

JOB SAFETY AND ENVIRONMENTAL ANALYSIS

Project Name: Kiribati Road Rehabilitation Project/ KIR – 12/01

JSEA No: 020 X014

2536

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Activity/Location: Establishment of the AC plant.

Approved By Mark Lees

PREPARED/REVIEWED	
NAME	DATE
Timani Samau	18/12/13
Mark Lees	13 Feb 14

SAFE WORK INSTRUCTIONS (SWIs) & ENVIRONMENT PROTECTION INSTRUCTIONS (EPIs) RELEVANT TO THIS WORK			
K001-Operating Plant	<input checked="" type="checkbox"/>	K044-Exposure to Noise	<input checked="" type="checkbox"/>
K002-Using Powered Small Plant	<input checked="" type="checkbox"/>	K051-Welding & Cutting Drums & Vessels	<input checked="" type="checkbox"/>
K003-Using Laser Survey Equipment	<input checked="" type="checkbox"/>	K052-Stacking & Storage of Materials	<input checked="" type="checkbox"/>
K004-Using Hand Tools	<input checked="" type="checkbox"/>	K053-Trenching & Excavations	<input checked="" type="checkbox"/>
K113 Electrically Powered Hand Tools	<input checked="" type="checkbox"/>	K126 Concrete Pumping	<input checked="" type="checkbox"/>
K115 Compressed Air	<input checked="" type="checkbox"/>	K129 Hazardous Chemicals – Storage & use	<input checked="" type="checkbox"/>
K116 Oxyacetylene	<input type="checkbox"/>	K072-Working with Asbestos	<input type="checkbox"/>
K114 Explosive Powered Tools and Power Actuated Tools	<input type="checkbox"/>	K130 Manual Handling	<input checked="" type="checkbox"/>
K108 Ladders Use	<input checked="" type="checkbox"/>	K132 Personal Protective Equipment	<input checked="" type="checkbox"/>
K010-Erecting & Using Mobile Scaffolding	<input type="checkbox"/>	K083-Communicable Disease	<input checked="" type="checkbox"/>
K011-Erecting & Using Fixed Scaffolding	<input checked="" type="checkbox"/>	K136 Fitness for Work	<input checked="" type="checkbox"/>
K012-Lifting & Slinging	<input checked="" type="checkbox"/>		
K117 Electric Arc Welding Equipment	<input checked="" type="checkbox"/>	L001-Soil Erosion Sediment. & Surface Run-Off	<input checked="" type="checkbox"/>
K014-Using Electrical Equipment	<input checked="" type="checkbox"/>	L002-Disturbance to Terrestrial Flora & Fauna	<input type="checkbox"/>
K015-Operating Cranes	<input checked="" type="checkbox"/>	L003-Disturbance to Aquatic Flora & Fauna	<input checked="" type="checkbox"/>
K016-Operating Light Vehicles	<input checked="" type="checkbox"/>	L004-Noise Emissions	<input checked="" type="checkbox"/>
K018-Using a Workbox	<input type="checkbox"/>	L005-Atmospheric Emissions	<input checked="" type="checkbox"/>
K024-Demolition	<input type="checkbox"/>	L006-Vibration	<input checked="" type="checkbox"/>
K031-Work Near Plant	<input checked="" type="checkbox"/>	L007-Storage, Maint. & Refuelling Machinery	<input checked="" type="checkbox"/>
K032-Work Near Underground Services	<input checked="" type="checkbox"/>	L008-Storage & Handling of Hazardous Subs.	<input checked="" type="checkbox"/>
K033-Work Near Overhead Power Lines	<input type="checkbox"/>	L009-Social Impact	<input checked="" type="checkbox"/>
K124 Water Awareness	<input checked="" type="checkbox"/>	L010-Land Restoration & Rehabilitation	<input checked="" type="checkbox"/>
K035-Working Close to Traffic	<input checked="" type="checkbox"/>	L011-Potential for Bush Fires	<input type="checkbox"/>
K105 Height	<input checked="" type="checkbox"/>	L012-Infectious Plant, Disease & Weeds	<input type="checkbox"/>
K037-Sunburn & Skin Cancer	<input checked="" type="checkbox"/>	L013-Solid and Liquid Waste	<input checked="" type="checkbox"/>
K038-Thermal Stress-Heat	<input checked="" type="checkbox"/>	L014-Disturbance to Cultural Heritage	<input type="checkbox"/>
K039-Thermal Stress-Cold	<input type="checkbox"/>	L015-Land Contamination	<input checked="" type="checkbox"/>
K040-Remote & Isolated Work	<input type="checkbox"/>	L016-Visual Amenity	<input checked="" type="checkbox"/>
K041-Housekeeping-Access & Egress	<input checked="" type="checkbox"/>	L017-Energy & Water Consumption	<input checked="" type="checkbox"/>
K043-Cyclonic Conditions	<input type="checkbox"/>	L018-Acid Sulphate Soils	<input type="checkbox"/>

PREPARATION NOTES

- Input from persons doing the work.
- Be thorough when describing the basic job steps.
- Preferably use control measures that engineer out the risk e.g. handrails, guarding.
- Refer to the relevant CEPs, SWIs or EPIs in the control measures.
- Make sure all hazards related to the work site are identified and controlled - there may be hazards that are not addressed in the CEP, SWI or EPI.
- Supervisor to provide relevant information (methodology, technical details) from CEPs and Project Risk Register.

PPE			
Standard PPE applicable to all activities as noted on this JSEA are as follows:			
Safety Footwear	<input checked="" type="checkbox"/>	Safety Helmet	<input checked="" type="checkbox"/>
High Visibility Clothing	<input checked="" type="checkbox"/>	Long Sleeved Shirt	<input checked="" type="checkbox"/>
Long Trousers	<input checked="" type="checkbox"/>	Gloves	<input checked="" type="checkbox"/>
Safety Glasses	<input checked="" type="checkbox"/>		
Note: Other specific PPE is to be identified as part of this risk assessment and listed under "How to Control the Risk" on the following pages. (X indicates use is mandatory)			

JOB SAFETY AND ENVIRONMENTAL ANALYSIS

Project Name: **Insert Business Unit Name Here**

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Activity/Location: Establishment of the AC plant.

Any significant hazards as defined in the Health & Safety in Employment Act 1992, Part 2 must be **Eliminated** / **Isolated** / **Minimised** and result recorded in the end column.

Basic Job Step	What Can Harm You or the Environment	What Can Happen (Risks)	How To Control the Risk (Reduce)	E/I/M
General				
	Untrained personnel Unfamiliar work environment rules and regulations	Personal injury Put others at risk	All personnel to be induction before starting on project Daily prestart conducted by supervisors and everyone to sign attendance sheet Supervisor to brief all new starts on JSEA and everyone to sign daily S T A R T cards	E
	Heat and Sun exposure	Dehydration Sun Burn Skin Cancer Heat Stroke	Drink adequate water Apply sunblock, wear sunglasses with UV protection Take appropriate breaks Sun brim for Safety helmets	M
	Dirty work area	Tripping or falling Cave in, crushing	Clean work space Excavated material stacked away from trench edge Build shoring to prevent the walls caving in	I
	Public access	Public getting injured	Safety fencing around excavation area Traffic control Public notification	I
Surveying	Traffic	Bodily harm-Vehicle colliding into person	Traffic Control- refer to traffic management plan. Ensure all road safety signs are installed around survey work site	M

JOB SAFETY AND ENVIRONMENTAL ANALYSIS

Basic Job Step	What Can Harm You or the Environment	What Can Happen (Risks)	How To Control the Risk (Reduce)	E/I/M
General				
	Laser survey equipment	Laser can damage eyes	Operator to never point laser equipment near any persons eyes.	M
	Inserting survey pegs	Crushing hand injury	Wear gloves	M
	Falling coconuts	Bodily harm or injury	Wear hard hat Avoid setting up beneath coconuts if possible	M
	Lack of communication	Bodily harm or injury	Work in peers- Use of radios. Prestart and notify other staff on location of survey Keep mobile phone on.	M
	Bush and loose rubbish	Cuts, scratches, and infection	Wear long sleeves at all times and gloves when necessary. Use hand sanitiser after handling any rubbish.	M
	Sea or lagoon	Drowning	Wear life jacket and appropriate swimwear when surveying in the sea. Survey during low tide	M
	Unstable ground	Trip or fall	Access the ground conditions before walking on	
<i>Clearing & Grubbing</i>	Moving Plant	Personal Injury	<ul style="list-style-type: none"> Stay in line of sight of operator Keep clear of machine Spotter to look out for members of the public especially children 	M
	Working close to traffic	Personal Injury	<ul style="list-style-type: none"> Traffic Control in place before work starts Traffic control measures to be monitored and adjusted as required 	I

JOB SAFETY AND ENVIRONMENTAL ANALYSIS

Basic Job Step	What Can Harm You or the Environment	What Can Happen (Risks)	How To Control the Risk (Reduce)	E/I/M
General				
	Refuelling and handling and storing chemicals fuels and oils	<ul style="list-style-type: none"> • Pollution, spills • Flammable products 	<ul style="list-style-type: none"> • Approved method and equipment, use of funnel and bowser system • Use of drip tray in mobile procedure • Refuel on hardstand area in workshop • Spill kit available • NO SMOKING during refuelling or within 20 metres of flammable products • Spill response • Stop refuelling immediatley • Secure spill area using absorbant pads/socks • Spread absorbant materials to collect spilled product • Report spill to supervisor • Place contaminated materails into plastic bag and disposed of in secure container • Complete environmental incident form 	M
	Earth trimming	Disease	<ul style="list-style-type: none"> • Wear gloves handling waste material • Wash hands before eating • Report contaminated ground 	M
	Soil erosion & Sedimentation	Silt to stormwater	<ul style="list-style-type: none"> • Shape the cleared ground to promote seepage & avoid runoff • Silt curtain to be used if above not possible 	E
	Hot weather	Sunburn & Heat Exhaustion	<ul style="list-style-type: none"> • Provide clean water to drink • Sunscreen 	M
	Falling branches, coconuts	Personal Injury	<ul style="list-style-type: none"> • Cordon off if possible otherwise use spotter • Stop traffic flow for branch falling if needed 	I

JOB SAFETY AND ENVIRONMENTAL ANALYSIS

Basic Job Step	What Can Harm You or the Environment	What Can Happen (Risks)	How To Control the Risk (Reduce)	E/I/M
General				
	Damage to property	Community relationship damaged	<ul style="list-style-type: none"> • Ensure clearance work is as per engineer instruction only • Stop if activity will cause damage & notify supervisor 	E
	Falling off work platform	Personal injury	<ul style="list-style-type: none"> • Install handrail • Truck cannot move when workers are trimming • Workers off platform to the deck when truck is moving • Spotter for truck driver to tell him where & when to move. • Spotter to inform workers when it is safe to continue work 	M
	Using bush knife	Cuts	<ul style="list-style-type: none"> • Swipe knife away from others 	I
	Manual Handling	Personal Injury	<ul style="list-style-type: none"> • Do not lift more than what you are capable of • Ask someone to help • Or use the machine 	M
	Hole in ground	Trip, fall	<ul style="list-style-type: none"> • Backfill where tree stumps have been removed straight away • Fence off if cannot backfill 	I
	Noise from chainsaws, plate compactor, mulcher	Personal Injury	<ul style="list-style-type: none"> • Wear ear protection • Be aware if ear protection is being used by others – Visible communication 	I
			<ul style="list-style-type: none"> • Chainsaw protection Safety helmet with Visor. Gloves/Safety boots/wrist to ankle cover/chainsaw chaps 	M
	Underground Services	Electrocution	<ul style="list-style-type: none"> • PUB to disconnect power prior to removal of tree stumps or any excavations including any clearing and grubbing • Excavation permit to be in place • S/E to attend area and mark known cable locations with Blue paint ,only then will the S/E issue the excavation permit. • PU B representative to be present on site 	I

JOB SAFETY AND ENVIRONMENTAL ANALYSIS

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General				
			<ul style="list-style-type: none"> • Cable detection to be completed the day prior to work commencing • 	I
	Removing Car bodies	Personal injury Pollution	Correct sling and rigging Lift plan to be in place Correct disposal of any oils and lubricants Never stand under any load being lifted	E/M
	UXO	Explosion Death	Ground survey by UXO specialist	M

JOB SAFETY AND ENVIRONMENTAL ANALYSIS

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General				
<i>Chipping – Vegetation</i>	Incorrectly positioning of machine	Machinery may start creeping on uneven ground Machine could tip over	Machine should be positioned away from public access Wheels must be chocked Check for loose nuts ,bolts or foreign objects Tools not in use must be securely stored away Machine to be positioned on even ground Ensure you have correct PPE Safety Helmet Safety glasses Visor/Safety goggles Ear muffs Gloves Loose clothing secured NEVER work alone Have fire extinguisher present McConnell Dowell supervisor to be in attendance	I

JOB SAFETY AND ENVIRONMENTAL ANALYSIS

Basic Job Step	What Can Harm You or the Environment	What Can Happen (Risks)	How To Control the Risk (Reduce)	E/I/M
General				
	Feeding materials / Loose material and debris Steel on wood	Materials getting jammed Material moving around Serious injury /possible death	Ensure that all clothing is secured Loose hair is to be tied back No jewellery to be worn Always feed material in from the SIDE of the machine and walk away Do Not Feed from directly in front of the in feed area Do Not operate machine with the chipper hood open any under any circumstance Always check for steel on wood before putting into in feed chute Machine only to operated when a McConnell Dowell supervisor is present. Machine is to be locked out/tagged out when not in use ONLY McConnell Dowell supervisor is to remove tag. Supervisor to hold both keys	M
	Material Jamming in the in feed	Trying to release material	Use supplied wooden pole to encourage materials into feeder(stand to side of in feed) Switch machinery off Wait 4-5 minutes for plant to shut down Isolate machinery before attempting to release waste material	I

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Basic Job Step	What Can Harm You or the Environment	What Can Happen (Risks)	How To Control the Risk (Reduce)	E/I/M
General				
	Transporting Machinery / Oil leaks	Trailer coming free from vehicle	In feed tray to be locked in the upright position Discharge chute is in transport position over the tongue of the machine and secured Any attachments must be securely stowed Trailer to be securely attached to towing vehicle Always use safety chain when towing Check tool box ,battery box, side panels, cabinet doors, and inspection doors are properly secured.	E
	Maintenance / Moving parts	Body parts getting caught in machinery	Disengage clutch Turn off engine Wait for the chipper disc/drum to come to a complete stop Install disc/drum lock pin Disconnect battery On disc chipper insert lock pin through lock pin tube On drum chippers insert lock pin through lock pin tube on side of drum housing Do not remove hood pin until the chipper disc/drum has come to a complete stop 2 man operation at rear of machine at all times	I
Erect Security Fence Perimeter	Manual Handling	Personal Injury	<ul style="list-style-type: none"> Do not lift more than what you are capable of Ask someone to help Or use the machine 	M
	Hole in ground	Trip, fall	<ul style="list-style-type: none"> Backfill where tree stumps have been removed straight away Fence off if cannot backfill 	I

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General				
	Working close to traffic	Personal Injury	<ul style="list-style-type: none"> • If applicable Traffic Control in place before work starts • Traffic control measures to be monitored and adjusted as required • Define work area clearly isolate work site 	I
	Moving Plant	Personal Injury	<ul style="list-style-type: none"> • Stay in line of sight of operator • Keep clear of machine • Spotter to look out for members of the public especially children 	M
Construct Concrete Foundations for Mobile Asphalt Plant / Wash Down Slab				
	Underground Electrical cables	Electrocution Burns	Use CAT cable detector for initial cable survey. Isolate power between power boxes Hand dig where cables are likely to be located PUB spotters on site Excavation permit	I/M
	Underground sewer/water pipes	Contaminate ground with sewer Loss of water	Investigation from drawings Hand dig where pipes are likely to be located PUB spotters on site Excavation permit	M

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General				
	Contaminated ground	Exposure to contamination leading to illness	Isolate contaminated area Use appropriate PPE	I/M
	UXO	Explosion- injury or death	UXO Survey- Certificate for clear area Evacuate area Call police immediately Phone 992	E M
	Incorrect use of shovel/spade	Injury	Follow correct procedure Rotate workload between workers	M
	Moving plant: Digger movement Dump truck movement	Plant colliding into or crushing person	Maintain a clear distance from moving plant Ensure operator is aware of everyone's position. Use a spotter	E M
	Falling objects: Digger bucket Side or back of truck	Object colliding into or crushing person	Maintain a clear distance from digger bucket and edge of truck. Never walk under load with loose material. Barrier separating the public from the worksite	E I
	Plant or equipment failure	Oil spills	Spill kits Maintain machinery	M
	Open trench	People falling into trench	Fence off trench Good housekeeping, maintain tidy area.	I M

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General				
	Uncontrolled stockpile	Siltation to lagoon Dust	Silt fence when near sea. Use water cart on dry loose material	I E
<i>Fixing steel</i>	Sharp edges	<ul style="list-style-type: none"> Cuts and scratches 	<ul style="list-style-type: none"> Mandatory PPE Rebar caps Bend tie wire in away from work area 	M
	Protruding dowel bars	<ul style="list-style-type: none"> Trips, cuts and grazes 	<ul style="list-style-type: none"> Rebar caps to identify protruding bars Walk around areas with many obstructions rather than taking short cuts 	M
	Walking on reinforcing mats	<ul style="list-style-type: none"> Unstable footing Awkward bending position 	<ul style="list-style-type: none"> Watch where you place your feet especially when working on top of cage Regularly stretch, bend your knees rather than exerting to much stress on your back 	M
<i>Concrete works</i>	Vibrating	<ul style="list-style-type: none"> Cement Splash Vibrator jammed 	<ul style="list-style-type: none"> Wear safety glasses to prevent splashes getting in eyes Place vibrators in to concrete vertically and do not twist through reo cages Remove plant away from splash zone Stay away if there is no need to be in the immediate work area 	M
	Placement	<ul style="list-style-type: none"> Cement burns 	<ul style="list-style-type: none"> Wear gloves when handling fresh concrete Protect existing cuts and scratches from concrete Wash immediately after pour 	M
	Finishing concrete	<ul style="list-style-type: none"> Applying curing compound ie. Rugasol 	<ul style="list-style-type: none"> Follow manufactures directions MSDS available on site 	M

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General				
	General Construction Form/frame works	<ul style="list-style-type: none"> • Unsecured structures • Insufficient temporary bracing • Collapsing structures • Tripping and falling • Cutting on sharp edges • Windy conditions • Falling items • Material and plant damage 	<ul style="list-style-type: none"> • Supervision by competent trades person • Follow CEP and manufactures assembling instructions • Check bracing daily • Housekeeping • Barricade hazardless areas/isolate • Secure stored building materials • Secure permanent materials to final requirements the earliest possible • Wear mandatory PPE 	E
	General /Plant and Equipment	<ul style="list-style-type: none"> • Atmospheric emissions • Spills (fuels, oils) 	<ul style="list-style-type: none"> • All plant fitted with correct exhaust systems • Plant maintained and Spill kits available • Daily plant check lists completed and up to date • Hearing protection 	M
	Untidy site/ housekeeping	<ul style="list-style-type: none"> • Spills, rubbish, public opinion/ complaints 	<ul style="list-style-type: none"> • Tidy up after yourself • Store materials in the correct location • Keep the site looking clean and tidy • 	M
	Dust and Noise	<ul style="list-style-type: none"> • Public disturbance 	<ul style="list-style-type: none"> • Suppress dust, regular clean ups and using a water cart • Use noise efficient machinery where possible 	M
	Concrete / Fresh Cement	<ul style="list-style-type: none"> • Aquatic disturbance 	<ul style="list-style-type: none"> • Control spills and wash out of concrete • Don't pour concrete around open water wells • 	M

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General				
Erect Mobile Asphalt Plant				
<i>Manual Handling</i>	Heavy manual handling	Personal injury/lacerations	Use correct lifting method Do not lift more than the recommended 25kg Use min of two man lift Wear correct PPE (safety helmet, gloves, safety boots, wrist to ankle protection, hi-vis , glasses) Use of plant where possible	M
<i>Working close to public</i>	Insufficient demarcation of work areas Unsupervised plant	Harm, injury to public Plant damage	Work area to be coned /netted or fenced off and signs labelled to clearly define hazards on site Excavations to be covered or fenced off Do Not leave engines running or keys in when equipment is not being used	I/M
<i>Spills</i>	Contamination of water source	Environmental impacts Damage to Flora and Fauna Polluted waterways	Spill kits to be in all supervisors vehicles Silt curtain around work area within 20meters of water Store hazardous material in suitable bunded container	M

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General				
<i>Work around unknown location of underground services</i> <i>Work in UXO nominated areas</i>	<p>Damage to underground services</p> <p>Exposed wires</p> <p>Pour connections</p> <p>Insufficient cover to existing services</p> <p>Damaging UXO during excavation or handling</p>	<p>Electrocutions</p> <p>Fire</p> <p>Explosion</p>	<p>All work areas to be scanned using CAT</p> <p>Pot holing inspection to confirm depth</p> <p>PUB to be present when pot holing</p> <p>PUB to isolate as required</p> <p>Approved excavation permit to be available</p> <p>Spotter to be present when excavating around services</p> <p>Out riggers NOT to be position near any underground services</p> <p>If pot holing, UXO survey to be carried out</p>	E/M
Noise	Exceeding noise	<p>Hearing loss/damage</p> <p>Nuisance to public</p>	<p>Wear approved hearing protection</p> <p>Limit hours of operating noisy machinery (0630-1630)</p> <p>Divert public away from work site</p>	M
<i>Unloading Plant /materials</i>	<p>Roll over</p> <p>Falling objects</p> <p>Rushing against other object</p> <p>Personal injury /death</p>	Permanent or fatal injuries	<p>All materials/machinery to be brought to site on appropriate transportation</p> <p>All unloading to carried out on level and stable ground</p> <p>No personnel to stand beneath slung loads or between slung loads</p> <p>GOLDEN RULE 2</p>	M

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General				
<i>Truck Loader crane safe operation and overturning risk</i>	Set up to close to edge of embankment Unstable ground conditions	Injury/Death/Plant Damage Plant tipping	Ground to be inspected under out rigger position Check for : Holes /cracks /running water/or any signs of unstable area Wear seat belts in all plant/machinery 1mtrx 1mtr pads to be used under out riggers Ensure materials are secure before unloading Unloading to be carried out on level ground Always use a dogman when unloading Never work under a suspended load GOLDEN RULE 2 Operator to use controls nearest to storage area so as to observe dogman instructions	M
<i>Vehicle/Plant Reversing</i>	Unsupervised reversing, Insufficient vision by operator	Crushing injury Being run over	All vehicles to use designated access/egress points Ensure adequate traffic control is in place Risk assessment of work area before task commences Spotter in place for all reversing vehicles /plant	M

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General				
<i>Lifting plant/materials with crane/excavator</i>	<p>Objects falling while being moved</p> <p>Failing lifting equipment</p> <p>Exceed capacity of crane or excavator</p> <p>Poor communication and planning</p> <p>Suspended loads</p>	<p>Crushing injury</p> <p>Death</p> <p>Personal injury</p>	<p>Visually inspect lifting equipment at start of each day, report any defects</p> <p>Ensure all lifting equipment has a current tag and load rated every 12 months</p> <p>Lifting points on Diggers are to be certified</p> <p>Do not lift with bucket attached to machine</p> <p>Never use a lifting point on a bucket</p> <p>Use tag lines on items which require guiding into place</p> <p>Use swift lifts where appropriate</p> <p>Tag any inoperable or unsafe lifting equipment with DO NOT use tags</p> <p>Ground personnel to never be under a lifting load/drop zone</p> <p>Lifting and handling to be done in a smooth and controlled manner</p> <p>Lift plan to be carried out by supervisor</p> <p>Never stand under a suspended load</p> <p>Use Tag lines to guide the load</p> <p>Visually check all strops and chains before use</p>	E/M
<i>Plant and equipment</i>	Operating, moving, reversing plant	<ul style="list-style-type: none"> • Bodily harm • Plant damage 	<ul style="list-style-type: none"> • Operators competent or to operate under a competent supervisor • Operators to perform Daily Plant inspections correctly and accurately • Never exceed the capacity of the machine • Hearing protect to be worn • Spotters to be used when reversing all plant 	M

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General				
	Lifting and Slinging	<ul style="list-style-type: none"> • Load falls • Crushing injury • Plant damage 	<ul style="list-style-type: none"> • Experienced/ licensed operators • Check all lifting gear prior to using • Remove any gear with defects • Rigging and dogging done by competent persons • Never exceed the capacity of the crane truck or Excavator, Terex crane • Never lift over work areas or walk under slung loads • Check and inspect truck crane and boom weekly • Lift plan to put place for all lifts 	M
	Electrical tools	<ul style="list-style-type: none"> • Electrocution • Electrical burns 	<ul style="list-style-type: none"> • GOLDEN RULE 8 – never use faulty or damaged electrical equipment • Use electrical tools away from water • No leads in the water • RCD at all times/ Electrically gear tested 3 monthly • Do not remove any safety guards • Ensure leads are tagged and damaged gear is removed 	M
	Drilling ,Grinding, cutting	<ul style="list-style-type: none"> • Bodily harm • Plant damage 	<ul style="list-style-type: none"> • Wear correct PPE including face shield and safety glasses, leather gloves • Suitable lighting • All items to be secured prior work commencing • Use the correct piece of equipment for the job • Permit for all hot works 	M

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General				
	Jacking	<ul style="list-style-type: none"> • Load slipping • Bodily harm • Plant damage • Packing collapsing 	<ul style="list-style-type: none"> • Correct packing and bearing • Do not overload jack • Monitor object and jack during operation • Use safety stands 	M
	Hot Works	<ul style="list-style-type: none"> • Burns • Arc eye 	<ul style="list-style-type: none"> • Wear correct PPE to protect from sparks • Use correct eye protection, and others never watch welding operations • Competent welders, gas cutter's and grinder users only – according to register • Erect welding shields if required • Hot works permit • Ensure flashback arrester are in place • Fire protection in place 	M
	Compressed Air	<ul style="list-style-type: none"> • Blood clots 	<ul style="list-style-type: none"> • Never clean yourself with compressed air, if it gets into cuts or grazes it can cause blood clots • Use all the correct fittings and whip checks 	M
	Sharp edges	<ul style="list-style-type: none"> • Cuts and scratches 	<ul style="list-style-type: none"> • Mandatory PPE(safety helmet,gloves,steel cap boots. Wrist to ankle clothing HiViz,safety glasses,) • Rebar caps • Bend tie wire in away from work area 	M

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Basic Job Step	What Can Harm You or the Environment	What Can Happen (Risks)	How To Control the Risk (Reduce)	E/I/M
General				
	Ladders and scaffolding	<ul style="list-style-type: none"> • Falling from heights • Falling equipment and materials from heights • Injury 	<ul style="list-style-type: none"> • GOLDEN RULE 3 – Never work at height without fall protection • Use of light weight mobile scaffolding • Check scaffolding daily • Secure ladders top and bottom • Eliminate to work off ladders • Keep areas below working on heights areas clear/barricade • Wear safety harnesses if scaffolding is not possible • Replace ladders with working platforms 	M
	Confined space	<ul style="list-style-type: none"> • Entrapment 	<ul style="list-style-type: none"> • GOLDEN RULE 10 – Never enter a confined space unless you have appropriate training and equipment. • Permit • Resue plan • Hole watch • Safety Harness • Trained in confirmed entry • Respirator/Dust mask if needed 	M

JOB SAFETY AND ENVIRONMENTAL ANALYSIS

Basic Job Step	What Can Harm You or the Environment	What Can Happen (Risks)	How To Control the Risk (Reduce)	E/I/M
General				
	350 kva Generator (Energised Equipment)	<ul style="list-style-type: none"> • Electrocution 	<ul style="list-style-type: none"> • GOLDEN RULE 8 – never use faulty or damaged electrical equipment • Never attempt to disconnect/refuel generator unless you have appropriate training and equipment. Authorised personnel only. • Establish safe working instruction to operate Generator • No leads in the water/ Use PVC Pipes to protect wires from exposure to staff and plant • RCD at all times/ Electrically gear tested 3 monthly • Do not remove any safety guards • Ensure leads are tagged and damaged gear is removed 	I/M
<i>Plant and equipment (Loaders, Trucks, Forklift, Etc)</i>	Operating, moving, reversing plant	<ul style="list-style-type: none"> • Bodily harm • Plant damage • Generate dust 	<ul style="list-style-type: none"> • GOLDEN RULE 4 Working near mobile plant – Keep clear of moving plant • GOLDEN RULE 5 Operating Mobile Plant – Always be aware of other plant and pedestrians when operating mobile plant • GOLDEN RULE 6 Driving vehicles – Always drive to the conditions, always wear seatbelt • Operators competent or to operate under a competent supervisor • Operators to perform Daily Plant inspections correctly and accurately • Never exceed set speed limit in yard • Define clear traffic movement in the yard to avoid confusion 	M



JOB SAFETY AND ENVIRONMENTAL ANALYSIS

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JSEA No: 020 X014 2536 Rev: A Supervisor Name: _____

INDUCTION / REVIEW

DATE	NAME	SIGNATURE

DATE	NAME	SIGNATURE