

		Operation / Task:		Piling Rig Access and Egress					Prepared by:		STEQ / Operational Teams		Rev 3 Date: 14/08/2023		Rev 2 Date: 04/05/2023 Not Known																															
Location:		Various Sites/ Yard		Department:		CANNON PILING - H&S					Issue Date:		May-23																																	
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<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 / attendant	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/ attendant	Site Supervisor/ Forman																															

		Operation / Task:		<b>Welding cutting and associated work on site</b>					Prepared by:		STEQ / Operational Teams		Rev 3 Date: 14/08/2023		Rev 2 Date: 04/05/2023 Not																																				
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	General Note.						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.																																												
<b>A</b>	<b>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. All welder must wear powered airflow (PAPR) whilst undertaking welding. 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 gauntlets.					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 headtop with reactive lens and powered airflow (PAPR RPE) must be used during welding activity.					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 to 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
<b>D</b>	<b>Use of burning gear for cutting steel</b>										
D1	Excessive Light	Welder/ Site staff	4	4	16	Welder must wear his welding headtop/ powered airflow (PAPR) during burning works as similar fume will be emitted from task.	4	1	4	Welders	Mobile plant manager,

		Operation / Task:	Site Crane works					Prepared by:	STEQ / Operational Teams	Rev 3 Date:	14/08/2023				
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		Department:								Rev 1 Date:	Known				
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		1	Minor injury	Minor impact, operational delay	Improbable	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	1	2	3	4	5					
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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: 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.									
<b>A</b>	<b>All Activities</b>														
A1	Overloading of crane.	Operator / Site workers	5	3	15	A suitable lift plan must be prepared by an Appointed person, this will guide the choice of a suitable crane to carry out the lifts, this must be reviewed by another appointed person prior to any mobilisation of cranes. The site must be visited before preparing lift plant. Supervisor to ensure that weights of loads are known and are within the capacity of the crane in line with the lift plan provided.					5	1	5	Appointed Person	Project Manager/ Supervisor
A2	Trips, slips and falls	Operator / Site	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 working adjacent to site boundaries or hoardings.					5	1	5	Appointed Person	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 agreed. The Client or Principal contractor must confirm the site hazard assessment that the overhead lines do not affect the crane or to arrange for improved control measures in line with HSE Guidance GS6 and asset owners requirements to be implemented before work commences.					5	1	5	Appointed Person	Project Manager/ Supervisor
A5	Collision with persons.	Operator / Site workers	5	3	15	Only trained and competent persons to operate the crane, qualifications shall be checked prior to lift commencement. 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 qualified lift supervisor must be in place supervising all crane activities. Always adhere to site traffic management plan.					5	1	5	Lift supervisor	Supervisor
A6	Failure of lifting appliance or lifting accessories.	Site Workers	5	3	15	Current inspection certificate, not more than 12 months 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. The lift 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	lift supervisor	Supervisor

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A7	Lifting operations - please see separate lift plan and risk assessment.	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 lift 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	Lift supervisor	Supervisor
A8	Uncontrolled fall of load.	Slinger/ signaller	5	2	10	Exclusion zone must be in place and adhered too.	5	1	5	lift supervisor	Supervisor
A9	Fall of load caused by damage to strop being used on loads of small diameter.	Slinger/ signaller	5	3	15	Soft eyed strops are not to be used except for lifting drive tubes or for lifting CFA augers	5	1	5	slinger / signaller	Supervisor
A10	Movement of load on ground while slings being attached or removed.	Slinger/ signaller	3	3	9	Loads to be placed on suitable timbers to allow access or strops underneath and chocks.	3	1	3	Slinger / Signaller	Supervisor
A11	Fall of load caused by incorrect slinging.	Slinger/ signaller	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	slinger / signaller	Supervisor
<b>B</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 Person	Project Manager/ Construction Manager
<b>C</b>	<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 Person	Project Manager/ Construction Manager

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		Operation / Task:	<b>Pile and Zone tests</b>					Prepared by:	STEQ / Operational Teams	Rev 3 Date:	14/08/2023				
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1		Mino Injury	Minor impact, operational delay	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> R           <div style="width: 15px; height: 15px; background-color: yellow; margin-bottom: 5px;"></div> Y           <div style="width: 15px; height: 15px; background-color: green; margin-bottom: 5px;"></div> G         </div> <p>Red - Intolerable take immediate action Yellow - Tolerable with additional controls Green - Tolerable no further action required</p>		
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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>	<b>Construction of test pile and anchor pile (if applicable)</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>	<b>Crane work</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</b>	<b>Rigging of kentledge test</b>														
C1	Ground bearing failure under kentledge.	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/
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
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</b>	<b>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</b>	<b>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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<b>F</b>	<b>Undertaking test</b>										
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

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	C	L	RR		C	L	RR	C	L	RR																																																						
	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.																																																								
<b>A</b>	<b>All Activities</b>																																																															
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 personnell 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 immediatley, 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. 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 succficient 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 adquate 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/windy conditions suitable low impact resistant eye protection must be worn.										3	1	3	Main Contractor	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</b>	<b>Rigging and dismantling on site</b>										
B1	Inadequate piling platform causing plant to topple	Rig operator/ attendant	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/ attendant	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</b>	<b>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 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 supervisor	5	1	5	Supervisor / rig driver	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 rig attendant with CPCS slinger/signaller CPCS card. All rigs must be fitted with rear view mirrors and reversing camera's, movement to be controlled by a trained slinger / signaller. No-one must be allowed to be close enough to the piling rig which will enable contact.	5	1	5	Supervisor / rig driver	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 in line with GS6 and asset owners requirements.	5	1	5	Supervisor / rig driver	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</b>	<b>Connecting flight string (All sites must have copies of the Task instruction available for Rigging / De rigging)</b>										
D1	Fall from height	MEWP operator	5	2	10	Only IPAF 3b trained operators are allowed to operate the MEWP. All persons in the basket shall be trained in the use and inspection of safety harness and lanyard, operators must wear harness correctly and secure the lanyard to the anchor point in the basket, ensuring lanyard is shortened as much as possible. 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
D1b	Rescue of individual at height in MEWP	MEWP operator	5	2	10	Second man will be available at all times, shown how to change control from MEWP basket to ground control and deliver basket to ground safely and raise situation with supervisor/ PC to enable first aid treatment. If MEWP operator is thrown from basket and hanging in suspension the above must be done as quickly as possible with first aider laying any unconscious victim down and treating any other injuries. Hospital check is advised with anyone operative suffering a fall / hanging in harness.	5	1	5	Operators	Supervisor
D1c	Use of bosuns chair	rig attendant	5	2	10	Use of MEWP must be prioritised over the use of a bosuns chair when work at height is required. Bosuns chair, Harness, lanyard and Piling rig will be inspected 6 monthly under LOLER 1998. Operative shall check over the harness, lanyard and bosuns chair before use, never use defective equipment. No other persons to be within 10m during activity. good communication from rig driver to bosuns chair operative (rig attendant) must be maintained. Ascending and descending shall be done slowly controlled by rig attendant signals to the rig driver. bosuns chair shall not be used in windy conditions that are above safe wind speeds for the piling rig. All operatives on site will be briefed on Bosun's chair rescue plan (see seperate briefing)	5	1	5	Operators	Supervisor
D2	Entrapment or nipping by auger	Rig operator / attendant	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 / attendant	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</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</b>	<b>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	Supervisor
E2	Entanglement with auger / rotating stock	Site Workers	5	3	15	All site staff must wear Hi VI vests to ensure rig operator can see them. 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	Supervisor / rig operator	Supervisor / project manager
E3	Inadequate piling platform	rig driver / attendant	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</b>	<b>Setting up of concrete pump and pipes</b>										
F1	Refer to separate Hazard assessment		N/A	N/A		See separate Hazard Assessment	N/A	N/A	N/A		
<b>G</b>	<b>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 EN166F 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</b>	<b>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</b>					

TASK	HAZARD	Persons at Risk	Degree of Risk			Control Measures	Residual Risk			Person Responsible	Monitoring Responsibility
			C	L	RR		C	L	RR		
<b>I Manufacture of reinforcing cage</b>											
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 still 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
<b>J Use of excavator to insert reinforcing cage</b>											
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 slinger / signaller.	5	1	5	Steel fixer/ Operator/ site operatives	Supervisor
J2	Underside of excavator bucket striking personnell 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 slinger / signaller.	5	1	5	Steel fixer operatives/ Operator	Supervisor
<b>K Lift rebar into pile</b>											
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		Supervisor
<b>L Removal of spoil from pile position by excavator</b>											
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 maximum slew radius. 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
<b>M</b>											
M1	Fall from height.	Rig operator / attendant	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/ attendant	Supervisor

		Operation / Task:		<b>Lifting and installation of pile reinforcement</b>					Prepared by:		STEQ / Operational Teams		Rev 3 Date: 14/08/2023		Rev 2 Date: 04/05/2023 Not																																												
Location:		Various Sites/ Yard		CANNON PILING - H&S					Issue Date:				May-23		Known																																												
H&S Consequence, C		Env. Consequence, C		Likelihood, L		Likelihood					Acceptance Criteria																																																
1 Mino Injury		Minor impact, operational delay		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>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> <tr><td>3</td><td>2</td><td>4</td><td>6</td><td>8</td><td>10</td></tr> <tr><td>4</td><td>3</td><td>6</td><td>9</td><td>12</td><td>15</td></tr> <tr><td>5</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	1	2	3	4	5	3	2	4	6	8	10	4	3	6	9	12	15	5	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 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 manually 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 needs to be 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 / lifted by rig winch to the left of the cab to prevent cement hose damage. All lifting equipment is to have been inspected and have a six monthly inspection certificate. operative to be trained and competent in slinging techniques and ensure webbing sling is checked for damage prior to use, no lower than 2t Working Load Limit with an Effective Working Length of no less than 1.5m sling to be used. slinging technique will be to choke hitch and repeat a half hitch @ 500mm above first hitch. rig attendant will ensure no operatives will stand immediately beneath lifting operations. Rod is not to be gripped and suspended by spanner, rope or any material not suitable such as steel delivery slings where Cannon piling are not in possession of a thorough examination certificate that is in date for the sling. rod reinforcement to be lifted vertically with trailing end being given a clear path to move forward during lifting operation. Rig attendant / slinger - signaller shall guide the operation from point of safety (if failure of lifting attachments were to occur no contact with reinforcement bar would be achieved) and will ensure no unauthorised person will enter the area during lifting.	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:	STEQ / Operational Teams	Rev 3 Date:	14/08/2023				
Location:		Various Sites/ Yard	Department:	CANNON PILING - H&S					Issue Date:		Rev 2 Date:	04/05/2023			
		H&S Consequence, C	Env. Consequence, C	Likelihood, L		Severity	Likelihood					Acceptance Criteria			
		1 Mino Injury	minor impact, operational delay	Improbable			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			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.					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.									
<b>A</b>	<b>Loading or unloading on site</b>														
A1	Crane / Forklift / Telehandler usage	Operator 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 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 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					Prepared by:	STEQ / Operational Teams	Rev 3 Date:	14/08/2023				
Location:		Various Sites/ Yard	CANNON PILING - H&S					Issue Date:		Rev 2 Date:	04/05/2023 Not				
		Department:								Rev 1 Date:	Known				
		H&S Consequence, C	Env. Consequence, C	Likelihood, L		Severity	Likelihood					Acceptance Criteria			
		1	Mino Injury	Minor impact, operational delay	Improbable		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		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
	General Note.		C	L	RR						C	L	RR		
<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. appliances are delivered. All electrical systems shall be installed by the company electrician or by a suitably skilled person.					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>	<b>Crane work</b>										
D1	Crane work in General	Operatives	N/A	N/A	N/A	Please refer to a separate lift plan and risk assessment for crane work.	N/A	N/A	N/A		
<b>E</b>	<b>Site clearance</b>										
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>	<b>Unloading plant or equipment in the street outside a site</b>										
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>	<b>Erecting tower scaffold platforms</b>										
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>	<b>Erecting scaffolding for working platforms</b>										
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>	<b>While using a ladder</b>										
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>	<b>Access to site cabins</b>										
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

		Operation / Task:	<b>Mobile elevated work platform</b>				Prepared by:	STEQ / Operational Teams	Rev 3 Date:	14/08/2023					
Location:		Various Sites/ Yard	Department:	CANNON PILING - H&S				Issue Date:		Rev 2 Date:	04/05/2023 Not Known				
		H&S Consequence, C	Env. Consequence, C	Likelihood, L		Likelihood					<b>Acceptance Criteria</b>				
		1 Mino Injury	minor impact, operational delay	Improbable		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		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.					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 an anchor 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 from 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:	<b>Forklift truck and telescopic handlers</b>					Prepared by:	STEQ / Operational Teams	Rev 3 Date:	14/08/2023				
Location:		Various Sites/ Yard	Department:	CANNON PILING - H&S					Issue Date:		Rev 2 Date:	04/05/2023 Not			
											Rev 1 Date:	Known			
											May-23				
		H&S Consequence, C	Env. Consequence, C	Likelihood, L		Likelihood					Acceptance Criteria				
		1	Mino Injury	Minor impact, operational delay	Improbable	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>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.					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>	<b>Use of forklift truck of telescopic handler on site</b>														
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	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
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</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 worn. i.e. Gloves, Overalls, Glasses.	5	1	5	Supervisor Operator Banks man	Supervisor

[Empty box]

		Operation / Task:	<b>Excavator operation</b>					Prepared by:	STEQ / Operational Teams	Rev 3 Date:	14/08/2023				
Location:		Various Sites/ Yard	Department:	CANNON PILING - H&S					Issue Date:		Rev 2 Date:	04/05/2023 Not Known			
		H&S Consequence, C	Env. Consequence, C	Likelihood, L	Likelihood					Acceptance Criteria					
		1	Minor injury	Minor impact, operational delay	Improbable	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	1	2	3	4	5					
		3	Major injury	Major impact	Possible	2	4	6	8	10					
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		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.					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, hand protection to EN 388 (mechanical hazards) and EN 374-3 (re-fuelling), protective footwear to EN 20345, eye protection to EN166, head protection to EN397.									
<b>A</b>	<b>Access &amp; Egress</b>														
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:		STEQ / Operational Teams		Rev 3 Date: 14/08/2023		Rev 2 Date: 04/05/2023 Not																																														
Location:		Various Sites/ Yard			CANNON PILING - H&S						Issue Date:		May-23		Rev 1 Date: Known																																																
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		General Note.				C									C			L		RR																																											
<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" and let the engine cool before re-fuelling.						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																																															

**Acceptance Criteria**  
 Red - Intolerable take immediate action  
 Yellow - Tolerable with additional controls  
 Green - Tolerable no further action required

		Operation / Task:			<b>Dumper trucks</b>						Prepared by:		STEQ / Operational Teams		Rev 3 Date: 14/08/2023		Rev 2 Date: 04/05/2023 Not																																												
Location:		Various Sites/ Yard			CANNON PILING - H&S						Issue Date:		May-23																																																
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	C	L	RR		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.																																																					
<b>A</b>	<b>All Operations</b>																																																												
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 dumper to be exchanged.						5	1	5	Operator / Supervisor	Supervisor/ Construction Manager																																											
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.						5	1	5	Operator/ Supervisor	Supervisor/ Construction Manager																																											
<b>B</b>	<b>Loading of dumper</b>																																																												
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.						3	1	3	Operator Banks man Supervisor	Construction Manager Supervisor Principal Contractor																																											
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.						5	1	5	Operator/ Supervisor	Supervisor/ Construction Manager																																											
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.						3	1	3	Operator Banks man Supervisor	Construction Manager Supervisor Principal Contractor																																											
<b>C</b>	<b>Travelling across site</b>																																																												
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.						4	1	4	Operator Banks man Supervisor	Construction Manager Supervisor Principal Contractor																																											
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.						3	1	3	Operator Banks man Supervisor	Construction Manager Supervisor Principal Contractor																																											
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 supervisor or STEQ department						5	1	5	Operator/ Supervisor	Construction Manager Supervisor Principal Contractor																																											

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.	2	2	4	Supervisor / Yard Foreman	Main Contractor/ Depot Manager
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.	5	1	5	Operator	Supervisor



D Storage of Plant											
D1	Theft/ Vandalism	Site Workers Members of Public	5	3	15	Keys must always be removed from 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	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. Bowsers are pressure tested every 5 years. 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	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 worn. 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

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		Operation / Task:	<b>Concrete breakers &amp; scrabblers on site</b>					Prepared by:	STEQ / Operational Teams	Rev 3 Date:	14/08/2023				
Location:		Department:	CANNON PILING - H&S					Issue Date:		Rev 2 Date:	04/05/2023				
		Various Sites/ Yard								Rev 1 Date:	Known				
		H&S Consequence, C	Env. Consequence, C	Likelihood, L		Likelihood					Acceptance Criteria				
		1	Minor injury	Minor impact, operational delay	Improbable	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	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
	General Note.		C	L	RR						C	L	RR		
<b>A Use of breaker or scrabbler</b>															
A1	Noise.	Site workers	4	4	16	All operators and persons in the immediate work area must wear suitable ear protection to EN352. 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	Scabblers 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. Mask must be face fit tested to individual.					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:			<b>Concrete Pumping</b>					Prepared by:		STEQ / Operational Teams		Rev 3 Date: 14/08/2023 Rev 2 Date: 04/05/2023 Rev 1 Date: Known		14/08/2023 Not Known																																			
Location:		Various Sites/ Yard			Department:			CANNON PILING - H&S					Issue Date:		May-23																																				
H&S Consequence, C		Env. Consequence, C		Likelihood, L			Likelihood					Acceptance Criteria																																							
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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 CPCS card. Lorries reversing to the mixer areas must always be controlled with a banksman.																																																			
<b>A Use of concrete pump</b>																																																			
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 form. 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>B Pumping concrete</b>																																																			
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																																			
<b>C Cleaning hose lines with compressed air</b>																																																			
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
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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/ muscularskeletal 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

		Operation / Task:		<b>Abrasive Wheels &amp; Stihl saw use</b>					Prepared by:		STEQ / Operational Teams		Rev 3 Date: 14/08/2023		Rev 2 Date: 04/05/2023 Not																																												
Location:		Various Sites/ Yard		Department:		CANNON PILING - H&S					Issue Date:		May-23																																														
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Note: Abrasive wheels and Stihl saws 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.																																																											
<b>A Pre-start inspection</b>																																																											
A1	Using a faulty grinder / stihl saw		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 or Stihl saw shall be tagged OUT OF ORDER and removed from use.					3	1	4	Operator	Supervisor																																											
A3	Using faulty or damaged Grinding & cutting disc.		Operator / anyone close by	3	3	9	grinding & cutting discs will be inspected prior to use, check use by date on steel collar, cracks or visible damage, discoloured discs showing moisture absorption. If steel with diamond blades ensure visual checks for damage to teeth, bent disc are not present.					3	1	3	Operator	Supervisor																																											
<b>B Fitting new grinding &amp; cutting discs</b>																																																											
B1	Wheel / disc coming off machine		Operator / anyone close by	4	3	12	Only trained/competent persons to change the grinding / cutting disc. Before using machine, must ensure the disc is secured firmly to spindle. Power source must be disconnected regardless if 110v, battery or engine (pull spark plug cap of spark plug) prior/during the fitting of the new disc					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. Disconnect regardless if 110v, battery or engine (pull spark plug cap of spark plug)					4	1	4	Operator	Supervisor																																											
B3	Contact with the wheel or disc		Operator / anyone close by	2	3	6	Guard must be fitted and adjusted to ensure hands are protected during use. Item being cut will be secure / imovable, cut off section shall be allowed to fall away preventing blade snag and loss of control.					2	1	2	Operator	Supervisor																																											
B4	Fitting incorrect abrasive wheel, causing wheel burst		Operator / anyone close by	4	3	12	ensure correct disc is used, do not grind/ apply side pressure to cutting wheels. Do not cut with grinding disc.					4	1	4	Operator	Supervisor																																											

C Using the angle grinder or Stihl saw											
C1	Flying Particles / Sparks or swarf causing injury	Operator / anyone close by	4	2	8	Operator to ensure that other personnel in the area are informed of task start. Angle grinder / stihl saw operator must have eye protection worn to EN166B medium impact protection. Correct PPE must be worn, this could include safety goggles or full face visor (welders headton with clear grinding screen for example). The guard to be adjusted to assist in discharging sparks /	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 task area; area around the work area shall be kept clean, tidy with off cuts and spent disc's being disposed of properly and not thrown on the floor.	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 angle grinder / stihl saw. Loose clothing must not be worn when cutting / grinding. 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 stihl saw or grinder with controls identified and followed. Combustible and flammable materials must not be stored near the grinder. Before commencing any grinding /cutting activities the operator must ensure the work area is free from any such material. Fire extinguishers must be located close to hand. operatives are trained in the use of fire extinguishers. Stihl saws to be refueled when cold ensure impervious gloves & safety glasses are worn and operator has been briefed on petrol COSHH assessment. Petrol to be stored in steel jerry can away from area. ensure stihl saw placed on plant tray when not in use.	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. Could include EN352-1 Ear muffs, EN352-2 ear plugs, EN352-3 ear muffs connected to helmet with a protection factor SNR36. 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	RPE to be used that is adequate and suitable for the task. if cutting / grinding causes cement dust to become airborne then FFP3, P3, TH2 (APF 20) all tight fitting dust masks must be face fit tested, preference should be given to PAPR powered airflow systems (no fit testing requirement) further guidance can be sought in HSE document HSG53 or consult H&S team. If stihl saw is used then water suppression must be also applied while cutting to reduce dust becoming airborne.	4	1	4	Operator	Supervisor
C7	Vibration	Operator/ anyone close by	4	3	12	reduce vibration exposure as low as possible by the following control measures, task rotation stop one individual doing all vibratory work. Regular breaks never use angle grinder /stihl saw for more than 10 mins at a time. Keep hands warm. Use good tools, replace regularly ensuring tool has low vibration emissions, if numbness or tingling is felt inform supervisor. HAVS assessment must be undertaken. operatives to undergo health surveillance.	4	1	4	Operator	Supervisor
C8	impact injuries due to wheel burst.	Operator / anyone close by	5	2	10	Operator to check machine and wheel before use. Persons fitting the wheel shall be competent (trained) guard never to be removed (prevents larger disc being fitted as well as discharging disc fragments away from the operator) Never change direction when cutting. prevent work piece grabbing (closing in) on disc, always set up allowing off cut to fall away under gravity. use both handles to assistance in recovering control following any snatching of the blade.	5	1	5	Operator	Supervisor

[ ]

		Operation / Task:	<b>Maintenance &amp; Inspection of Plant</b>					Prepared by:	STEQ / Operational Teams	Rev 3 Date:	14/08/2023				
Location:		Various Sites/ Yard	Department:	CANNON PILING - H&S					Issue Date:		Rev 2 Date:	04/05/2023 Not			
		H&S Consequence, C	Env. Consequence, C	Likelihood, L		Likelihood					Acceptance Criteria				
		1 Mino Injury	minor impact, operational delay	Improbable		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			
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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: 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; (Use of MEWP) 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 stated.					4	1	4	Operator	Site supervisor



		Operation / Task:	<b>Welding, Cutting and Associated work on site</b>					Prepared by:	STEQ / Operational Teams	Rev 3 Date:	14/08/2023				
Location:		Department:	CANNON PILING - H&S					Issue Date:		Rev 2 Date:	04/05/2023 Not				
										Rev 1 Date:	Known				
										May-23					
H&S Consequence, C		Env. Consequence, C	Likelihood, L		Likelihood					Acceptance Criteria					
1 Mino Injury		Minor impact, operational delay	Improbable		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>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.					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 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. arrestors 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 must be undertaken in well-ventilated areas. Welding operatives must use PAPR powered airflow with a minimum TH2 filter(APF20). Welding operatives must undergo health surveillance.					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 to 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

This Task Briefing must be read in conjunction corresponding Risk Assessment.

**Scope of the work**

*Setting up and use of the concrete pump/agitator & pumping lines, including arrangements for pumping, cleaning and preventing / clearing blockages.*

Training Required to carry out the task	Plant & equipment required to carry out the task	PPE Required
<ul style="list-style-type: none"> <li>CPCS – Concrete pump</li> </ul>	<ul style="list-style-type: none"> <li>Concrete Pump</li> <li>Agitator (where required)</li> <li>Compressor</li> <li>Concrete Hoses / Wash out adapt</li> </ul>	<ul style="list-style-type: none"> <li>Full face visor when cleaning lines or clearing blockages</li> <li>Hearing protection at pump</li> </ul>

**Health and safety Hazards**

- Ground conditions
- Lifting operations
- Plant / traffic movements
- Proposed route of hoses, pipes / concrete lines & crossing points on site
- Pedestrian access
- Method of communication from pump man to concrete line operative

**Environmental Hazards**

- Consideration of concrete water run-off and nearby sensitive receptors

**Method for Task**

Ground Conditions

1. A suitably sized hardstanding/ platform will have been constructed in advance of the concrete pump and agitator arriving on site. This area shall include space for any lifting equipment to be sited.
2. Planning will consider, environmental aspects of wash out, safety aspects of plant & vehicle movements and pedestrian access.
3. A competent person will need to sign off the hardstanding / platform in relation to the associated plant loadings of any lifting equipment to be used.

Setting concrete pump & agitator

4. Ensure sufficient area is provided which considers the following
  - Firm level ground
  - Proximity to the point of intended discharge i.e. pile positions, communication to the concrete crew.
  - Reduces the need to move the concrete pump & agitator
  - Safe access & egress for pedestrians and vehicles
  - Clearance from other trades
  - Route of pumping hoses / requirement for any crossing point for plant
  - Wash out area and wash water run-off.
5. A trained and competent operator will set up the positioning of the concrete pump and agitator in accordance with his training.
6. Any compressed air lines will be fitted with suitable sized whip checks.
7. Hoses etc should be routed to reduce trip hazards and interface with site traffic / plant movements.
8. All hoses are to be secured with a safety pin.
9. Safety whip checks shall be fitted to all concrete pumping hose connections off the ground and between the pump and first hose.

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10. Concrete pump hose shall be checked daily to ensure it is serviceable.

Priming the Concrete Lines and Avoiding Blockages

11. The concrete pumping hose lines must be primed before any concrete is pumped through them.
12. This operation involves mixing 'Prime A Pump'. A powder / water mix which is used to lubricate the internal surface of the pipes / hoses which concrete will be flowing through which helps prevent concrete blocking before it emerges at the discharge point.
13. The priming mix (biodegradable solution) will be mixed in accordance with the manufacturer's instructions and approx. four (4) number buckets of this solution are poured directly into the hose.
14. The mixture is pumped in the normal manner slowly through the lines immediately followed by concrete until concrete emerges from the bottom of the auger.
15. With a 5m exclusion zone in place the concrete ball catcher shall be used around the bottom of the auger to contain any discharge / splatter of fluid or concrete.
16. Once clean concrete flows out of the bottom of the augers, pumping can stop, and the auger bung inserted ready for piling to commence.
17. This procedure must be repeated whenever concrete is to be pumped through dry pipe work / hoses.
18. To prevent blockages occurring there are a number of steps that can be taken:
  - Ensure that the pipes / hoses are not kinked and that they are not blocked or flattened by other plant driving over them
  - Keeping sufficient concrete in the hopper will prevent air from getting into the system.
  - The pump operator should avoid keeping tools on the pump as blockages have been caused by tools falling into the hopper.

Pumping concrete and detecting blockages

19. During concreting operations, the pump operator must remain alert, constantly monitoring pumping pressure, the level of the concrete in the pump hopper and maintaining communication / contact with the concrete man (piling rig attendant).
20. When pumping concrete, the pump should have a regular rhythm of strokes. An interruption to this rhythm will often indicate a blockage has occurred. The pressure gauge on the pump will indicate a much higher pressure.
21. The pressure gauge on the pump should be located, such that it is within view of the pump operator during pumping operations.
22. Should the pump operator or concrete man suspect or detect a blockage then they should stop pumping and investigate, as below.
23. Concrete should NOT be allowed to stand in the pipe / hose for more than 15 minutes without moving it (this period may need to be shortened in periods of hot weather). Where this is not possible the concrete lines should be flushed out.

Dealing with a blockage

24. Whenever a blockage occurs an assessment must be made by the Supervisor as to how long work on clearing the blockage can continue before lines must be cleared to avoid concrete setting in the pipes and hose. This time will depend on several factors including temperature on site.
25. The pressure in the system must be checked and RELEASED before attempting to clear a blockage.
26. Compressed Air must NEVER be used to clear a blockage.

Locating and Clearing a Blockage

27. When the blockage is detected it can be usually be located by the pump operator, operating the pump and then releasing the pressure. A "kick" in the pipe / concrete hose can occasionally be seen, or a "crunching" sound heard at the point of the blockage.
28. The pressure MUST be released from the system by a competent operator by switching the pump to suck for approximately 5 strokes.
29. The concrete / concrete hose can then cautiously be split at the nearest joint to the blockage. Remove the joint coupling cautiously listening for a hissing sound as a sign of pressure.

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- 30.If hissing / pressure detected, repeat the above reversing of the pump and try again. Allow the pressure / hissing to dissipate over time before splitting the joint fully.
- 31.Full face visor / goggles must be worn when dealing with blockages and the area excluded by barriers.
- 32.The blockage can then be cleared by shaking the hose, slung off an excavator or by striking with a hammer.
- 33.If the above does not clear the blockage follow the 'Cleaning Pipelines' procedure as below.
- 34.Ensure that the end of the concrete hose is firmly restrained to prevent it from kicking; it should be physically attached to a fixed point, an exclusion zone set up and care taken to contain any discharges from the hose.
- 35.When cleared, a short amount of pumping should be carried out after these processes to check that the system is fully clear.

Cleaning out the Pump

- 36.Cleaning operations shall only commence once pressure has been released or a time period allowed for this to dissipate from the system.
- 37.When cleaning out the pump / Pump:
- Isolate and switch off the engine before removing any guards of grilles and washing down the hopper
  - Ensure that wash water does not enter drains, watercourses, etc
  - Correct PPE is worn as specified above.
- 38.Cleaning of the concrete plant and pipes / hoses must only be carried out upon completion of an installed product,
- NOTE - this does not necessarily happen at the end of the shift only.
- 39.Under no circumstances shall cleaning of either the pump or the agitator be permitted during installation of a pile as additional water can be added to the concrete mix affecting its qualities.
- 40.A pressure washer is generally used for cleaning the concrete plant.
- 41.Once cleaned, any accumulated water within the pump must be removed before any further concrete is put through.
- 42.Care should be taken to ensure wash waters are captured and or that they do not reach any sensitive receptors.

Cleaning Concrete Pipelines / Hoses

- 43.When cleaning pipelines, always:
- Use a washout adapter fitted with a pressure relief valve and check that this is in good working order
  - Disconnect the concrete hose from the concrete pump.
  - Ensure that the remote end of the concrete hose is firmly restrained to prevent it from kicking; it should be physically attached to a fixed point and care taken to contain any discharges from the hose.
  - Attach the airline to the compressor and ensure the regulator valve on the wash out adaptor is in the closed position.
44. Ensure that there is a clear communication / line of vision between the concrete man and the compressor operator (Pump Operator).
- 45.Prior to any pressure being applied to the line ensure all personnel maintain a 5m safety zone from the line and its discharge point is not pointing towards persons, roads, railways, buildings etc.
- 46.Ensure that the discharge end is firmly restrained to prevent it from kicking, it should be physically attached e.g. by chain to a fixed point and care taken to contain any discharges from the hose.
- 47.Upon the direction of the concrete man, the pump operator will slowly open the regulator and gradually apply pressure to the concrete line.
- 48.The concrete man will control the operation via verbal instructions and hand signals.
- 49.When all cleaning operations are complete the concrete man will instruct the compressor operator to shut down the compressor and vent the line.

Blockage during cleaning

- 50.In the event that a blockage is detected during the pipeline cleaning the following process shall be carried out.
- 51.Switch off the compressor.

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52. Release any pressure in the line by opening the release valve on the washout adaptor and a second valve on the compressor.

53. Do not attempt to uncouple any joints until the pressure has been fully released

54. Remove the air line from the washout adaptor taking care that there is no pressure still in the line – pressure can normally be detected by a hissing noise

55. Follow the procedures described above for identifying and clearing blockages

Maintenance

56. All faulty or defective plant or equipment must be reported to the Supervisor, and if unsafe, immediately removed from service and/or repaired.

57. The Daily and Weekly maintenance checks must be carried out and the Operators Plant Inspection Report completed and handed to the Supervisor.

58. All concrete / concrete hoses MUST be inspected for signs of damage and general wear and tear on arrival at site and at regular intervals during the course of the project.

Concrete Quality Control

59. The concrete deliver ticket shall be checked prior to taking receipt of the concrete – to ensure it is the correct specification for the project and that the expected time to use will not exceed 2hrs from batched time.

60. Concrete cubes, flow and slump checks shall be taken as specified for to meet the project requirements and in accordance with the IMS procedures.

61. Under no circumstance shall water be added to concrete on site.




**Records to be Completed**

- None

**Permits required**

- Not applicable

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<b>Persons Exposed</b>		Employees: Yes	Other Workers: Yes	Public/Visitors: Yes	Vulnerable Persons: No	
<b>Severity</b>	5	5	10	15	20	25
	4	4	8	12	16	20
	3	3	6	9	12	15
	2	2	4	6	8	10
	1	1	2	3	4	5
		1	2	3	4	5
		<b>Likelihood</b>				
		<p><b>Likelihood</b></p> <p>Rating 1 = Very unlikely          Rating 2 = Unlikely          Rating 3 = Likely          Rating 4 = Very likely          Rating 5 = Almost certain</p>			<p><b>Severity</b></p> <p>Rating 1 = No injury, Minor environmental incident e.g. spill contained on site          Rating 2 = Minor injury or illness,          Rating 3 = "7 day" injury or illness, significant spill, pollution off site          Rating 4 = Major injury or illness          Rating 5 = Fatality, disabling injury, major environmental impact</p>	
						
		Acceptable	Further review	Unacceptable Risk		
<b>Risk = Likelihood x Severity</b>						

Hazard Id	HAZARD	1	2	3	4	5	6	7	8	9
		Factors of Harm		Risk Multiple of columns 1 × 2	CONTROL MEASURES	Factors of Harm		Residual risk Multiple of columns 5 × 6	Control measures implemented by (name)	Control Frequency Check Rate
		Likelihood	Severity			Likelihood	Severity			
<i>Standard Control Measures –</i>										
<i>Safe Use of a Concrete Pump</i>										
	ALL operations	5	5	25	<ul style="list-style-type: none"> <li>Only trained and competent persons allowed to bank vehicles operate the concrete pump / agitator and work on associated activities i.e. clearing blockages / maintenance.</li> </ul>	1	5	5	Supervisor	Induction + daily
	Setting up the concrete pump & agitator	4	5	20	<ul style="list-style-type: none"> <li>Ensure suitable location is agreed with Client to minimise further moves, hose routes and safe access / egress for vehicles and pedestrians.</li> </ul>	1	4	4	Supervisor	Set up

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					<ul style="list-style-type: none"> <li>• Ensure ground is firm &amp; level.</li> <li>• WPC in place for any lifting equipment used to unload and set up the plant.</li> <li>• Lift plan in place.</li> </ul>					
	Setting up the concrete hose lines	3	4	12	<ul style="list-style-type: none"> <li>• Ensure hose routes are clear of traffic / plant routes.</li> <li>• Any crossing points should be suitably protected – bury the hose, purpose designed ramps etc.</li> <li>• DO NOT allow ANY plant or vehicles to run over the hose – this causes unseen internal damage which can lead to premature failure.</li> <li>• All off the ground hose joints to be fitted with a safety whip check.</li> </ul>	1	4	4	Supervisor	Set up
	Reversing Concrete trucks on site and up to the agitator	5	5	25	<ul style="list-style-type: none"> <li>• Delivery vehicles drivers given induction briefing upon arriving on site – DO's and DON'Ts</li> <li>• Banksman and driver to maintain visual contact with each other – otherwise STOP.</li> <li>• All trucks to be banked with clear hand signals from safe position.</li> <li>• Site traffic route to be established.</li> <li>• When reversing up to the pump the banksman to stand in a safe position, clear of potential nip points.</li> <li>• Chute alignment / adjustment to be carried out with the vehicle stationary and parked.</li> </ul>	1	5	5	Supervisor	Daily
	Discharging Concrete	5	3	15	<ul style="list-style-type: none"> <li>• Reduce free fall height i.e. splashing</li> <li>• All operatives working close to wet concrete must wear the standard PPE.</li> <li>• Delivery drivers to wear standard site PPE as above.</li> <li>• Environmental receptors i.e. ground water, rivers, drains, known / measures in place to prevent environmental impact.</li> </ul>	1	3	3	Supervisor	Daily
	Pumping Concrete	4	4	16	<ul style="list-style-type: none"> <li>• Prime the lines in advance of pumping the concrete with a cement solution or prime-a-pump.</li> <li>• During the concrete operation the Pumpman must constantly monitor the workability of the concrete, pump pressure gauge, the rhythm of the pump strokes and maintain contact with the rig operator.</li> </ul>	1	4	4	Supervisor	Daily

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					<ul style="list-style-type: none"> <li>• Clear communication to be in place between rig operator and Pumpman. This can be visual, oral or by radio depending on the site conditions</li> <li>• Maintain an EXCLUSION ZONE of 5 meters around the work area, during pumping operations</li> <li>• EAR DEFENDERS mandatory whilst operating the concrete pump / agitator.</li> </ul>					
	Concrete hose bursting	4	5	20	<ul style="list-style-type: none"> <li>• Ensure the concrete is of the correct and specified workability.</li> <li>• Inspect all concrete hose on delivery to site and regularly thereafter, reject any damaged pieces</li> <li>• Identify designated traffic routes for plant crossings, install timber / steel cross over points or bury hose.</li> <li>• Do not allow plant – dumpers or excavator etc to track over the hose.</li> <li>• Fit safety pins to all quick release couplings and check daily.</li> <li>• The first length of hose projecting from the pump is to be identified so it is always used at this location.</li> <li>• The Banksman then has responsibility to ensure that this section is protected from damage.</li> <li>• Use steel pipe wherever site conditions allow</li> <li>• The length of hose in the loop between the rig and the rotary head is to be sheathed which will contain bursts at this location.</li> <li>• Whip checks to be fitted to joints off the ground.</li> <li>• Environmental receptors known / measures in place</li> </ul>	1	5	5	Supervisor	Daily
	Clearing Blockages and Pipelines	5	4	20	<ul style="list-style-type: none"> <li>• STOP PUMPING SHOULD A BLOCKAGE OCCUR – Inform Supervisor</li> <li>• Follow the steps in this Task Briefing to locate and clear blockage.</li> <li>• Blockage clearance should only be carried out under direction of a Contract Supervisor.</li> <li>• Prior to attempting to clear a blockage, reverse pump (suck) for a number of strokes (depending on pump type) to release the pressure</li> <li>• Ensure pressure is released by reverse pumping prior to opening couplings.</li> <li>• Maintain an EXCLUSION ZONE of 5 meters around the work area during blockage clearance operations.</li> </ul>	1	4	4	Supervisor	When Blockage occurs

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					<ul style="list-style-type: none"> <li>• Ensure that the end of the hose is firmly restrained to prevent it from kicking when the pressure is released.</li> <li>• Once parted the end of the hose should be attached to the eye on the excavator bucket by a chain and care taken to contain any discharges from the hose.</li> </ul>					
	Blowing & clearing blockages during blowing out	5	4	20	<ul style="list-style-type: none"> <li>• Check the pressure relief valve on the blow-out chamber is in good working order and whip checks are fitted to all joints / valves.</li> <li>• Place the blow out box around auger and secure in place.</li> <li>• Keep all personnel at least 5m from concrete line and auger.</li> <li>• <b>In the event that blockage is detected during blowing out -</b> <ul style="list-style-type: none"> <li>• Switch off the compressor</li> <li>• Fully release all comp air pressure by opening the relief valve on the blow-out chamber and a second valve on the compressor before attempting to uncouple any parts of the air/concrete line</li> </ul> </li> <li>• Ensure that the end of the concrete hose is firmly restrained to prevent it from kicking when the pressure is released.</li> <li>• The end of the hose should be attached to the eye on the excavator bucket by a chain and care taken to contain any discharges from the hose.</li> <li>• Environmental receptors known / measures in place</li> </ul>	1	4	4	Supervisor	Daily
	Cleaning of Concrete pump and agitator	4	4	9	<ul style="list-style-type: none"> <li>• Use the access points provided on the pump and agitator to access the machinery.</li> <li>• Pumpman must switch off engine before raising grille.</li> <li>• Maintain an EXCLUSION ZONE of 5 meters around the work area during cleaning operations.</li> <li>• Environmental receptors i.e. ground water, rivers, drains known / measures in place to prevent environmental impact.</li> </ul>	2	2	4	Supervisor	Daily
	Cleaning delivery trucks – general wash water	3	4	12	<ul style="list-style-type: none"> <li>• Ensure wash out skip is in place – lined and positioned to allow easy vehicle access in a safe position for driver to wash out.</li> <li>• Ensure skip is emptied when fully – do not allow wash water to contaminate the ground.</li> </ul>	1	4	4	Supervisor	Daily

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	Skin exposure to wet concrete or cementitious dust	5	3	15	<ul style="list-style-type: none"> <li>• COSHH assessment available and briefed to all relevant personnel.</li> <li>• Wear gloves, keep arms covered where possible or as a minimum use protective barrier cream</li> <li>• Wash off any concrete splashes onto the skin immediately etc.</li> </ul>	1	3	3	Supervisor	Daily
	Hydraulic oil and diesel spills	4	4	16	<ul style="list-style-type: none"> <li>• Regular daily and weekly maintenance and checks and servicing</li> <li>• Drip trays to be positioned under pumps and agitators – checked and emptied regularly</li> <li>• Spill kits readily available</li> <li>• Environmental receptors known / measures in place</li> </ul>	2	2	4	Supervisor	Daily

Site Specific control measures are to be added to the project specific Works Package Plan (produced on the database system)

Where Residual Risk = Further Review (yellow) – revisit controls and check if risk has been reduced SFAIRP. If this is the case the task can continued as per risk assessment.

Hierarchy of Risk Reduction – a) Elimination, b) Substitution, c) Engineering Controls, d) Signage / Warnings and / or Administrative Controls, e) PPE

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