

JOB SAFETY AND ENVIRONMENTAL ANALYSIS

Project Name: **Kiribati Road Rehabilitation Project**

JSEA No: **020**

X013 2536

Rev: 1 Page 1 of 6

Activity/Location: **Concrete Batch Plant**

Approved By

Mark Liersch

| PREPARED/REVIEWED | |
|-------------------|------------|
| NAME | DATE |
| Tim Grant | 30/09/13 |
| M Wynne | 27/12/2013 |
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| SAFE WORK INSTRUCTIONS (SWIs) & ENVIRONMENT PROTECTION INSTRUCTIONS (EPIs) RELEVANT TO THIS WORK | | |
|--|-------------------------------------|--|
| K001-Operating Plant | <input type="checkbox"/> | K044-Exposure to Noise <input checked="" type="checkbox"/> |
| K002-Using Powered Small Plant | <input type="checkbox"/> | K051-Welding & Cutting Drums & Vessels <input type="checkbox"/> |
| K003-Using Laser Survey Equipment | <input type="checkbox"/> | K052-Stacking & Storage of Materials <input type="checkbox"/> |
| K004-Using Hand Tools | <input type="checkbox"/> | K053-Trenching & Excavations <input type="checkbox"/> |
| K113 Electrically Powered Hand Tools | <input type="checkbox"/> | K126 Concrete Pumping <input type="checkbox"/> |
| K115 Compressed Air | <input type="checkbox"/> | K129 Hazardous Chemicals – Storage & use <input 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 type="checkbox"/> |
| K010-Erecting & Using Mobile Scaffolding | <input type="checkbox"/> | K083-Communicable Disease <input type="checkbox"/> |
| K011-Erecting & Using Fixed Scaffolding | <input type="checkbox"/> | K136 Fitness for Work <input type="checkbox"/> |
| K012-Lifting & Slings | <input type="checkbox"/> | |
| K117 Electric Arc Welding Equipment | <input type="checkbox"/> | L001-Soil Erosion Sediment. & Surface Run-Off <input type="checkbox"/> |
| K014-Using Electrical Equipment | <input type="checkbox"/> | L002-Disturbance to Terrestrial Flora & Fauna <input type="checkbox"/> |
| K015-Operating Cranes | <input type="checkbox"/> | L003-Disturbance to Aquatic Flora & Fauna <input type="checkbox"/> |
| K016-Operating Light Vehicles | <input type="checkbox"/> | L004-Noise Emissions <input type="checkbox"/> |
| K018-Using a Workbox | <input type="checkbox"/> | L005-Atmospheric Emissions <input type="checkbox"/> |
| K024-Demolition | <input type="checkbox"/> | L006-Vibration <input type="checkbox"/> |
| K031-Work Near Plant | <input type="checkbox"/> | L007-Storage, Maint. & Refuelling Machinery <input type="checkbox"/> |
| K032-Work Near Underground Services | <input type="checkbox"/> | L008-Storage & Handling of Hazardous Subs. <input type="checkbox"/> |
| K033-Work Near Overhead Power Lines | <input type="checkbox"/> | L009-Social Impact <input type="checkbox"/> |
| K124 Water Awareness | <input type="checkbox"/> | L010-Land Restoration & Rehabilitation <input type="checkbox"/> |
| K035-Working Close to Traffic | <input type="checkbox"/> | L011-Potential for Bush Fires <input type="checkbox"/> |
| K105 Height | <input type="checkbox"/> | L012-Infectious Plant, Disease & Weeds <input type="checkbox"/> |
| K037-Sunburn & Skin Cancer | <input type="checkbox"/> | L013-Solid and Liquid Waste <input 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 type="checkbox"/> |
| K040-Remote & Isolated Work | <input type="checkbox"/> | L016-Visual Amenity <input type="checkbox"/> |
| K041-Housekeeping-Access & Egress | <input type="checkbox"/> | L017-Energy & Water Consumption <input 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 X | Safety Helmet X | High Visibility Clothing X | |
| Long Trousers <input checked="" type="checkbox"/> | Long Sleeved Shirt <input checked="" type="checkbox"/> | | <input type="checkbox"/> |
| Safety Glasses <input checked="" type="checkbox"/> | Gloves <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) | | | |

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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 | 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 |
| | Traffic | Vehicle Colliding into body | Traffic control Correct signage | I/M |
| | Public access | Public getting injured | Safety fencing around excavation area Traffic control Public notification | I |
| | Noise | Hearing loss/damage Nuisance to public | Wear approved hearing protection Limit hours of operating noisy machinery (0630-1630) Divert public away from 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 |
|-------------------|--------------------------------------|--|--|-------------|
| | Oil Spills | Oil spills leading to: Contamination of water source Damage to Flora and Fauna Polluted waterways | Spill kits to be carried in all supervisors vehicles Silt curtain around work area within 20meters of water Store hazardous material in suitable Bunded container | M |
| Cement De-bagging | Cement dust | Pollution Breathing in dust Cement in eyes | Silt fences around de-bagger to prevent wind entering and dust leaving. Full gas respirator for persons breaking bags, and dust masks for other personnel nearby Full goggles to be worn by de-bagging persons | I M M |
| | Manual Lifting cement bags | Body injury | Two man lift Bend knees, keep back straight Keep access clear | M |
| | Cement screw | Hands getting caught and jammed | Never to put hands past cement grate. Someone always to have readily access to safety switch Stop engine and lock out plant before putting anything into the screw | E I E |
| | Cement bag rubbish | Pollution | Store all used cement bags in designated bag which is then filled and disposed of in the landfill | I |
| Loading aggregate | Moving loader | Person getting run over | Stay clear of loader path Make sure loader operator can see you Use spotter to assist loader operator. | I M |
| | Falling aggregate | Aggregate falling onto someone | Stay clear of aggregate hopper sides | M |
| | Conveyor belt | Hands getting jammed in moving parts | Never to put hands on moving parts, stop conveyor before touching any moving parts. Someone always to have readily access to the safety switch | E 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 |
|---------------------------|--------------------------------------|---------------------------------------|---|-------|
| Slumping concrete | Moving truck bowl | Hands getting squashed | Never to reach into truck bowl. Do not climb access ladder while truck bowl is moving | E |
| | Accessing slump stand | Tripping or falling | Hold onto handrail while climbing steps Maintain three points of contact when accessing ladder at all times Keep access clear | M |
| | Adding additive | Spill on hands Spill on ground | Wear gloves Spill kit nearby Use pump to control additive flow Drums to stored on Bunded pallets Ensure all products are clearly labelled | M |
| Operating Concrete Trucks | Unloading washed out trucks | Pollution of environment | Only wash concrete trucks in designated concrete wash pit Slurry pit to fenced off to prevent unauthorised access Slurry pit to be emptied on a regular basis | I |
| | Washing chute with truck hose | Trip or fall from ladder | Hold onto hand rails when climbing ladder Maintain three points of contact when accessing by ladder Always have at least one hand holding onto hand rail while at the top | M |
| | Reversing into position | Person getting run over | Always use a spotter when reversing | M |
| | Un-hooking and positioning chute | Hands getting squashed Body injury | Keep hands clear of folding joints Correct lifting technique | M |

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Supervisor Name: _____

INDUCTION / REVIEW

| DATE | NAME | SIGNATURE |
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