOTE: Mobile concrete pumps, hired without an operator, are only to be operated by trained and competent persons authorised on the company skill matrix. Operatives under training shall be supervised by an authorised employee. Operators of lorry mounted pumps shall hold a current CPC card. Lorries reversing to the mixer areas must always be controlled with a banksman.																																														
A	Use of concrete pump																																																				
A1	Concrete splashes in eyes		Pump Man	4	3	12	Operator to wear suitable eye protection which must prevent splashes entering the eyes whilst working adjacent to pumping area. e.g. (Goggles, Bolle Tracker Glasses, Visor)					4	1	4	Pump Man	Supervisor																																					
A2	Concrete splashes on skin		Pump Man	2	4	8	Chemical Suits must be available and worn whenever there is a high risk of concrete or grout coming into contact with normal clothing or the skin. Chemical resistant gloves, a long sleeved top and trousers must be worn at all times whilst working with any cement based products. Suitable water tight footwear must be provided and worn at all times. Apply barrier cream before the start of each working shift, reapply after washing hands.					2	1	2	Pump Man	Supervisor																																					
A3	Moving parts of pump		Pump Man	4	3	12	Supervisor to inspect examination certificate of pump on arrival. Daily inspection to be completed by operator and recorded on the weekly safety inspection which must be The moving part of the drum must be adequately guarded on the top podium to prevent contact with moving parts. Hopper grill to be secured when operating. Engine to be stopped before lifting grill.					4	1	4	Pump Man	Supervisor																																					
A4	Excessive noise exposure for the operator.		Pump Man / Any one close by	4	4	16	Noise levels for all operations have been assessed. Items of plant with average noise levels above 85 dB(A) have Ear Protection Zone signs requiring persons to wear ear protection. Where reasonably practicable, noise reduction methods to be adopted to reduce noise levels.					4	1	4	Pump Man	Supervisor																																					
B	Pumping concrete																																																				
B1	Pipe connections parting, during concreting		Any site worker	4	3	12	Couplings to be fitted to all joints. Pipes and couplings, including hose clips and safety chains, or whip checks, to be inspected daily. It is advisable to use pipe protectors or burry concrete hoses where ever possible to reduce the risk of damage caused by vehicles constantly running over the hoses.					4	1	4	Pump Man	Supervisor																																					
B2	Pipe bursting during concreting		Any site worker	4	3	12	Concrete hoses must be inspected in the yard prior to delivery to site. The pump man must visually inspect the hoses daily and record on the hose inspection form. Site foreman to ensure this is carried out. Plant Dept. to maintain a register. Pipe kinks must be avoided where ever possible. It is advisable to use pipe protectors or burry concrete hoses where ever possible to reduce the risk of damage caused by vehicles constantly running over the hoses.					4	1	4	Pump Man	Supervisor																																					
C	Cleaning hose lines with compressed air																																																				
C1	Escape of compressed air.		Pump Man / Ganger	4	3	12	No couplings are to be undone until the pressure has been released.					4	1	4	Ganger / Pump Man	Supervisor																																					
C2	Concrete splashing across site		Any site worker	3	4	12	Supervisor to supervise work. Persons to stand clear. Pressure to be released before pipe coupling is loosened. Suitable Eye protection to prevent concrete entering the eyes must be worn. Methods of containing concrete to be adopted in preferred order.					3	2	6	Ganger / Pump Man	Supervisor																																					
C3	Cleaning ball flying out		Any site worker	3	4	12	Ball catcher to be used. End of run to be shielded. Persons to be kept clear.					3	2	3	Ganger / Pump Man	Supervisor																																					

D Clearing a concrete blockage											
D1	Use compressed air and blow out cannon to clear a blockage.	Any site worker	4	4	16	Compressed air and the blow out cannon shall not be used to dislodge a concrete blockage in the line. All non essential personal must be excluded from the immediate area. Blockages shall be cleared before any compressed air is used to clean out pipelines . Chemical Suits must be available and worn whenever there is a high risk of concrete or grout coming into contact with normal clothing or the skin. Chemical resistant gloves, suitable water tight footwear and a full face visor must be worn.	4	1	4	Ganger/ Pump Man	Supervisor
D2	Collapsed rubber hose, ball not running through the line.	Ganger/ Pump man	3	3	9	The person disconnecting the pipe shall only do so if the ball has run through the system, if the pipe has a kink or is collapsed it shall be straightened to ensure the ball is not trapping air in the pipe line.	3	1	3	Ganger/ Pump Man	Supervisor
D3	Concrete splashing across site.	Any site worker	3	3	9	Pump man to instruct the pump man to reverse the concrete pump. All non essential personnel must be kept away from mixers/ delivery lorries	3	1	3	Ganger/ Pump Man	Supervisor
E Moving concrete hoses across the site											
E1	Parting of hose/ musckleor injuries	Any site worker	4	3	12	Hoses are to be moved across the site by machinery. Correct web slings, not rope lashing, to be used. Slings to be inspected before use. Personnel to stand clear. Crook type attachments must be used to move the hoses short distances. Grabbing the hose and trying to move it manually should be avoided at all times.	4	1	4	Ganger/ Pump Man	Supervisor

**Concrete Pumping 2 of 2**



Location:		Operation / Task:		Prepared by:		HSEQ / Operational Teams		Rev 2 Date:		Rev 1 Date:																																					
Various Sites/ Yard		CANNON PILING - H&S		Issue Date:						Feb-20																																					
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<p><b>General Note.</b></p> <p>Note: Abrasive wheels are only to be operated by trained, competent and authorised personnel only. Operators under training shall be supervised by an authorised employee. Wheels are only to be changed by trained and competent persons.</p>																																															
<p><b>A Pre-start inspection</b></p>																																															
A1	Using a faulty grinder	Operator / anyone close by	3	3	12	Operator shall carry out a visual inspection before use. All faults shall be reported to the supervisor. If faults are found the grinder shall be tagged OUT OF ORDER and locked out.	3	1	4	Operator	Supervisor																																				
A3	Grinding stone wheel not square or has grooves	Operator / anyone close by	3	3	9	Grinding stone wheel shall be square with the guide rest. Only a trained /competent person may dress the grinding wheel stone, using the correct tool to do so.	3	1	3	Operator	Supervisor																																				
<p><b>B Fitting new grinding wheel/ stone</b></p>																																															
B1	Wheel / disc coming off machine	Operator / anyone close by	4	3	12	Only trained/competent persons to change the wheel stone. Before using machine, must ensure the Stone is secured firmly to spindle. Power source must be disconnected prior to fitting new wheel.	4	1	4	Operator	Supervisor																																				
B2	Machine operating causing injury to persons	Operator / anyone close	4	3	12	Power source must be disconnected prior to fitting a new wheel.	4	1	4	Operator	Supervisor																																				
B3	Contact with the wheel or disc	Operator / anyone close	2	3	6	Gloves must be worn whilst handling discs / wheels. The correct tools must be used. The guide rest shall not be more the 3 mm away from the stone.	2	1	2	Operator	Supervisor																																				
B4	Fitting incorrect stone, causing the stone to burst	Operator / anyone close by	4	3	12	Persons fitting the stone shall ensure that the stone is the correct type for the job; this must include checking that the correct revolutions on the stone are correct for the revolution on the machine spindle and that the damper discs are in place on the stone.	4	1	4	Operator	Supervisor																																				

C Using the grinder											
C1	Flying Particles / Sparks or swarf causing injury	Operator / anyone close by	4	2	8	Operator to ensure that other personnel are not in the area. Correct PPE must be worn, this should include ear plugs, safety goggles, overalls. The shield on the grinder shall be lowered over the stone and the guide rest shall not be more the 3 mm away from the stone.	4	1	4	Operator	Supervisor
C2	Untidy work area causing slips, trips and falls	Operator / anyone close by	3	3	9	Operator to ensure that other personnel are not in the area. Material shall not be stacked or stored around the grinder; area around the static grinder shall be kept clear of waste materials. Any mess created must be swept up as soon as possible. Supervisor to carry out regular workarounds encouraging good housekeeping practises.	3	1	3	Operator	Supervisor
C3	Entanglement / Contact with moving wheel	Operator / anyone close by	4	3	12	The guard must always be in place when using the grinder. Loose clothing must not be worn when using the grinder. Long hair to be tied back or a cap to be worn. Jewellery to be removed.	4	1	4	Operator	Supervisor
C4	Sparks causing a fire	Operator / anyone close by	5	3	15	When working on site a Hot Work Permit must be issued before using any sstill saw or grinder. Combustible and flammable materials must not be stored near the grinder. Before commencing any grinding activities the operator must ensure the work area is free from any such material. Fire extinguishers must be located close to hand. All workshop staff are trained in the use of fire extinguishers.	5	1	5	Operator	Supervisor
C5	Noise	Operator/ anyone close by	4	4	16	Suitable ear protection must be worn at all times whilst using abrasive wheels. Anyone working close by must be warned and they must also wear suitable hearing protection.	4	1	4	Operator	Supervisor
C6	Dusts from materials being cut	Operator / anyone close by	4	3	12	Dust mask to be worn.	4	1	4	Operator	Supervisor
C7	Vibration	Operator/ anyone close by	4	3	12	It is recommended that continuous use of grinding activities should not exceed 10 mins. Job rotation with other plant staff should be encouraged. Anyone who has been identified as suffering from early stage HAVs must be assessed by their line manager/ Occupational Health as to their compatibility to operate Vibrating machinery.	4	1	4	Operator	Supervisor
C8	Bursting of the wheel or disc due to incorrect wheel/ stone being used	Operator / anyone close by	5	2	10	Operator to check machine and wheel before use. Persons fitting the stone shall ensure that the stone is the correct type for the job; this must include checking that the correct revolutions on the stone are correct for the revolution on the machine spindle and that the damper discs are in place on the stone.	5	1	5	Operator	Supervisor

**Abrasive Wheels 2 of 2**



		Operation / Task:	<b>Maintenance &amp; Inspection of Plant</b>					Prepared by:	HSEQ / Operational Teams	Rev 2 Date:	Rev 1 Date:				
Location:		Various Sites/ Yard	Department:					CANNON PILING - H&S							
		H&S Consequence, C	Env. Consequence, C	Likelihood, L		Severity	Likelihood					Acceptance Criteria			
1		Mino Injury	Minor impact/ operational	Improbable			1	1	2	3	4	5	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="width: 10px; height: 10px; background-color: red; margin-bottom: 2px;"></div> R           <div style="width: 10px; height: 10px; background-color: yellow; margin-bottom: 2px;"></div> Y           <div style="width: 10px; height: 10px; background-color: green; margin-bottom: 2px;"></div> G         </div> <p style="font-size: small; margin-top: 5px;">           Red - Intolerable take immediate action            Yellow - Tolerable with additional controls            Green - Tolerable no further action required         </p>		
2		First Aid injury	Community complaints	Remote			2	2	4	6	8	10			
3		Major injury	Major impact	Possible			3	3	6	9	12	15			
4		Permanent consequence	Legal impact	Probable			4	4	8	12	16	20			
5		Potential Fatality	Major impact and cost	Almost certain			5	5	10	15	20	25			
TASK	HAZARD	Persons at Risk	Degree of Risk			Control Measures					Residual Risk		Person Responsible	Monitoring Responsibility	
			C	L	RR						C	L	RR		
	General Note.					Note: All maintenance and inspection are to be carried out by competent persons who are trained and are on the company data base. All maintenance and inspection are to be carried out as required by the Plant Department and rig manufacturer, following the manufactures operating instructions.									
<b>A Maintenance and inspection of plant</b>															
A1	Entrapment by moving plant.	Operator	4	3	12	All plant is to be isolated by the removal of keys and the operator controls locked out prior to maintenance/inspection taking place. Signage informing others that maintenance/inspection is taking place should be placed in a prominent position on the cab.					4	1	4	Operator	Site supervisor
A2	Falls from height.	Operator	5	3	15	Any work at height be from behind suitable fall prevention equipment i.e. permanent handrail system, if this is not in place then the hierarchy of control must be followed, use work equipment or other measures to prevent falls where they cannot avoid working at height; and where the risk of a fall cannot be eliminated, use work equipment or other measures to minimise the distance and consequences should one occur.					5	1	5	Operator	Site supervisor
A3	Exposure to harmful substances.	Operator	4	3	12	All operators must follow the control measures of the associated COSHH assessments and wear the correct PPE as recommended.					4	1	4	Operator	Site supervisor



Operation / Task:		Welding, Cutting and Associated work on site			Prepared by:	HSEQ / Operational Teams	Rev 2 Date:	Rev 1 Date:																									
Location:		Various Sites/ Yard			Department:		CANNON PILING - H&S																										
H&S Consequence, C		Env. Consequence, C		Likelihood, L		Acceptance Criteria																											
1 Mino Injury		Minor impact/ operational		Improbable		<table border="1"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td> </tr> <tr> <td>2</td><td>4</td><td>6</td><td>8</td><td>10</td> </tr> <tr> <td>3</td><td>6</td><td>9</td><td>12</td><td>15</td> </tr> <tr> <td>4</td><td>8</td><td>12</td><td>16</td><td>20</td> </tr> <tr> <td>5</td><td>10</td><td>15</td><td>20</td><td>25</td> </tr> </table> Red - Intolerable take immediate action Yellow - Tolerable with additional controls Green - Tolerable no further action required			1	2	3	4	5	2	4	6	8	10	3	6	9	12	15	4	8	12	16	20	5	10	15	20	25
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TASK	HAZARD	Persons at Risk	Degree of Risk			Control Measures			Residual Risk			Person Responsible	Monitoring Responsibility																				
			C	L	RR		C	L	RR																								
	General Note.					Note: This assessment covers cutting and welding work using electric arc welding and oxygen/ flammable gas equipment on various construction sites. Welding activities are only to be undertaken by trained, competent and authorised personnel. A hot works permit must be issued by the main contractor or a cannon piling foreman/ supervisor before any welding is carried out.																											
<b>A</b>	<b>Use of welding equipment</b>																																
A1	Fire and explosion from ignition of gas cylinders	Welder / Site staff	5	3	15	Gas cylinders and hoses to be checked for leaks, etc. Arc welding equipment to be examined by electrician regularly. Cylinders to be kept upright and secured. Valves to be closed when not in use. Cylinders to be fitted with appropriate regulator and gauge. Flash-back to	5	1	5	Welders	Mobile plant manager, site foreman																						
A2	Fire from other flammable materials	Welder / Site staff	5	3	15	Hot work permit must be in place prior to carrying out any hot work operations. Flammable materials must be removed from working area. Fire extinguisher must be available and close by at all times. Welder to check condition of welding equipment before use and to ensure that equipment is safe after use. Cutting and welding of drums or tanks that have contained flammable materials is prohibited with out following the appropriate procedure. This must include producing a separate HA in conjunction with the Workshop Manager.	5	1	5	Welders	Mobile plant manager, Supervisors																						
A3	Fumes from rods, coatings and metals.	Welder / Site staff	4	4	16	Welding etc. must be undertaken in well-ventilated areas. Local exhaust ventilation may also be required in certain circumstances to remove fumes. Health checks must be undertaken at set timescales arranged by line management / HR.	4	2	8	Welders	Mobile plant manager, Supervisors																						
A4	Hot metal surfaces.	Welder / Site staff	2	3	6	Hot work permit must be in place prior to carrying out any hot works on site. Welder to exclude other persons from the working area. Barriers and signs may be required. Welder must wear welding gloves.	2	1	2	Welders	Mobile plant manager, Supervisors																						
A5	Flying splatter	Welder/ Site staff	3	3	9	Welder to exclude other persons from the working area. Barriers and signs may be required. Welder must wear flame retardant overalls, appropriate apron and welding gloves.	3	1	3	Welders	Mobile plant manager, Supervisors																						
A6	Excessive light/radiation for the welder.	Welder/ Site staff	4	4	16	Approved welding Face shield must be worn by the welder	4	1	4	Welders	Mobile plant manager, Supervisors																						
A7	Excessive light/radiation for others nearby.	Welder/ Site staff	4	4	16	Fireproof screens to be placed around working area. Welder to exclude other persons from the working area. Barriers and signs may be required	4	2	8	Welders	Mobile plant manager, Supervisors																						
<b>B</b>	<b>Storage of used hot welding rods</b>																																
B1	Burns/ Scalds	Welder/ Site staff	2	4	8	Used weld rods should be immediately placed in a small steel bucket or such like receptacle.	2	1	2	Welders	Welder, Supervisor																						
<b>C</b>	<b>Storage of gas cylinders</b>																																
C1	Fire and explosion.	Welder/ Site staff	5	3	15	Cylinders must be stored in dedicated locked labelled cages and secured. Cylinders in use in the workshop must be stored on trolleys and isolated when not in use. Any vans carrying gas bottles must be ventilated, carry appropriate fire extinguishers and display the correct hazard warning signs.	5	1	5	Welders	Mobile plant manager, Supervisors																						

D Use of burning gear for cutting steel											
D1	Excessive Light	Welder/ Site staff	4	4	16	Goggles to EN 166 class 3,4, 9-B fitted with a filter to EN 169 to be worn.	4	1	4	Welders	Mobile plant manager, Supervisors