

# JOB SAFETY AND ENVIRONMENTAL ANALYSIS

Project Name: **Kiribati Road Rehabilitation Project**

JSEA No: **020**

X00D **2536**

Rev: 1 Page 1 of 9

Activity/Location: Hiab /Excavator lifting Operations

Approved By

Mark Liersch

PREPARED/REVIEWED	
NAME	DATE
Michael Wynne	16 August 2013
Michael Wynne (reviewd )	30 December

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 checked="" type="checkbox"/>
K004-Using Hand Tools <input type="checkbox"/>	K053-Trenching & Excavations <input 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 type="checkbox"/>
K009-Using Ladders <input type="checkbox"/>	K082-Personal Protective Equipment <input checked="" 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 checked="" type="checkbox"/>	
K013-Using 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 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 type="checkbox"/>	L013-Solid and Liquid Waste <input 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 type="checkbox"/>
K040-Remote & Isolated Work <input type="checkbox"/>	L016-Visual Amenity <input type="checkbox"/>
K041-Housekeeping-Access & Egress <input checked="" 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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Basic Job Step	What Can Harm You or the Environment	What Can Happen (Risks)	How To Control the Risk (Reduce)	E/I/M
<b>Health and Safety</b>				
Traffic	Insufficient Traffic management	Personal injury Damage to site or damage to public vehicles	Adhere to approved Traffic management plan, remain within defined protected areas Traffic management plan as set out in the PEP Daily site check by Supervisor ,weekly site audit	I
Trips and falls/slips	Poor housekeeping Unlevel areas	Personal injury	Good housekeeping to be maintained Remove any trip hazards No climbing on or over stock piled material Stored plies to be chocked	M/E
Manual Handling	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 mechanical lifting device	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
New arrivals on site onsite	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
Working close to public	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
Spills	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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Basic Job Step	What Can Harm You or the Environment	What Can Happen (Risks)	How To Control the Risk (Reduce)	E/M
Work around unknown location of underground services Work in UXO nominated areas	Damage to underground services Exposed wires Poor connections Insufficient cover to existing services Damaging UXO during excavation or handling	Electrocutions Fire Explosion	All work areas to be scanned using CAT Pot holing inspection to confirm depth PUB to be present when pot holing PUB to isolate as required Approved excavation permit to be available Spotter to be present when excavating around services Out riggers <b>NOT</b> to be position near any underground services If pot holing, UXO survey to be carried out	E/M
Noise	Exceeding 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
Unloading Plant /materials	Roll over Falling objects Rushing against other object Personal injury /death	Permanent or fatal injuries	All materials/machinery to be brought to site on appropriate transportation All unloading to carried out on level and stable ground No personnel to stand beneath slung loads or between slung loads <b>GOLDEN RULE 2</b>	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
Truck Loader crane safe operation and overturning risk	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 <b>GOLDEN RULE 2</b> Operator to use controls nearest to storage area so as to observe dogman instructions	M
Vehicle/Plant Reversing	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

## 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
Lifting plant/materials with crane/excavator	Objects falling while being moved Failing lifting equipment Exceed capacity of crane or excavator Poor communication and planning Suspended loads	Crushing injury Death Personal injury	Visually inspect lifting equipment at start of each day, report any defects Ensure all lifting equipment has a current tag and load rated every 12 months Lifting points on Diggers are to be certified Do not lift with bucket attached to machine Never use a lifting point on a bucket Use tag lines on items which require guiding into place Use swift lifts where appropriate Tag any inoperable or unsafe lifting equipment with <b>DO NOT</b> use tags Ground personnel to never be under a lifting load/drop zone Lifting and handling to be done in a smooth and controlled manner <b>Lift plan</b> to be carried out by supervisor Never stand under a suspended load Use Tag lines to guide the load Visually check all strops and chains before use	E/M
General	Hot Weather Insufficient water intake Exposure to sun	Dehydration	Adequate water supply for work crews Regular breaks Safety helmets with sun brims	I/M

