PARADISE BEACH ELEVATED WATER TANK PROJECT

BASELINE RISK ASSESSMENT

RISK ASSESSMENT NUMBER	RA 01	RISK ASSESSMENT SCOPE	BASELINE RISK ASSESSMENT
CONTRACT NUMBER	TBC	AREA WORK WILL BE PERFORMED IN	PARADISE BEACH
RISK ASSESSMENT DATE	13/03/2023	METHOD STATEMENT NO & DESCRIPTION	TO BE SUBMITTED BY THE PRINCIPAL CONTRACOTR
REVISION NUMBER	0	BRIEF DESCRIPTION OF WORK TO BE DONE	REPAIRS TO THE ELEVATED WATER TANK

PREPARED BY:					
Initials and Surname	Sebenza Risk Management	Signature	Reviewed:	YES	NO
Sally van der Riet	OHS Agent				
			Risk Assessment team:		
ACCEPTED BY THE PRINCIPAL CONTRACTOR:			Comments:		
Initials and Surname	OWNER	Signature		AVAILABLE	ADEQUATE
				Yes / No	Yes / No
			Procedures	N/A	
			Training	N/A	
APPROVED BY:					
Initials and Surname	CLIENT	Signature	Review date:		

RISK MATRIX		CONSEQUENCE & EXPOSURE (Where an event has more than one 'Consequence Type', choose the 'Consequence Type' with the highest rating)				
Consequence Type		**1 - Insignificant**	**2 - Minor**	**3 - Moderate**	**4 - High**	**5 - Major**
		Exposure - Incident site, a few workforce, minimal time	Exposure - Localized, a few of workfce, some of the time	Exposure - Plant Wide, some workfoce, some of the time	Exposure - Immediate neighbours, most of workforce, most of the time	Exposure- Community, most of work force most of the time
Safety / Health		First aid case / Exposure to minor health risk	Medical treatment case / Exposure to major health risk	Lost time injury / Reversible impact on health	Single fatality or loss of quality of life / Irreversible impact on health	Multiple fatalities / Impact on health ultimately fatal
Environmental		Minimal environmental harm	Material environmental harm - incident remediable short term	Serious environmental harm - incident remediable	Major environmental harm	Extreme environmental harm - incident irreversible
Financial		No disruption to operation / 5% loss of budgeted operating profit/listed assets	Brief disruption to operation / 10% loss of budgeted operating profit/listed assets	Partial shutdown / 15% loss of budgeted operating profit/listed assets	Partial loss of operation / 20% loss of budgeted operating profit/listed assets	Substantial or total loss of operation / 25% of loss budgeted operating profit/listed assets
Legal & Regulatory		Low level legal issue	Minor legal issue; noncompliance and breaches of the law	Serious breach of law; investigation/report to authority, prosecution and or moderate penalty possible	Major breach of the law; considerable prosecution and penalties	Very considerable penalties and prosecutions. Multiple law suits and jail terms
Reputation / Social / Community		Slight impact - public awareness may exist but no public concern	Limited impact - local public concern	Considerable impact - regional public concern	National impact - national public concern	International impact - international public attention
LIKELIHOOD		**RISK LEVEL**				
5 - Almost Certain (Consistant)	The unwanted event has occurred frequently; occurs in order of one or more times per year & is likely to reoccur within 1 year (weekly, daily)	11 (Medium)	**16 (Significant)**	**20 (Significant)**	**23 (High)**	**25 (High)**
4 - Likely (Often)	The unwanted event has occurred infrequently; occurs in order of less than once per year & is likely to reoccur within 5 years (Monthly)	7 (Medium)	12 (Medium)	**17 (Significant)**	**21 (High)**	**24 (High)**
3 - Possible (Frequent)	The unwanted event has happened in the business at some time; or could happen within 10 years (Mitiple times per year)	**4 (Low)**	8 (Medium)	**13 (Significant)**	**18 (Significant)**	**22 (High)**
2 - Unlikely (infreqent)	The unwanted event has happened in the business at some time; or could happen within 20 years (every 1-5 years)	**2 (Low)**	**5 (Low)**	9 (Medium)	**14 (Significant)**	**19 (Significant)**
1 - Rare	The unwanted event has never been known to occur in the business; or it is highly unlikely that it will occur within 20 years (less than once every 5 years)	**1 (Low)**	**3 (Low)**	6 (Medium)	10 (Medium)	**15 (Significant)**
Risk Rating	**Risk Level**	**Guidelines for Risk Matrix**				
21 to 25	High	A high risk exists that management's objectives may not be achieved. Appropriate mitigation strategy to be devised immediately.				
13 to 20	Significant	A significant risk exists that management's objectives may not be achieved. Appropriate mitigation strategy to be devised as soon as possible.				
6 to 12	Medium	A moderate risk exists that management's objectives may not be achieved. Appropriate mitigation strategy to be devised as part of the normal management process.				
1 to5	Low	A low risk exists that management's objectives may not be achieved. Monitor risk, no further mitigation required.				

BASELINE RISK ASSESSMENT : SITE ESTABLISHMENT

Activities	HAZARD / ASPECT	RISK / IMPACT	RAW Risk Rating (before control			Actions needed to eliminate / lower / control risk				RESIDUAL RISK			Responsible person(s)
			Consequence	Likelihood	Total	Engineering controls	Admin - Appointments, checklist, SWP	Other - Load Tests, Permits	PPE	Consequence	Likelihood	Total	
Site Handover	Unlawfully working on site	Law suits, violating relationship with the Client	5	3	15		Minutes kept of all meetings held. All documents to be scanned as soon as they are received. Handover Document signed by all parties			5	1	5	Project Manager & Site Manager
Site Establishment - Offloading containers	Using substandard equipment used to offload containers	Has potential to cause property damage and severe injuries to employees	3	4	12		EHS Officer/Site Manager to inspect the lifting tackle equipment and machine used to offload containers that is inspected and certified to be in good use by competent Lifting Machine Inspector .	Valid Load test certificates for crane, lifting tackle equipment and inspected by competent Lifting Machine Inspector,		3	1	3	EHS Officer & Site Manager
	Incompetent crane operator and banksman operating crane and offloading containers.	Can cause severe damage to property/equipment or injuries/fatality	4	3	12		EHS Officer/Site Manager to do spot check to verify the competency of crane operator and banksman. Crane Operator and banksman to provide valid operators certificate.			4	1	4	EHS Officer, Site Manager & Crane Operator
	Placing containers in a wrong area which Client has not identified for Site Establishment	Project Delays and penalty fines from Client for site establishing in an unapproved site area.	2	5	10		Site Manager/Supervisor to be present when containers are being offloaded for Site Establishment. Site Establishment drawings to be used when containers are placed.			1	3	3	Site Manager/Supervisor
	Major oil or fuel leaks from mobile plant & vehicles	Soil or ground contamination	2	5	10	Drip Trays to be placed underneath static plant/vehicles	Mobile plant & vehicle drivers/inspectors to do daily inspections of the plant or vehicle			1	3	3	Crane operator & Supervisor
Public Safety	Open Excavations, Mobile plant, access to site	Serious injury to public	4	4	16		All excavations to be barricaded. Excavation to be inspected twice daily and photographic evidence kept on record. Relevant signage displayed i.e. deep excavations, construction vehicle. CLO to address the community regarding the risks on site. Written proof of communication to be maintained.						
Existing Services	Lack of permits obtained from the Client to identify existing services	Project delays, unauthorized works and fatalities	5	4	20		Permits to be obtained before construction works commenced from the Client. Project/Site Manager to follow drawing provided and consult with the Engineers and work with caution. Should any service be found that does not reflect on the drawing a notification must be given to Client of such.			5	2	10	Project/Site Manager & Client
Bush Clearing & Earthworks	Lack of Search and Rescue not conducted	Project delays and penalty fines from Local Government for environmental transgression	4	3	12		Project/Site Manager to ensure that Search & Rescue has been done by the Client if it is required in the area project is to be completed. Proof of Search and Rescue certificate is kept in Environmental Management file.			3	1	3	Project/Site Manager & Client

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Bush Clearing & Earthworks	Clearing outside the approved construction footprint	Project delays and penalty fines from Client for environmental transgression	4	5	20	Site demarcating and pins placed.	Site supervision at all times by a competent person in the form of Site Manager/Site Supervisor. Employees to be trained through Site Induction, Baseline Risk Assessment and Task Specific Risk Assessment trainings of not going outside approved construction footprint			4	2	8	Site Manager/ Site Supervisor
Bush Clearing & Earthworks	Workig in the bush	snakes	4	4	16		Contractor must research was kind of snakes live in the vacinity, what they look like, communicat this to employees, with the emergency procedures and nearest hospital with the required antivenom.			2	2	4	Site Manager/ Site Supervisor
Operating construction vehicles	Incompetent mobile plant operators	Have potential to cause severe damage to property/equipment or other persons	4	3	12		Site Manager/Supervisor to ensure that mobile plant is operated by competent person by checking the operators certificates and medicals			2	2	4	Site Manager/ Site Supervisor
Construction vehicles	Dark excessive smoke from faulty mobile plant/vehicles	Air pollution	4	5	20	Divert plant exhaust to away from public area. Retrofit plant with particulate reduction device to reduce dark smoke emission.	Mobile plant operators to do daily plant inspections. Faults in plant to be reported immediately to Plant Manager/Site Manager. Site Manager/Supervisor to do spot checks on checklists. Plant Manager to carry out routine maintenance of plant/equipment/vehicle. User ultra low sulphur diesel for all diesel powered plants and vehicles	. Record of Plant/Equipment/Vehicle Maintenance Service and inspections to be kept on EHS file.		4	2	8	Site Manager/Supervisor & Plant Manager
Construction vehicles	Excessive noise generated by mobile plant/vehicles being in operation	Noise pollution	4	4	16	Use noise barrier or enclosure for noisy plants especially when working close to public areas. Fit muffle or silence for noisy machines	Plant Manager to carry out routine maintenance of plant/vehicle.. Plant operators to do daily inspections of plant. Operators to switch off idling equipment and close all engine doors of plant/equipment. Site Manager/Supervisor to monitor construction work is carrying out in prescribed working hours especially in public areas. Noise warning signage to be displayed.	Record of Plant/Equipment/Vehicle Maintenance Service and inspections to be kept on EHS file.	Ear muffs/plugs to be worn.	4	2	8	Site Manager/Supervisor & Plant Manager
Construction vehicles	Excessive oil or fuel leaks from mobile plant	Soil/ground contamination	5	3	15	Drip Trays to be placed underneath static plant/vehicles	Mobile plant operators to do daily plant inspections and record of such inspection kept in EHS file on site. Faults in plant to be reported immediately to Plant Manager/Site Manager. Site Manager/Supervisor to do spot checks on checklists. Plant Manager to carry out routine maintenance of plant/vehicle. Service record of mobile plant/vehicles to be kept in file on site	Record of Plant/Equipment/Vehicle Maintenance Service and inspections to be kept on EHS file.		3	2	6	Site Manager/Supervisor & Plant Manager

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Use of construction vehicle	Dust nuisance	Environmental non compliance and project delays	5	5	25		Project Manager to submit Dust Suppression Method Statement to be approved by Client. Water source point to be identified for drawing water to be used for dust suppression measures. Water truck/s to be used to suppress dust on site		Dust mask to be worn when there is excessive dust on site	5	2	10	Project Manager, Site Manager & EHS Officer
Bush Clearing & Earthworks	Incorrect placing of topsoil	Has potential for Cost implication as top soil will be removed from one area to another.	2	5	10		Hauling and displacing of topsoil must be to an area identified by Client			2	2	4	Project Manager & Site Manager
Bush Clearing & Earthworks	Deliberately destroying flora and fauna	Environmental non compliance and project delays	5	3	15		Baseline & Task Specific Risk Assessments and Induction Trainings to be used to warn employees of not damaging or killing flora and fauna and also about No Go to Environmental Sensitive areas	Record of Training to be kept on EHS file		5	1	5	EHS Officer & Site Manager/Supervisor
Site establishment	Lack of eating & changing areas	Has potential to cause injuries to employees as they will tend to eat on site	3	4	12		Site Manager /Supervisor to ensure erecting of proper eating areas. Check on a daily basis that eating areas are kept clean			3	1	3	Site Manager/ Site Supervisor
Site establishment	Working with substandard/unsafe hand tools e.g. hammers, spades, chisels, etc..	Has potential to cause hand injuries and damage to equipment	3	4	12		Hand tools to be inspected by a competent person who has been appointed in writing. Hand tool inspector to do weekly inspections as per Techni Civils checklist. EHS Officer to do spot checks on hand tools and registers. Induction Training to be used to raise awareness to employees that no home made tools are allowed on site. Employees to be trained on SWP of Hand tools	Record of Weekly Hand Tool Inspections and SWP Training to be kept on EHS file.	Hand gloves, safety googles, dust masks, ear plugs/muffs etc..	3	1	3	EHS Officer & Site Manager/Supervisor
Site establishment	Working with substandard/unsafe potable electrical tools e.g. angle grinders, skill-saw, hand drills etc..	Has potential to cause severe injuries and electrocution which may lead to a fatality	4	3	12		Portable Electrical tools to be inspected by a competent person who has been appointed in writing. Potable Electrical tools inspector to do daily inspections as per Techni Civils register. EHS Officer to do spot checks on potable electrical tools and registers. Employees to be trained on SWP of Potable Electrical Tools	Record of Daily Potable Electrical Tools Inspections and SWP Training to be kept on EHS file.	Hand gloves, safety googles, dust masks, ear plugs/muffs etc..	3	2	6	EHS Officer & Site Manager/Supervisor
Site establishment	Employees not wearing Personal Protective Equipment (PPE) while using hand or potable electrical tools	Has a potential to cause severe injuries to user of hand/potable electrical tools	3	5	15		Toolbox Talks, Risk Assessments and Induction Training to be used to train employees about importance of wearing PPE. Supervisor to ensure all times employees are being issued out with PPE and they are wearing it correctly. EHS Officer to do spot checks on site to see employees are adhering in wearing PPE.	PPE Issue Register and training records to be kept on file.	Hard Hats, Hand gloves, safety googles, dust mask, ear muff/plugs etc…	3	2	6	EHS Officer & Site Manager/Supervisor

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			Consequence	Likelihood	Total	Engineering controls	Admin - Appointments, checklist, SWP	Other - Load Tests, Permits	PPE	Consequence	Likelihood	Total	
Site establishment	Manual Handling of building material & equipment e.g. cement bags, bricks, generators etc…	Has a potential to cause Ergonomically related injuries	3	3	9	Wheelbarrow/pallet jacks to be used to transport heavy material	Supervisor/Site Manager to ensure 25kg or a 1/3 per person weight ratio to be adhered to when lifting material or equipment. Ensure workers are informed about safe body positioning: to lift with the legs and to keep the back straight when lifting heavy objects to prevent back injuries through Induction and Toolbox trainings. Heavy and odd shaped objects to be handled by two or more workers.		Hard Hats, Hand gloves, safety googles, dust mask, ear muff/plugs, safety goggles etc…	3	1	3	EHS Officer & Site Manager/Supervisor
Site establishment	Unhygienic conditions in eating and changing areas due to poor housekeeping	Has to potential to cause health problems for the employees	2	4	8		EHS Officer/Supervision to educate and ensure employees not spitting in work and eating areas. Supervisor to ensure refuse removal system is in place. Check on a daily basis that eating and changing areas are kept clean.			1	3	3	EHS Officer & Site Supervisor
	Lack of seats in changing areas	Can cause ergonomic related injuries to employees	3	4	12		Site Manager/Supervisor to ensure that employees are provided with proper seats.			2	2	4	Site Manager
Toilet Facilities	Lack of toilet facilities	Non compliance to OHS Act 85 of 1993 and Client EHS Specifications as employees will tend to use site and surrounding areas to relief themselves	3	4	12		Suitable ablution blocks shall be erected or provided in lay down areas as soon as the project awarded; it shall be well maintained, kept clean and odourless at all times. Site Manager / Supervisor o enforce adherence at all times.	Monthly / weekly inspections shall be done and dept. on record		3	1	3	Site Manager/Supervisor
	Poor cleaning/maintenance of toilet facilities	Has a potential to cause health problems for the employees	3	4	12		Portable toilets must be protected against the wind - tied down. When using portable toilets ensure cleaning is done at least 1-2 times a week. Site Administrator/EHS Officer to enforce adherence at all times. EHS Officer/Site Supervisor to ensure toilet paper and hand soap always available. Techni Civils Container toilets to be connected to sewer line if being used by a competent person	Potable Chemical Toilets service records to be kept in EHS file.		2	3	6	EHS Officer/Site Administrator
	Biological hazards due to ablutions facilities having blockage	Has a potential to cause health problems for the employees and environmental pollution	2	4	8		Site Supervisor/EHS Officer to ensure potable chemical toilets are serviced twice a week and are protected against wind.			2	2	4	Site Supervisor & EHS Officer

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			Consequence	Likelihood	Total	Engineering controls	Admin - Appointments, checklist, SWP	Other - Load Tests, Permits	PPE	Consequence	Likelihood	Total	
Temporary Service Connections	Unsafe electrical connections/installations. Unqualified/Incompetent electrician doing connections/installations. Exposed electrical cables from distribution board to offices, stores and security not covered/buried.	Have a potential to cause electrocution which may lead to a fatality and severe injuries.	4	3	12	Electrical Lock Out Tag	Project Manager to appoint a competent and approved Electrician to do electrical installations/connections. Competence of the Electrician to be kept on EHS file Weekly DB Inspections by the qualified/competent electrician. Serviced Fire Extinguishers to close by for emergency. Site Manager to ensure that all cables from distribution boards are covered or buried underground.	COC after safe installation. Record of Weekly DB Inspections to be kept on EHS file		4	1	4	Project Manager/ Site Manager & Electrician
Temporary Service Connections	Unsafe electrical connections/installations. Unqualified/Incompetent electrician doing connections/installations. Exposed electrical cables from distribution board to offices, stores and security not covered/buried.	Fire caused by faulty/unsafe electrical connections	4	4	16		Project Manager to appoint a competent and approved Electrician to do electrical installations/connections. Competence of the Electrician to be kept on EHS file Weekly DB Inspections by the qualified/competent electrician. Serviced Fire Extinguishers to close by for emergency. item Manager to ensure that all cables from distribution boards are covered or buried underground.			4	1	4	Project Manager/ Site Manager & Electrician

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			Consequence	Likelihood	Total	Engineering controls	Admin - Appointments, checklist, SWP	Other - Load Tests, Permits	PPE	Consequence	Likelihood	Total	
Temporary Service Connections	Leaks from unsafe water connections. Incompetent person doing water connections	Water wastage	2	5	10		Project/Site Manager to appoint a competent service provider to do the water connections. Site Manager to ensure that proper water line installation is done by the appointed service provider.			1	3	3	Project Manager/ Site Manager
Temporary Service Connections	Unconsumable/dirty water	will cause a sick and unhealthy work force. Loss of production time	4	3	12	Install water purifier	Site Manager / Supervisor to ensure proper installation of portable water lines and availability at all times. The drinking water is to be checked and records of results kept. Ensure availability of clean portable water.			3	1	3	Project Manager/ Site Manager
Perimeter Fencing	Lack of perimeter fence or fence is less than 1.8m in height	Theft of property or Access to site by unauthorised persons which may lead to serious injuries to persons	5	4	20		Project/Site Manager to ensure site perimeter fence is erected and competent security guards are appointed to keep watch on site during day and night. Supervisor to put in a place a system of control. Warning signage is displayed conspicuously to keep the public away from site.			5	2	10	Project Manager/ Site Manager & Supervisor
Fire Extinguisher	Lack of or unserviced/damaged/faulty Fire Extinguishers	Failure to extinguish fires, which may result in severe injuries to employees/property damage and loss of production time	4	3	12		Project/Site Manager to appoint a competent person as Emergency Coordinator & Fire Equipment Inspector. Fire Equipment to be inspected on weekly as per Techni Civils register and record of such kept in EHS file. Fire Equipment Inspector to ensure faulty/damaged/unserviced fire extinguishers are sent for repairs to a competent service provider/ removed from site immediately.			3	1	3	Project/Site Manager & Fire Equipment Inspector
First Aid Box & Station	Lack of First-Aid box and equipment. First-aid box not controlled. Incompetent/unqualified first aider	Has a potential to cause serious injuries on employees who are injured as there is no equipment or first aider to render service. Loss of production time	3	5	15		Project/Site Manager to a appoint a qualified first aider and proof of qualification to be kept on EHS file. First Aider to ensure that first aid box contents are kept full at all times. First Aid Box and First Aider names to be displayed in a conspicuous space so that employees can see.			3	3	9	Project/Site Manager & First Aider
Personal Protective Equipment (PPE)	Lack of or employees not issued with PPE. Employees not trained in the correct usage and storage of their PPE.	Has a potential to cause serious injuries on employees.	3	5	15		EHS Manager/Officer to ensure that employees are issued with PPE and they sign PPE issue register. PPE equipment to be kept available at all times.			1	4	4	EHS Officer & Supervisor

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			Consequence	Likelihood	Total	Engineering controls	Admin - Appointments, checklist, SWP	Other - Load Tests, Permits	PPE	Consequence	Likelihood	Total	
Traffic Management & Public Safety	High volumes of traffic in the road both from construction activities and public activities. Member of the public gaining access to the construction works.	Possible accidents and fatalities, Delay cost for operational Investors.	5	4	20		Project traffic management plan that includes the potential location for parking of employee vehicles must be submitted for approval to the Client. Signage and required barricading must be displayed as per the approved plan. Licence driver and road worthy vehicles to be used on the road with inspection being conducted by management. The construction site must be adequately cordoned off to avoid member of the public gaining access			5	2	10	Project/Site Manager & EHS Officer
Temporary Flammable Stores	Poor storage of hazardous chemical substances	Soil pollution	2	5	10		Provision must be made for drip trays to prevent run off spills from causing pollution.			1	5	5	EHS Officer & Supervisor
Temporary Flammable Stores	Inadequate temporary flammable store	Fire risk resulting into property damage and injury to people	3	3	9		Temporary storage must be erected in accordance to the legislated requirements. The usage of chemical containers must be well managed and a monitoring program must be implemented to ensure hazardous chemicals are stored in a safe manner.			2	1	2	EHS Officer & Supervisor
Emergency Preparedness	Lack of emergency preparedness	Fatalities and property damage	4	3	12		Assessment of all possibly emergency situation s must be conducted and an emergency responds plan must be submitted by the Project/EHS Manager to the H&S Agent for approval. Sufficient emergency equipment must be available on site with regular awareness conducted.			3	1	3	EHS Manager Officer & Supervisor
	Average				**14**							**5**	

BASELINE RISK ASSESSMENT - HAND TOOLS

Activities	HAZARD / ASPECT	RISK / IMPACT	RAW Risk Rating (before control			Actions needed to eliminate / lower / control risk				RESIDUAL RISK			Responsible person(s)
			Consequence	Likelihood	Total	Engineering controls	Admin - Appointments, checklist, SWP	Other - Load Tests, Permits	PPE	Consequence	Likelihood	Total	
Pre-use inspection of hand tools	Failure to inspect tools Inspection register not completed & signed off by supervisor	Has a potential to cause serious injuries to user or damage to equipment/property	4	3	12		Hand tools to be inspected by a competent person. Storeman and user of hand tools to be trained on how to do the pre-use inspection. EHS Manager/Officer to do spot checks on registers to ensure that they are completed. Site Supervisor to sign off inspection register.			1	3	3	Site Manager, Site Supervisor & EHS Manager/Officer
Storage of hand tools	Incorrect storage of hand tools	Damage to property	4	1	4		Proper storage space for hand tools to be provided. Storage to be controlled by a trained and competent store man			1	3	3	Supervisor & Storeman
	Theft of hand tools	Can cause delay in production	5	1	5		Hand tools not to be left unsupervised.			1	2	2	Supervisor & Storeman
Maintenance	Defects not reported Defects repaired by an incompetent employee	Can cause property damage and serious injury to user	3	3	9		All defects on the hand tools must be reported to the supervisor Only trained and competent persons to repair the hand tools			3	1	3	Supervisor & Storeman
	Average				**8**							**3**	

BASELINE RISK ASSESSMENT - HAZARDOUS CHEMICALS

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			Consequence	Likelihood	Total	Engineering controls	Admin - Appointments, checklist, SWP	Other - Load Tests, Permits	PPE	Consequence	Likelihood	Total	
Working with powered HCS e.g. cement, diesel, petrol, paint, etc..	Inhalation of dust particles of powdered HCS	Has a potential to cause severe health problems like cancer, respiratory problems	4	4	16		Site Manager/Supervisor & EHS Officer to ensure employees are trained on working HCS and supervision of work at all times.		Employees to wear dust mask.	4	1	4	EHS Officer, Site Manager/Supervisor
	Manual handling of powdered HCS	Can cause muscuskeletal related injuries	3	4	12		EHS Officer to ensure employees are trained on Risk Assessment and Safe Lifting and Handling Techniques. Record of such training to be kept on file.			3	1	3	EHS Officer, Site Manager/Supervisor
	First Aider not trained on MSDS of HCS	Can serious injuries as First Aider wont be able to treat HCS related injuries to employees	3	3	9		EHS Officer to ensure that First Aider has received training on MSDS as aware of where is the MSDS file at all times.			3	1	3	EHS Officer
	Lack of MSDS	Has a potential to cause severe injuries as there will be no guideline to assist employees who have received injury due to working with HCS	4	4	16		EHS Officer & HCS Supervisor to ensure that monthly inspections are being done			3	2	6	EHS Officer & HCS Supervisor
	Powdered HCS contact with skin	Has a potential to cause serious skin problems	3	5	15		Employees to be trained on the importance of wearing and keeping PPE in good condition. Site Supervisor to do spot checks on the quality of PPE worn by employees. PPE Inspections to be done and record of such inspections to be kept on file.		overall, hand gloves, safety shoes	2	2	4	EHS Officer & HCS Supervisor
	Spillage of powdered HCS into the environment	Environmental pollution & can cause no growth of plant	3	4	12	**Drip trays**	Employees to be trained on the SWP of working with HCS and supervision of work at all times			1	4	4	EHS Officer & HCS Supervisor
	Flying particles of powdered HCS	Can cause eye injuries	3	4	12		Employees to wear eye protection when working with HCS and supervision of work at all times. Daily Safe Task Instruction to be communicated with workers prior commencing work.		safety goggles	2	2	4	EHS Officer & HCS Supervisor
	Lack of PPE	Has a potential to cause serious injuries to employees	4	3	12		Site Manager/Supervisor to ensure that there is adequate stock of PPE available on site		hand gloves, dust masks, overall, safety shoes, eye and ear protection	3	1	3	EHS Officer & HCS Supervisor
Working with vaporous/liquid/flammable HCS e.g. petrol, paint, thinners, painters mate etc.	Inhalation of fumes	Has a potential to cause respiratory related health problems	2	5	10		Employees to wear dust masks when working liquidified/flammable HCS. Daily Safe Task Instruction to be communicated with workers prior commencing work.			2	2	4	EHS Officer & HCS Supervisor
	Contact with skin/body	Has a potential to cause skin allergies/rashes	3	4	12		Employees to be trained on the importance of wearing and keeping PPE in good condition through toolbox talks, Daily Safe Task Instructions			2	2	4	EHS Officer & HCS Supervisor

BASELINE RISK ASSESSMENT - HAZARDOUS CHEMICALS

Activities	HAZARD / ASPECT	RISK / IMPACT	RAW Risk Rating (before control measures)			Actions needed to eliminate / lower / control risk				RESIDUAL RISK			Responsible person(s)
			Consequence	Likelihood	Total	Engineering controls	Admin - Appointments, checklist, SWP	Other - Load Tests, Permits	PPE	Consequence	Likelihood	Total	
	Decanting of HCS into another container	Can cause serious health problems or a fatality	4	4	16		Employees to be trained through induction & toolbox talks, to alert them that no decanting of HCS is allowed on site			3	1	3	EHS Officer & HCS Supervisor
	Spillage of liquidified HCS	Environmental pollution	3	4	12	**Drip trays/bunded walls to prevent any spillages**	Daily Safe Task Instructions to be communicated with workers prior to work			2	2	4	EHS Officer, Site Manager/Supervisor
	Fire/Explosion caused by source of ignition	Have a potential to cause a fatality/severe injuries	4	4	16		Site Manager/Supervisor and EHS Officer to ensure warning signage is displayed in areas where flammable HCS are stored. Awareness to be given to employees through toolbox talks, Risk Assessments and DSTIs about importance of not using any source of ignition close to flammable HCS.			4	1	4	EHS Officer, Site Manager/Supervisor
	Lack of PPE	Has a potential to cause serious injuries to employees	4	3	12		EHS Office/Site Supervisor to ensure that there is adequate stock of PPE available on site at all time to supply employees.			3	1	3	EHS Officer, Site Manager/Supervisor
Temporary Flammable Store	Poor storage of hazardous chemical substances	Soil pollution	3	4	12	**A steel cage flammable store with a drip tray to be used on site**	Provision must be made for drip trays to prevent run off spills from causing pollution.			2	1	2	Site Manager
	Lack of or unsafe temporary flammable store	Has a potential to cause soil pollution and theft of material	3	4	12		Site Manager to ensure that temporary flammable store provided on site is in good condition and unsafe flammable store to be made safe.			2	2	4	Site Manager/Supervisor
	Lack of warning signage or warning signage not displayed	Has a potential to cause property damage and serious injuries to employees	4	3	12		Site Manager/Supervisor & EHS Officer to ensure employees are trained on working with HCS and supervision of work at all times.			4	1	4	EHS Officer, Site Manager/Supervisor
Training of employees	Employees not trained on how to use HCS	Has a potential to cause serious injuries	4	4	16		EHS Officer & Site Manager/Supervisor to ensure that employees working with HCS are trained on the Risk Assessment, SWP of HCS and MSDS. Record of such training to be kept on file.			3	2	6	EHS Officer, Site Manager/Supervisor
		AVERAGE			**13**							**4**	

BASELINE RISK ASSESSMENT : USE OF LIFTING MACHINERY

Activities	HAZARD / ASPECT	RISK / IMPACT	RAW Risk Rating (before control			Actions needed to eliminate / lower / control risk				RESIDUAL RISK			Responsible person(s)
			Consequence	Likelihood	Total	Engineering controls	Admin - Appointments, checklist, SWP	Other - Load Tests, Permits	PPE	Consequence	Likelihood	Total	
Surveying the site	Slipping, tripping and uneven surfaces, snakes	Strains, sprains and multiple injuries	3	4	12		Analysis to be done on accessibility of pegged areas. Induction to be undertaken for awareness of hazards and PPE to be worn.			3	2	6	Project Manager & Site Manager
	Limited accessibility to site	Project delays and possible injuries of the surveyor	3	4	12		TBL operator to be used to clear and allow for access within the construction footprint boundaries. Approval of such operation must be granted from the Client Representative.			2	2	4	Project Manager & Site Manager
Existing Services (below & above)	Lack of permits obtained from the Military Base and Engineers to identify existing services	Project delays, unauthorized works and fatalities	5	4	20		Permits to be obtained before construction works commenced from the Client. Contractor to follow drawing provided and consult with the Engineers. And work with caution. Should any service be found that does not reflect on the drawing a notification must be given to Client of such.			4	2	8	Project Manager & Site Manager
Delivery of Lifting Machinery and Equipment	Entrance to site - driving truck with mobile plant (loaded on trailer) to and from work area and driver not aware of site hazards and rules	Can result in serious injuries and collisions with other construction vehicles on site	4	4	16		Site Manager/Supervisor to check access route to work area and obtain relevant permits (where required) prior to entering site with plant. Operator to be familiarized with route to work area prior to commencement of activities. Truck driver to be inducted upon arrival on site so to be aware of site hazards and rules.			4	1	4	
	Oil and fuel leaks	Soil or ground pollution	3	4	12		Pre-inspection conducted daily on truck prior to use and record on register by truck driver.			1	5	5	
	Speeding	Severe injuries and damage to property	4	4	16		EHS Officer and Site Supervisor to enforce site speed limit and speed limit signage to be displayed at the entrance of the site and around site to displayed. Speed limit for site to be 20km/h.			2	3	6	
	Construction Plant not properly secured on back of delivery truck	Has a potential to cause damage to property and serious injuries	4	3	12		Plant Manager to ensure plant is secured in position strapped/chained in place before leaving yard.			4	1	4	
	Delivery truck driver intoxicated	Has a potential to cause damage to property and serious injuries	4	4	16		No person will be allowed to enter site under being intoxicated. Random alcohol testing will be done by Site Supervisor. No person will be allowed to operate any equipment or drive any plant on site whilst under the influence of any drug or intoxicating substance.			4	1	4	
Positioning of the crane to place columns and wall panels	Accidents with other site construction vehicles	Has a potential to cause damage to property and severe injuries or fatality	4	3	12		Flagman placed to control traffic and guide truck into position. Truck reverse hooter, horn headlights and amber light to be working at all times. Supervision of work at all times.			4	1	4	
	Workers struck by truck	Can result in severe injuries	4	3	12		Area demarcated and workers kept clear from area.			3	1	3	
	Uneven surfaces	Damage to property and serious injuries	4	3	12		Truck driver and supervisor to pre-inspect offloading area prior to commencing offloading of construction mobile plant. Task Specific Risk Assessment to be communicated with all employees involved in activity including truck driver.			4	1	4	Site Manager & Supervisor
	No supervision of work	Damage to property and serious injuries. Delay to production	4	4	16		Project Manager to ensure a competent supervisor is appointed and present at all times on site.			4	2	8	Project Manager & Site Manager

BASELINE RISK ASSESSMENT : USE OF LIFTING MACHINERY

Activities	HAZARD / ASPECT	RISK / IMPACT	RAW Risk Rating (before control			Actions needed to eliminate / lower / control risk				RESIDUAL RISK			Responsible person(s)
			Consequence	Likelihood	Total	Engineering controls	Admin - Appointments, checklist, SWP	Other - Load Tests, Permits	PPE	Consequence	Likelihood	Total	
Use of crane and lifting tackle	Use of lifting machinery.	Potential cuase of serious injury.	4	4	16		Only a competenty, qualified and appointed crane operator to operate the crane. A competent banksman to be used to guide the material which will be placed. All loat test certificates to be in the OHS file. A technical method statement to be developed.	Load test certificates					
	Use of lifting tackle	Can result in severe injuries	4	4	16		All lifting tackle to have valid load test certificates. Banksman and employees using the lifting equipmetn to be competent. All employees in close proximity to be aware of the work activities.	Load test certificates					
	Working in close proximity to other employees	Can result in serious injuries.	4	4	16		A "drop zone"to be cordened off to ensure employees are not in close proximity to the material which is being lifted, and then lowered.						
Offloading of Plant- Drive Plant of back of truck using fitted ramps	Truck not secured in parked position		4	3	12		Driver to ensure truck is in neutral, engine switched off and park brake activated prior to loading			4	1	4	Site Manager & Supervisor
	Plant not aligned with ramps		4	3	12		Competent operator appointed in writing and trained on SOP. Flagman to guide plan onto truck.			4	1	4	Site Manager & Supervisor
	Plant brakes failing		4	3	12		Daily pre-start inspection conducted and recorded on register. Routine maintenance of plant to be done by a competent person.			4	1	4	Site Manager & Supervisor
	Accidents with other site construction vehicles		4	3	12		Flagman placed to control traffic. Truck reverse sirens, hooter and lights working.			4	1	4	Site Manager & Supervisor
	Workers struck by plant driving down from truck		4	3	12		Project Managed to appoint a competent site supervisor to ensure all work is done under supervision. Supervisor to be on site at all times.			3	1	3	Site Manager & Supervisor
	Unsupervised staff & operations		4	4	16		Supervisor to ensure Plant is secured in position, strapped/chained in place.			2	3	6	Site Manager & Supervisor
Bush Clearing & Earth Works	Clearing outside the approved construction footprint	Project stoppage and penalties for environmental transgression	5	4	20		Contractor to operate within the boundaries and request approval from the Client upon any challenges experience to deviation from the approved area to be cleared. Area to be pegged and employees to be informed not to deviate outside the footprint.			2	2	4	Site Manager & Supervisor
	Use of construction vehicles for bush clearing and wood chipping	Serious injury to employees due to insufficient knowledge.	4	4	16		Employee using construction vehicles to be competent. If the wood of a wood chipper is invisaged, the contractor must ensure that only competent employees use the machine, and they receive the required training prior to the use of the machine.						Site Manager & Supervisor
	Dust nuisance	Environmental none compliance and project stoppages	4	5	20		Dust suppression method statement must be approved by the Client. Water source for suppression to be identified and water trucks must be implemented.			3	2	6	Site Manager & Supervisor
	Incorrect placing of top soil	Cost implication	4	3	12		Hauling and placing of op soil must be to a designated area identified by the Client			1	4	4	Site Manager & Supervisor

BASELINE RISK ASSESSMENT - MOBILE PLANT AND CONSTRUCTION VEHICLES

Activities	HAZARD / ASPECT	RISK / IMPACT	RAW Risk Rating (before control			Actions needed to eliminate / lower / control risk				RESIDUAL RISK			Responsible person(s)
			Consequence	Likelihood	Total	Engineering controls	Admin - Appointments, checklist, SWP	Other - Load Tests, Permits	PPE	Consequence	Likelihood	Total	
Working with mobile plant, equipment & constructio n vehicles	Lack of Induction Training for operators or working on site without receiving training on site induction	Can cause serious injuries and damage to property	4	4	16		Site Manager/Supervisor & EHS Officer to ensure all mobile plant operators undergo site induction training prior working on site. Record of training to be kept on file. Induction sticker to be given to operators as a proof of being inducted on site.		Overall, safety shoes, hand gloves, hard hats , reflective vests	2	3	6	Site Manager/Supervisor
	Employees/Operators unsafely climbing into mobile plant e.g. TLB, excavator, roller, tipper truck etc.	Can cause serious injury to operator	3	4	12		Operator to mount and dismount the mobile plant/equipment only at locations that have steps and handholds. Daily Safe Task Instructions to be communicated with workers			1	2	2	EHS Officer/Supervisor
	Failure to do pre-inspection of construction mobile plant/equipment	Has a potential to cause property damage/fatality or severe injury	3	4	12		Site Supervisor or EHS Officer to ensure that operatord do their daily pre-inspection and record of inspections are kept on file. Plant to be operated by a competent person			1	5	5	EHS Officer/Supervisor
	Incompetent operator operating mobile plant/equipment	Has a potential to cause property damage/fatality or permanent disabling injury	4	4	16		Site Manager/Supervisor/EHS Officer to ensure and enforce mobile plant/equipment to be operated by a competent person who has been appointed in writing has a valid operators certificate and medical certificate. Supervision of work at all times			2	2	4	EHS Officer/Supervisor
	Unsafe/damaged/substandard mobile plant/equipment being used on site	Has a potential to cause property damage/fatality or severe injury	4	4	16		Site Supervisor or EHS Officer to do spot checks on mobile to check and inspect their working condition, damaged/substandard mobile plant/equipment to be reported to workshop immediately for repairs or removed from site			2	2	4	EHS Officer/Supervisor/ Site Manager
	Excessive oil/fuel leaks from mobile plant & equipment	Environmental pollution	3	5	15	Drip trays be used to contain leaks	Workshop Manager to ensure and enforce routine maintenance of mobile plant/equipment and recod of such to be kept on file			2	3	6	EHS Officer/Supervisor
	Exposure to excessive noise generated by mobile plant or equipment	Has a potential to cause noise induced hearing loss	3	4	12		Operator to make use of ear protection and take frequent brakes		Ear protection	3	2	6	EHS Officer/Supervisor

BASELINE RISK ASSESSMENT - MOBILE PLANT AND CONSTRUCTION VEHICLES

Activities	HAZARD / ASPECT	RISK / IMPACT	RAW Risk Rating (before control			Actions needed to eliminate / lower / control risk				RESIDUAL RISK			Responsible person(s)
			Consequence	Likelihood	Total	Engineering controls	Admin - Appointments, checklist, SWP	Other - Load Tests, Permits	PPE	Consequence	Likelihood	Total	
	Employees being hit by an excavator/tlb bucket or run over by a roller/compacting machine	Has a potential to cause permanent disabling injury/fatality	4	3	12		Employees to keep clear of the mobile plant/equipment during operations. Ensure that the operator has seen you before approaching. Supervision of works at all times Employees to keep clear of excavator while moving. No passengers allowed on mobile plant/equipment		Hard hat, reflective vest, safety shoes	3	1	3	EHS Officer/Supervisor
	Engine failure of mobile of plant or equipment	Loss of production time	4	4	16		Employee to start engine according to starting procedure and maintenance schedule to be followed. Mobile plant/equipment to be operated by a competent person.			2	3	6	EHS Officer/Supervisor
	Operators exposed to dust	Has a potential to cause health problems/respiratory related illnesses	2	5	10		Dust to be controlled using dust suppression measures. Supervisor to monitor dust in work area			2	2	4	EHS Officer/Supervisor
	Mobile plant/equipment falling into unbarricade/open trenches/excvations	Has a potential to cause severe injuries/fatality and damage to property	4	4	16		Mobile plant/equipment to be operated by a competent and trained operator. Task to be supervised by a competent supervisor. All excavations to barricade. Warning signs to be posted indicating open trenches.			4	1	4	EHS Officer/Supervisor
		AVERAGE			**14**							**5**	

BASELINE RISK ASSESSMENT - PORTABLE ELECTRICAL TOOLS

Activities	HAZARD / ASPECT	RISK / IMPACT	RAW Risk Rating (before control			Actions needed to eliminate / lower / control risk				RESIDUAL RISK			Responsible person(s)
			Consequence	Likelihood	Total	Engineering controls	Admin - Appointments, checklist, SWP	Other - Load Tests, Permits	PPE	Consequence	Likelihood	Total	
Pre-use inspection of portable electrical tools e.g. drills, skill-saw, grinders	Failure to inspect machine. Inspection register not completed & signed off by supervisor	Has a potential to cause serious injuries to user or damage to equipment/property	4	3	12		Portable electrical tools to be inspected by a competent person. Storeman and user of portable electrical tools to be trained on how to do the pre-use inspection. EHS Manager/Officer to do spot checks on registers to ensure that they are completed. Site Supervisor to sign off inspection register.			1	3	3	Site Manager, Site Supervisor & EHS Manager/Officer
Changing of drill bits and blades	Portable electrical tools not made safe-not plugged out	Can cause damage to equipment and serious injury to user	4	3	12		Only a trained person is allowed to change the drill bits and blades on a drilling machine or grinder/skill-saw. Task to be supervised by a competent supervisor. User to ensure that the drilling machine is plugged out.			3	1	3	Supervisor Storeman
	Incorrect tools used to change the drill bits and blades	Damage to equipment or injury to hands to caused by using incorrect tools to change drill bits and blades	3	3	9		Task to be supervised by a competent supervisor. Only trained and competent person to change the drill bit on the drilling machine or blades on skill-saw/grinder			2	1	2	Supervisor Storeman
	Incorrect bit or blade fitted	Can cause damage to equipment and serious injury to user	3	4	12		Task to be supervised by a competent supervisor. Only a trained and competent person to change the bit on the drilling machine or blades on skill-saw/grinder. Supervisor to ensure that the correct bit and blade is provided and fitted.			3	1	3	Supervisor Storeman
	Bit or blade fitted the wrong way round	Can cause damage to equipment and serious injury to user	3	3	9		Task to be supervised by a competent person to change the bit/blade on the drilling machine/skill-saw/grinder after the fitment of the bit or blade			3	1	3	Supervisor Storeman
	Damaged bit/blade fitted	Can cause damage to equipment and serious injury to user	3	4	12		Task to be supervised by a competent supervisor. Bit/blade to be inspected by the supervisor before fitment this task is to be done by a trained and competent person			3	2	6	Supervisor Storeman
Use of portable electrical tools	Drilling machine/grinder/skill-saw used by incompetent/untrained or unskilled employee	Can cause serious injuries to user and damage to property	3	4	12		Only trained and competent employees are allowed to work with a portable electrical tools. EHS Officer to do spot checks to ensure portable electrical tools is used by competent person Portable electrical tools not to be left unsupervised. Task to be supervised by a competent supervisor.			2	2	4	Supervisor EHS Officer
	Exposure to excessive noise caused by using portable electrical tools	Long exposure to excessive noise has a potential to cause noise induced hearing loss in the long term.	2	4	8	Site Manager to order portable electrical tools from supplier one with noise dampener.	When the portable electrical tool is used for long periods of time-user to wear ear protection. Employee to be trained on the SWP for wearing and using PPE.		Wear ear muffs/plugs	2	1	2	Site Manager, Site Supervisor & EHS Manager/Officer
	Bit or blade coming off while working with the drilling machine/grinder/skill-saw	Has a potential to cause property damage and serious injuries to user and employees around	3	3	9		Portable electrical tools to be inspected before use by a trained and competent person. Inspection registers to be signed off by the responsible supervisor.			3	1	3	Supervisor & Storeman
	Loose or exposed electrical wires. Working in an environment where the is presence of water	Has a potential to cause electrocution to the user which can lead to a fatality	4	4	16		Portable electrical tools not to be used while standing on water. Portable electrical tools to be inspected before use and portable electrical tools with poor connections and cables to be removed from site			4	1	4	Supervisor & EHS Officer

BASELINE RISK ASSESSMENT - PORTABLE ELECTRICAL TOOLS

Activities	HAZARD / ASPECT	RISK / IMPACT	RAW Risk Rating (before control			Actions needed to eliminate / lower / control risk				RESIDUAL RISK			Responsible person(s)
			Consequence	Likelihood	Total	Engineering controls	Admin - Appointments, checklist, SWP	Other - Load Tests, Permits	PPE	Consequence	Likelihood	Total	
	Exposure to dust generated by breaking hard surfaces e.g. concrete	can cause dust inhalation which may lead to chest problems or lung cancer	3	3	9		When the drilling machine is used in an activity where dust is being generated –user to wear dust mask/respirator. Employees to be trained on the SWP for wearing and using PPE		Dust Mask/Respirator	3	2	6	Supervisor & EHS Officer
	Using drilling machine/grinder to break hard surface e.g. concrete can cause kick backs	Hand fracture due to kick-back of drilling machine/grinder hitting hard surface	3	4	12		Supervisor to check drawing of the area to broken if there are not rebar. Drilling machine/grinder to be used by a trained and competent person.		Ear muffs, safety googles, hand gloves	3	2	6	Supervisor
Storage of portable electrical tools	Incorrect storage of portable electrical tools	Damage to property	4	1	4		Proper storage space for portable electrical tools to be provided. Storage to be controlled by a trained and competent store man			1	3	3	Supervisor & Storeman
	Theft of portable electrical tools	Can cause delay in production	5	1	5		Portable electrical tools not to be left unsupervised.			1	2	2	Supervisor & Storeman
Maintenance	Defects not reported Defects repaired by an incompetent employee	Can cause property damage and serious injury to user	3	3	9		All defects on the portable electrical tools must be reported to the supervisor Only trained and competent persons to repair the portable electrical tools			3	1	3	Supervisor & Storeman
	Average				**10**							**4**	

BASELINE RISK ASSESSMENT - TEMPORARY WORKS (FORMWORK & SUPPORTY WORK)

Activities	HAZARD / ASPECT	RISK / IMPACT	RAW Risk Rat (before control measures)			Actions needed to eliminate / lower / control risk				RESIDUAL RISK			Responsible person(s)
			Consequence	Likelihood	Total	Engineer controls	Admin - Appointments, checklist, SWP	Other - Load Tests, Permits	PPE	Consequence	Likelihood	Total	
Steel fixing	Manual Handling	Back injury, sprains, cuts & pinching	2	3	6		Manual handling and ergonomic safe working procedures to be followed. Employees to assess the wight & size the the steel before lifting. Employees to receive assistance when lifting and if possible, mechanical means to be used. Safety gloves to be used.			1	2	2	Site Manager, Site Supervisor & EHS Manager/Officer
	Suspended loads	Serious injury/fatality due to re-inforcing falling from heights	5	3	15		No person may be allowed under suspended loads. Guide ropes to be used at all times. Competent lifting machine operators. Only authorised persons will be involved with this activity. All other employees to stay at least 10m away from any lifting activity.	Loat test certificates for all lifting machinery & tackle		3	2	6	Construction Manager
	Working at heights	Serious injury due to falling from heights	5	3	15		Scaffolding to be erected by a competent person and certified by an appointed, certified scaffolding inspector. All persons working at heights exceeding 1,8m to be trained on fall arrest safety. All tools and equipment used at a height to be secured from falling. No person will be allowed to work close to or underneath scaffolding (drop zone) whilst overhead work is in progress. All persons working at a height exceeding 1,8m must be issued with a double lanyard safety harness and it must be secured to a safe anchoring point at ALL times.			3	2	6	Construction Manager
Placing temporary works	Unapproved temporary works design	Structural failure	5	4	20		All temporary works designs to be approved prior to consturction of temporary works commencing. A temporary works designer to be appointed, temporary works supervisor and a temporary works inspector. All competency certificates to be approved by the engineers prior to work commencing.			3	1	3	Construction Manager
	Suspended loads	Serious injury/fatality	5	4	20		Scaffolding to be erected by a competent person and certified by an appointed, certified scaffolding inspector. All persons working at heights exceeding 1,8m to be trained on fall arrest safety.			3	1	3	Supervisor Storeman
	Manual Handling	Back injury, sprains, cuts & pinching	2	3	6		Manual handling and ergonomic safe working procedures to be followed. Employees to assess the wight & size the the steel before lifting. Employees to receive assistance when lifting and if possible, mechanical means to be used. Safety gloves to be used.			3	2	6	Supervisor Storeman
	Temporary Works	Collapse of Temporary Works	5	4	20		Competent temporary works designer to be appointed to compleete a design and inspection prior to any loads being imposed on temporary works. Competent temporary works supervisor to be appointed in writing to supervise the erecting and work involving temporary works and inspect regularly following approval of the temporary works. All temporary works must be erected according to the design and will be inspected and approved by the designer before imposing the load. Temporary works to be inspected and signed off prior to removal of shutter boards and props.			3	2	6	Construction Manager

BASELINE RISK ASSESSMENT - TEMPORARY WORKS (FORMWORK & SUPPORTY WORK)

Activities	HAZARD / ASPECT	RISK / IMPACT	RAW Risk Rat (before control measures)			Actions needed to eliminate / lower / control risk				RESIDUAL RISK			Responsible person(s)
			Consequence	Likelihood	Total	Engineer controls	Admin - Appointments, checklist, SWP	Other - Load Tests, Permits	PPE	Consequence	Likelihood	Total	
Correction to shutters that kicked	Heights	Serious injury or fatality	5	4	20		Ensure formwrok is used as per design. Formwork to be secured properly at all areas before commencement of the pouring of concrete. When repairs need to be done ensure that such work happens safely from a ladder or scaffolding. Heights exceeing 1,8m ensure that employee is wearing a safety harnesss and it is attached to a secure anchor point.			2	2	4	Construction Manager
Pouring concrete into shutters	Concrete	Injury to eyes due to splashing of concrete. Dermititis / injury to hands if skin in constant contact with concrete.	2	2	4		The correct us of PPE and the understanding of why it is issued & should be used. If concrete splashes into your eyes, do not rub them, wash out with clean water and seek medical treatment. Employees to wear the required PPE (gloves, safety glasses).			1	1	1	Construction Manager
	Pouring concrete at heights	**Serious injury due to falling from heights**	5	4	20		Scaffolding to be erected by a competent person and certified by an appointed, certified scaffolding inspector. All persons working at heights exceeding 1,8m to be trained on fall arrest safety. All tools and equipment used at a height to be secured.			2	2	4	Construction Manager
	Use of concrete pump - mobile machinery	**Hit/struck by mobile moving machery or it moving parts**	3	2	6		All vehicles to be managed by qualified & competent operators. All employees to have clear instructions on the tasks performed. Non required personell not to be in close proximity of the concrete truck/boom.			2	2	4	Construction Manager
Average					**14**							**4**	

BASELINE RISK ASSESSMENT - HEIGHT WORK

Activities	HAZARD / ASPECT	RISK / IMPACT	RAW Risk Rating (before control			Actions needed to eliminate / lower / control risk				RESIDUAL RISK			Responsible person(s)
			Consequence	Likelihood	Total	Engineering controls	Admin - Appointments, checklist, SWP	Other - Load Tests, Permits	PPE	Consequence	Likelihood	Total	
Climbing to an elevated position to work	Access scaffolding	Serious injury or death	4	4	16		Competent, appointed scaffolding erector to erect the scaffolding. Competent, appointed scaffolding inspector to inspect the scaffolding. Only once certified safe, may employees working from the scaffolding. Adequate secure ladders/platforms, safety harnesses, life lines to be used. Scffolding not to be used in inclement weather.	Daily working at height permit required.	Overalls, safety shoes, hard hats, double lanysard safety harnesses.	2	2	4	Site Manager, Site Supervisor & EHS Manager/Officer
	Employees not permitted to work at heiths e.g. Epilepsy or vertigo	Serious injury, fatality	4	4	16		All employees to have medical certificates of fitness, relevant to tasks being conducted on site.		Overalls, safety shoes, hard hats, double lanysard safety harnesses.	2	2	4	
Securing yourself properly before starting work	Working at heights	Serious injury, fatality	4	4	16		Only trained, competent employees to carry out work and understand the hazards of working at heights. Enusre that employees are hooked above shoulder height onto a safe anchoring point. Where no proper anchoring points are available, make use of a certified life line.	Daily working at height permit required and a certified life line.		2	2	4	
Repairing external concrete, replacing pipe straps and bolts.	Working with tools and equipment at heights	Slipping and falling, objects from above falling to a lower leve and causing injury to employees below.	3	4	12		Area below to be cordened off to ensure that employees down't havae access to work area below. A toolbox / tool belt to be used. Scaffolding to be inspected prior to use and toe boards used.	Working at height permit.		2	2	4	
Lifting tools, equipment and material to an elevated position	Trying to carry materials, tools uup a ladder/scaffolding while you are climbing up.	Potential to drop tools or material and cause you to lose your grip while climbing and falling and being injured.	4	4	16		Never permit employees to climb any structure while trying to carry tools or equipment. Always maintain the "3 point contact" while climbing the structure. Training on the correct method of climbing. Having the correct equipment for lifting tools and equipment up to a working platform or area.			2	2	4	
	Working with tools and equipment at heights	Dropping tools causing injury and or damage below.	2	3	6		Ensure the correct lanyard rope is available and is used by persons working at height to secure tools. Ensure the correct training has been given and this can be reinforced before the job begins. Ensure scaffolding has toe boards.			1	2	2	
	Working with tools and equipment at heights	Dropping tools causing injury and or damage below.	2	3	6		Demarcate area with barrier tape and put up warning signs indicating men working above. Task specific training to be given to employees. Other employees not to be allowed to work in the drop zone.			1	2	2	
Complete task and remove tools and equipment.	Tools and equipment thrown down from heights.	Damage to equipment and property and could cause serious injury to employees.	4	2	8		Correctly trained employees and enforcement of discipline even to the extent of dismissal for ignoring safety rules and procedures espcially the non-conformances of height work requirements. Continuous training to be given to employees.			1	2	2	
	Pooe housekeeping	Slipping, tripping and falling.	4	2	8		Adequate secure ladders/platforms, safety harnesses, double lanyard safeyt harnesses to be used. Housekeeping to be constantly monitored. Employees to store their tools correctly.			1	2	2	
Average				**12**								**3**	

BASELINE RISK ASSESSMENT - CONCRETE REPAIRS

Activities	HAZARD / ASPECT	RISK / IMPACT	RAW Risk Rating (before control			Actions needed to eliminate / lower / control risk				RESIDUAL RISK			Responsible person(s)
			Consequence	Likelihood	Total	Engineering controls	Admin - Appointments, checklist, SWP	Other - Load Tests, Permits	PPE	Consequence	Likelihood	Total	
Climbing to an elevated position to work	Access scaffolding	Serious injury or death	4	4	16		Competent, appointed scaffolding erector to erect the scaffolding. Competent, appointed scaffolding inspector to inspect the scaffolding. Only once certified safe, may employees working from the scaffolding. Adequate secure ladders/platforms, safety harnesses, life lines to be used. Scffolding not to be used in inclement weather.	Daily working at height permit required.	Overalls, safety shoes, hard hats, double lanysard safety harnesses.	2	2	4	Site Manager, Site Supervisor & EHS Manager/Officer
	Employees not permitted to work at heiths e.g. Epilepsy or vertigo	Serious injury, fatality	4	4	16		All employees to have medical certificates of fitness, relevant to tasks being conducted on site.		Overalls, safety shoes, hard hats, double lanysard safety harnesses.	2	2	4	
Securing yourself properly before starting work	Working at heights	Serious injury, fatality	4	4	16		Only trained, competent employees to carry out work and understand the hazards of working at heights. Enusre that employees are hooked above shoulder height onto a safe anchoring point. Where no proper anchoring points are available, make use of a **certified life line. Wind speed meter to be on site. No height work may continue if wind speeds exceed 40km/hour.**	Daily working at height permit required and a certified life line.		2	2	4	
Lifting and securing materia and equipment	Working with tools and equipment at heights	Slipping and falling, objects from above falling to a lower leve and causing injury to employees below.	3	4	12		Area below to be cordened off to ensure that employees down't havae access to work area below. A toolbox / tool belt to be used. Scaffolding to be inspected prior to use and toe boards used.	Working at height permit.		2	2	4	
Lifting tools, equipment and material to an elevated position	Trying to carry materials, tools uup a ladder/scaffolding while you are climbing up.	Potential to drop tools or material and cause you to lose your grip while climbing and falling and being injured.	4	4	16		Never permit employees to climb any structure while trying to carry tools or equipment. Always maintain the "3 point contact" while climbing the structure. Training on the correct method of climbing. Having the correct equipment for lifting tools and equipment up to a working platform or area.			2	2	4	
	Working in awkward positions	Back injury	2	2	4		Ergonomic training to be given to employees. Employees to use managable lifting equipment/ropes etc			1	2	2	
	Working with tools and equipment at heights	Dropping tools causing injury and or damage below.	2	3	6		Ensure the correct lanyard rope is available and is used by persons working at height to secure tools. Ensure the correct training has been given and this can be reinforced before the job begins. Ensure scaffolding has toe boards.			1	2	2	
	Working with tools and equipment at heights	Dropping tools causing injury and or damage below.	2	3	6		Demarcate area with barrier tape and put up warning signs indicating men working above. Task specific training to be given to employees. Other employees not to be allowed to work in the drop zone.			1	2	2	
Working in awkward positions	Working at heights	Serious injury, fatality	4	4	16		Only trained, competent employees to carry out work and understand the hazards of working at heights. Enusre that employees are hooked above shoulder height onto a safe anchoring point. Where no proper anchoring points are available, make use of a **certified life line.**	Daily working at height permit required and a certified life line.					
	Working in awkward positions	Back injury	2	2	4		Ergonomic training to be given to employees. Employees to use managable lifting equipment/ropes etc			1	2	2	

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	Working with tools and equipment at heights	Dropping tools causing injury and or damage below.	2	3	6		Ensure the correct lanyard rope is available and is used by persons working at height to secure tools. Ensure the correct training has been given and this can be reinforced before the job begins. Ensure scaffolding has toe boards.			1	2	2	
	Working on the edge of a platform	Serious injury due to falling	4	3	12		Contractor to ensure that edge protection is installed, either to the roof edge or scaffolding.			2	1	2	
Complete task and remove tools and equipment.	Tools and equipment thrown down from heights.	Damage to equipment and property and could cause serious injury to employees.	4	2	8		Correctly trained employees and enforcement of discipline even to the extent of dismissal for ignoring safety rules and procedures espcially the non-conformances of height work requirements. Continuous training to be given to employees.			1	2	2	
	Pooe housekeeping	Slipping, tripping and falling.	4	2	8		Adequate secure ladders/platforms, safety harnesses, double lanyard safeyt harnesses to be used. Housekeeping to be constantly monitored. Employees to store their tools correctly.			1	2	2	
Average					10							3	