

JOB SAFETY AND ENVIRONMENTAL ANALYSIS

Project Name: **Kiribati Road Rehabilitation Project**

JSEA No: **020**

X00C 2536

Rev: 1 Page 1 of 9

Activity/Location: Excavations

Approved By

Mark Liersch

PREPARED/REVIEWED	
NAME	DATE
Tim Grant	24/8/13
Michael Wynne(reviewed)	30December 2013

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 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 checked="" type="checkbox"/>
K005-Using Electrically Operated Tools <input type="checkbox"/>	K055-Concrete Pumping <input type="checkbox"/>
K006-Using Compressed Air <input type="checkbox"/>	K071-Hazardous Substances <input type="checkbox"/>
K007-Using Oxyacetylene <input type="checkbox"/>	K072-Working with Asbestos <input type="checkbox"/>
K008-Using Explosive Powered Tools <input type="checkbox"/>	K081-Manual Handling <input checked="" type="checkbox"/>
K009-Using Ladders <input type="checkbox"/>	K082-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"/>	K084-Fitness for Work <input type="checkbox"/>
K012-Lifting & Slinging <input type="checkbox"/>	
K013-Using Electric Arc Welding Equipment <input type="checkbox"/>	L001-Soil Erosion Sediment. & Surface Run-Off <input checked="" 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 checked="" type="checkbox"/>	L007-Storage, Maint. & Refuelling Machinery <input type="checkbox"/>
K032-Work Near Underground Services <input checked="" 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"/>
K034-Working over or near to water <input type="checkbox"/>	L010-Land Restoration & Rehabilitation <input type="checkbox"/>
K035-Working Close to Traffic <input checked="" type="checkbox"/>	L011-Potential for Bush Fires <input type="checkbox"/>
K036-Working at Height <input 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 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 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 <input checked="" type="checkbox"/>	Safety Helmet <input checked="" type="checkbox"/>	High Visibility Clothing <input checked="" type="checkbox"/>	
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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Activity/Location: **Excavations**

Basic Job Step	What Can Harm You or the Environment	What Can Happen (Risks)	How To Control the Risk (Reduce)	E/I/M
Health and Safety				
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

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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
Pot Holing (by Hand)/ Digging with Excavator/ Loading Dump Trucks	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 Site Engineers to mark known services using Blue spray paint ,before task commences. Supervisor to obtain written diagram from S/E and attach the excavation permit Supervisor to carry out site walk down before starting work to identify and other unknown hazards	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
	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 192	E M
	Incorrect use of shovel/spade	Injury	Follow correct procedure Rotate workload between workers	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
	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
	Uncontrolled stockpile	Siltation to lagoon Dust	Silt fence when near sea. Use water cart on dry loose material	I E

