




SARAH BAARTMAN: CENTRE OF REMEMBRANCE

BASELINE RISK ASSESSMENT

RISK ASSESSMENT NUMBER	RA 01	RISK ASSESSMENT SCOPE	BASELINE RISK ASSESSMENT
CONTRACT NUMBER	WCS 047 427	AREA WORK WILL BE PERFORMED IN	HANKEY
RISK ASSESSMENT DATE	20/02/2023	METHOD STATEMENT NO & DESCRIPTION	TO BE SUBMITTED BY THE PRINCIPAL CONTRACOTR
REVISION NUMBER	0	BRIEF DESCRIPTION OF WORK TO BE DONE	COMPLETION OF THE SARAH BAARTMAN: CENTRE OF REMEMBRANCE

PREPARED BY:					YES	NO		
Initials and Surname	Safe Risk Management	Signature	Reviewed:					
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			
					N/A			
APPROVED BY:			Training					
Initials and Surname	CLIENT	Signature	Review date:					
	NDPW							

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 workforce, some of the time	Exposure - Plant Wide, some workforce, 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 (infrequent)	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 to 5	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 provider 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
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 or & 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 or & 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 or & Plant Manager
Use of construction vehicle	Dust nuisance	Environmental non compliance and project delays	5	5	25		Techni Civils 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

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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 goggles, 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 goggles, 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 goggles, dust mask, ear muff/plugs etc...	3	2	6	EHS Officer & Site Manager/Supervisor
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 goggles, dust mask, ear muff/plugs, safety goggles etc...	3	1	3	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	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
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 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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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 situations 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

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5

BASELINE RISK ASSESSMENT : EARTHWORKS & EXCAVATIONS, BOX CUTTING AND LAYERWORKS

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			Consequence	Likelihood	Total	Engineering controls	Admin - Appointments, checklist, SWP	Other - Load Tests, Permits	PPE	Consequence	Likelihood	Total	
Access to site	Not gaining authorization to have access to site	Project delays	5	3	15		Authorization must be granted by Client and access form must be completed. Approval Letter from Client to be given to Project Manager			5	1	5	Project/Site Manager
	No SHEQ documentation submitted to gain authorization	Project delays	5	3	15		Techni Civils SHE file must be submitted to the appointed SHE Agent for approval prior to any construction work starting			5	1	5	Project Manager & EHS Officer
	Lack of supervision whilst on site	Legal none compliance and risk of property damage	5	2	10		Project/Site Managed to appoint a competent person to be Construction Work Supervisor and ensure that Supervisor is present at all time during works execution.			2	2	4	Project Manager & Site Manager
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	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. Techni Civils 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 Construction Mobile Plant	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	

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Positioning of truck at work area to offload plant	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
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
Collecting Plant at end of contract	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 plant onto truck.			3	1	3	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.			5	1	5	Site Manager & Supervisor
	Unsupervised staff & operations		4	4	16		Project Managed to appoint a competent site supervisor to ensure all work is done under supervision. Supervisor to be on site at all times.			4	2	8	Site Manager & Supervisor

BASELINE RISK ASSESSMENT : EARTHWORKS & EXCAVATIONS, BOX CUTTING AND LAYERWORKS

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	
	Plant not secured on back of truck		4	3	12		Supervisor to ensure Plant is secured in position, strapped/chained in place.						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
	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
Excavation work	Possible risk of underground services while excavating manually or using a mobile plant/equipment.	Has a potential to cause severe injuries/fatalities and damage to property	4	4	16		Project/Site Managed to request and obtain Excavation permit from the Client. Techni Civils 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.	Excavation Permit		2	2	4	Site Manager & Supervisor
	Manual excavation of trench using hand tools	Can cause serious injuries or hand injuries employees due to using defective tools or tools unsafely	2	5	10		The responsible Site Manager/Supervisor to ensure that the equipment issued to the employees are in a safe and sound condition. Site HSE officer to carry out regular inspections to ensure that all equipment is in good condition. All hand tools to be on register and inspected on weekly basis.			1	3	3	Site Manager & Supervisor
	Over exertion	Has a potential to cause serious injuries to employees	4	4	16		Employees to be trained on the Risk Assessment and Method Statement for excavation. Proper job instructions to be given along with safety tips. Ensure that employees know how to use tools and equipment			3	1	3	Site Manager & Supervisor
	Employee struck on head/body by pick	Can cause serious injuries to employees	3	3	9		Task to be supervised by a competent supervisor, employees to be spaced well apart from each other when digging the trench, employees to wear hard hats. Any injuries to be reported to the site HSE officer.		Hard hat, reflective vests	2	2	4	Site Manager & Supervisor
	No safe access into deep excavation	May cause injuries with disability.	4	4	16		Ladders or ramps to be provided for employees working in deep trenches, task to be supervised by a competent supervisor.			3	2	6	Site Manager & Supervisor
	Excavation/Trench collapsing	May cause severe injuries and fatalities	5	5	25		Daily excavation inspection to be done by the appointed responsible person, all findings to be recorded on to register. Emergency plan to be in place in the event of such a incident.			4	3	12	Site Manager & Supervisor
	Material falling on to employees working in the trench	May cause injuries with disability.	4	4	16		No material or equipment to be stacked next to the edge of the trench, a area of 1.5 m to be kept clear around the excavation. Task to be supervised by a competent supervisor.			3	2	6	Site Manager & Supervisor

BASELINE RISK ASSESSMENT : EARTHWORKS & EXCAVATIONS, BOX CUTTING AND LAYERWORKS

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	
	Excavating with TLB/excavator employees not visible to operate or moving machine.	An injury to all parts of the body and as well as more serious fatal injuries.	4	3	12		Operator must ensure there are no employees working in this area. Operator must work under close supervision. He must inspect the work area prior to commencing work. Supervisor to ensure employees are informed and operator works under his supervision.			3	1	3	Site Manager & Supervisor
	Machine not to operate while employees are working in same excavations.	Bruises, scratches, fractures and fatal.	4	3	12		Supervisor must instruct operator when to commence work. Supervisor to control and enforce procedure.			3	1	3	Site Manager & Supervisor
	Materials can fall onto employees and the excavation may need extra work.	Injuries to employees and the excavation may need extra work.	4	3	12		Supervisor must instruct operator where to place discharged soil and gravel. Supervisor to control. All excavated materials must be discharged not closer than 2m from the edge of the excavation.			2	2	4	Site Manager & Supervisor
	Materials can fall onto employees when working inside the excavation.	Bruises, scratches, fractures and fatal	4	4	16		Employees to be instructed not to place loose soil on edge of the excavation. Excavated material to be placed away from side of excavation.			3	2	6	Site Manager & Supervisor
	Unstable / loose material causes unsafe condition.	Injury to employees and damage to excavations.	4	5	20		Check sides of excavations. Supervisor to inspect sides on a regular basis.			3	2	6	Site Manager & Supervisor
	No access provided for excavations deeper than 1.5m and employees not able to enter or exit the excavation safely.	In case of an emergency too many employees may be buried as a result of inadequate access. Employees may also strain muscles to get into or out of an excavation without safe and convenient access.	4	4	16		Supervisors to ensure employees are given safe and convenient access to excavations. Providing a ladder makes access into and out of the excavation area easy and safe.			4	2	8	Site Manager & Supervisor
Laying of storm water, sewer and water pipes	Delivery truck accessing site without induction	Has a potential to cause serious injuries	4	4	16		Supervisor to ensure that delivery truck driver receives site induction prior to entering site. Informative sign to be conspicuously displayed to inform visitors and employees to report to site office and do induction prior accessing site			3	3	9	Site Manager & Supervisor
	Fuel or oil leaks from delivery truck	Soil or ground pollution	4	4	16		Driver to do pre-inspection start up checklist on a daily basis prior to driving truck and proof of inspection to be kept with the driver at all times.			1	5	5	Site Manager & Supervisor
	Lack paperwork for crane truck used to deliver storm water pipes	Has a potential to cause property damage and serious injuries	4	4	16		EHS Officer and Site Supervisor to ensure that all relevant documentation for crane and slings are available. Load test of crane and slings to be done by a competent LMI.	Load test certificate of slings and crane		4	1	4	Site Manager & Supervisor
	Crane operated by incompetent person	Has a potential to cause property damage and serious injuries	4	4	16		EHS Officer and Site Supervisor to check the operators certificate for operating crane. No person will be allowed to operate crane without a valid crane operators certificate			4	2	8	Site Manager & Supervisor
	Poor stacking and storage of pipes	Has a potential to cause property damage and severe injuries	4	5	20		EHS Officer and Site Supervisor to ensure employees are trained through Task Specific Risk Assessments, SWP and toolbox talks about the correct stacking and storage of construction material. Project Manager to appoint a competent person as Stacking and Storage Supervisor.			3	3	9	Site Manager & Supervisor
Lowering or placing storm water or drainage pipes	Overhead loads, risk of falling on people and placing pipes on feet	Has a potential to cause severe injuries and property damage	4	4	16		No persons allowed to be under suspended loads. Employees to be clear from load when placing pipes. Awareness talks to be given to all involved with regards to overhead risks.			4	2	8	Site Manager & Supervisor

BASELINE RISK ASSESSMENT : EARTHWORKS & EXCAVATIONS, BOX CUTTING AND LAYERWORKS

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	
	Pipes may slip out of slinged position	Has a potential to cause severe injuries and property damage	4	4	16		Slinging operation to be supervised by a competent person.			3	1	3	Site Manager & Supervisor
	Rigging equipment failure	Has a potential to cause severe injuries and property damage	4	4	16		Chains to be certified and inspected before use by a competent person.	Load test certificate of slings		4	2	8	Site Manager & Supervisor
	Movement of pipes when new section is added	Has a potential to cause severe injuries and property damage	4	3	12		Pipes to be anchored with material before placing next pipe.			4	1	4	Site Manager & Supervisor
Backfilling and compacting	TLB driving or falling into trench	May result in injury with disability and plant damage.	3	3	9		TLB to be operated by a competent and trained operator. Task to be supervised by a competent supervisor.			4	1	4	Site Manager & Supervisor
	TLB tipping backfilling material in trench while employees inside	May result in severe injuries and fatalities	4	4	16		Supervisor to ensure no employees are inside the excavation when backfilling material is tipped and work to be under a supervision of a competent person. Daily Safe Task Instruction to be communicated with employees. Plant to be operated by a competent person who has a valid operators certificate.			4	1	4	Site Manager & Supervisor
	Employee being run over by TLB	May result in injuries with disability	4	3	12		TLB to be operated by a competent and trained operator. Employees to keep clear of the TLB during operations. Ensure that the operator has seen you before approaching, TLB to be fitted with a reverse hooter.			4	1	4	Site Manager & Supervisor
	Manual backfilling of the trench	Has a potential to cause ergonomic related injuries	4	3	12		Daily Safe Task Instruction to be communicated with employees prior to commencing with activity. Supervision of work to be done at all times			3	1	3	Site Manager & Supervisor
	Backfilling using defective hand tools	Can cause hand injuries	2	5	10		Defective tools to be removed from site or repaired. Hand tool inspector to inspect all tools as per weekly as per Techni Civils register.			2	2	4	Site Manager & Supervisor
Operating compacting equipment	Incompetent employee working with compacting equipment	Can serious injuries and property damage	3	4	12		Only trained and competent employees to work with any compacting equipment. Task to be supervised by a competent supervisor			3	2	6	Site Manager & Supervisor
	Operating a compacting machine close to your feet	Has a potential to cause foot injuries	3	3	9		Employee to be issued with steel toe cap safety boots, all injuries to be reported to the site HSE officer. Task to be supervised by a competent supervisor.			3	1	3	Site Manager & Supervisor
	Vibrations of compacting equipment causing trench to collapse	May cause injuries and disability	5	3	15		Daily excavation inspections to be done by the appointed responsible person. Task to be supervised by a competent supervisor.			4	1	4	Site Manager & Supervisor
	Prolong exposure to vibrations of a compacting machine	Have a potential to cause Cumulative Trauma Disorders injuries	3	4	12		Rotation of compacting machine among competent person to be ensured by Site Supervisor			2	2	4	Site Manager & Supervisor
	Employee over come by fumes	May cause asphyxiation and disability..	3	3	9		Minimise the use of petrol and diesel driven machines in the excavations. Task to be supervised by a competent supervisor. Working in confined space procedure to be followed			2	2	4	Site Manager & Supervisor
	Compacting equipment defective	Has a potential to cause serious injuries and damage to property	3	4	12		All compacting equipment to be inspected before used, supervisor to ensure that the equipment is in a safe working condition. Findings to be recorded on a register. Defective equipment to be removed from site.			1	3	3	Site Manager & Supervisor

BASELINE RISK ASSESSMENT : EARTHWORKS & EXCAVATIONS, BOX CUTTING AND LAYERWORKS

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	
	Prolong exposure to using compacting machines	Has a potential to cause noise induced hearing loss	4	4	16	Machine to be fitted with noise dampener	Site Supervisor to ensure and enforce wearing of ear protection and work to be supervised by a competent person.		Ear plugs	2	2	4	Site Manager & Supervisor
Operating Construction Mobile Plant	Construction Mobile Plant operated by incompetent person	Has a potential to cause property damage and severe injury	4	4	16		EHS Officer and Site Manager/Supervisor to ensure that construction mobile plant is operated by a competent operator who has a valid operators and medical certificate and appointed in writing.			2	2	4	Site Manager & Supervisor
	Unsafe/damaged construction mobile plant	Can cause severe injury or damage to property	4	3	12		Site Manager/Supervisor to ensure that construction plant brought to site is in good working condition. No damaged or broken construction plant will be allowed to work on site			3	1	3	Site Manager & Supervisor
	Operator mounting and dismounting construction mobile plant	May cause injuries and disability	4	3	12		Operator to mount and dismount the construction mobile plant only at locations that have steps and handholds. Condition of safety boots to be checked regularly and results recorded.			3	1	3	Site Manager & Supervisor
	Employee caught by rotating parts of the engine during maintenance of construction mobile plant	May cause severe injuries or amputations	4	4	16		Construction mobile plant engine to be switched off during maintenance and maintenance work to be done by a competent person. No work to be done on the TLB while the engine is still running. Supervision of work at all times			3	1	3	Site Manager & Supervisor
	Employing sustaining skin burns while doing maintenance on engine of construction mobile plant	Has a potential to cause skin burns	3	4	12		Construction mobile plant engine to be switched off during maintenance and engine allowed to cool off. Maintenance work to be done by a competent person. Supervision of work at all times			3	1	3	Site Manager & Supervisor
	Employee coming in contact with battery acid	Has a potential to cause skin burns	3	4	12		Do not allow electrolyte to come in contact with the skin or eyes. Make use of the correct P.P.E when working with batteries		Overall, hand gloves, safety goggles	3	1	3	Site Manager & Supervisor
	Employee being injured while changing the wheel of construction mobile plant	Has a potential to cause to injury	3	4	12		Changing of the wheels to be performed by a competent person and the task to be supervised by a competent supervisor. No tyre repairs or inflating may be done on the mine premises.			3	1	3	Site Manager & Supervisor
	Operator being exposed to dust on site	Can cause a health problems	3	4	12		Operator to wear dust mask when exposed to dust and dust suppression measures to be implemented to suppress dust on site		Dust Mask	2	2	4	Site Manager & Supervisor
	Excessive oil and fuel leaks from construction mobile plant	Can cause soil or ground pollution	3	4	12		Routine plant maintenance to be done by a competent person and record of maintenance to be kept on plant and EHS file on site. Operator to do pre-start checklist daily and report any faults to Site Manager/Supervisor immediately.			1	4	4	Site Manager & Supervisor
	Excessive noise generated by operating construction mobile plant	Has a potential to cause noise induced hearing loss and complains from the public	3	4	12		Operator to wear ear protection when exposed to noise. Supervisor to ensure and enforce wearing of ear protection.		Ear plugs	3	1	3	Site Manager & Supervisor

BASELINE RISK ASSESSMENT : EARTHWORKS & EXCAVATIONS, BOX CUTTING AND LAYERWORKS

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	
	Collisions with other plants and employees due to over speeding	Can result in permanent disability injury to operator or severe injury to employees and damage to property	4	4	16		Site Manager/Supervisor to ensure and enforce construction mobile plant to be operated by a competent person at all times who has been appointed in writing, has a valid medical and operator's certificate			4	1	4	Site Manager & Supervisor
	Refuelling of construction mobile plant	Has a potential to cause soil or ground pollution or property damage or fatality which may be caused by source of fire	4	4	16	Drip trays	No smoking & Open Flames warning signage to be displayed conspicuously. Supervisor to ensure that refuelling is done by a competent person who has been trained. Task Specific Risk Assessment to be communicated with employee prior to task being done.			5	1	5	Site Manager & Supervisor
	Warning lights and reverse hooter not working on construction mobile plant	Has a potential to cause severe injuries to employees working close to plant	4	4	16		Site Manager/Supervisor to ensure that routine maintenance of the construction mobile plant is done and record of such to be kept on EHS file. Pre-start up checklist to be completed by operator and any faults to be reported immediately to superiors. No plant will be allowed to work on site if reverse hooter and warning lights are not working.			4	1	4	Site Manager & Supervisor
	Damaged or not working properly brakes of construction mobile plant	Can result in property damage or severe injuries to operator or nearby employees	5	4	20		Site Manager/Supervisor to ensure that routine maintenance of the construction mobile plant is done and record of such to be kept on EHS file. Pre-start up checklist to be completed by operator and any faults to be reported immediately to superiors. No plant will be allowed to work on site if brakes are not working.			5	1	5	Site Manager & Supervisor
	Theft of construction mobile plant or fuel or battery of construction mobile plant	Can result in delay in production	5	3	15		Security company to be employed and plant to be parked in a secure area. Follow the correct lockout procedure. Never leave the key in the ignition or hide it on the vehicle after shutting the vehicle down. On shutdown of the vehicle for any reason ensure that it is parked level and that stop blocks have been placed at the rear wheels to prevent vehicle from runaway on uneven ground.			4	2	8	Site Manager & Supervisor
	Operating construction mobile plant in inclement weather conditions	Can cause permanent disability to operator and damage to plant	4	3	12		Site Manager/Supervisor to ensure no plant is operated during inclement weather conditions.			4	1	4	Site Manager & Supervisor
Building Concrete Aprons	Working with a hazardous chemical	Injury due to inhalation of cement dust and dermatitis .	2	2	4		Employees to wear dust masks when mixing cement. Cement to be mixed on a mixing board. Long sleeve overalls to be used.			1	1	1	
	Working in awkward positions	Back injury	2	2	4		Employees to be taught correct ergonomic procedures.			1	1	1	

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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

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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	
Working with powered HCS e.g. cement, Asphalt, 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 musculoskeletal 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

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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 & construction 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 operator 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 record 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 breaks		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/excavations	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 be barricade. Warning signs to be posted indicating open trenches.			4	1	4	EHS Officer/Supervisor
Maintenance of mobile plant or equipment	Employee being injured while changing the bucket on TLB/excavator	Can cause serious injuries	3	4	12		Employees to keep clear of the excavator/TLB during operations. Ensure that the operator has seen you before approaching. Employees to keep clear of excavator while moving. No passengers allowed on the excavator.			1	3	3	EHS Officer/Supervisor
	Hydraulic oil or fuel leaking from mobile plant/equipment	Environmental pollution	3	5	15	Drip trays, designated maintenance area to be built on site for emergency repairs	Leaks to be reported to the Site Supervisor and to be repaired by the workshop. Site Safety Officer and Site Management to be notified of oil leaks immediately.			1	5	5	EHS Officer/Supervisor
	Hydraulic oil being injected into employee while working on mobile plant/equipment	Has a potential to cause skin irritation/rash/allergies	3	4	12		Make use of a board or cardboard when checking for leaks in the hydraulic pipes or a bucket to be used to contain the leaks			2	2	4	EHS Officer/Supervisor
	Employee caught by rotating parts of engine of mobile plant/equipment	Can cause amputations or severe injuries	4	4	16		No work to be done on the mobile plant/equipment while the engine is still running. Work to be done by a competent person			3	1	3	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	
	Employee coming in contact with battery acid	Can cause chemical burns on the skin of employee/s	4	4	16		Do not allow electrolyte to come in contact with the skin or eyes. Make use of the correct P.P.E when working with batteries.		Hand gloves, apron, overall, safety goggles	3	1	3	EHS Officer/Supervisor
	Fire or explosion occurring due to fuel being close to sources of ignition	Has a potential to cause a fatality/severe injuries and damage to property	5	3	15		Remove all flammable materials such as fuel, oil and debris from the engine. Do not weld or flame cut any pipe or tank that contains any flammable fluids. Wiring must be kept in good order and no smoking or naked flames during refuelling.			5	1	5	EHS Officer/Supervisor
	Employee being injured while doing maintenance work on mobile plant/equipment	Can cause serious injuries	3	4	12		Maintenance and repair work to be done by a competent person. Maintenance to be supervised by a competent plant workshop foreman.			1	4	4	EHS Officer/Supervisor
General	Theft of mobile plant/equipment or components of mobile plant/equipment e.g. battery, fuel	Loss of production time and Financial cost	5	4	20		Project Manager/Site Manager to ensure that a security company is to be employed to look after the plant and plant to be parked in a secure area.			4	2	8	EHS Officer/Supervisor
	Refueling of mobile plant/equipment	Can cause ground or soil contamination due to leaks fuel/oil	3	5	15	Drip trays to be used during refueling and bund wall to be built to contain any major spills or leaks	Site Manager/Supervisor to ensure that all mobile plant/equipment is refueled in designated areas and by a competent person.			1	4	4	EHS Officer/Supervisor
	Fire or explosion occurring due to fuel being close to sources of ignition	Can cause a fatality or severe injuries and damage to property which may be caused by fire	5	3	15		Site Manager/Supervisor to ensure that No smoking or naked flames during refuelling. Warning signage and fire extinguishers to be close by the refueling area.			5	1	5	EHS Officer/Supervisor

AVERAGE

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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 there 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 goggles, 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

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BASELINE RISK ASSESSMENT - ELECTRICAL INSTALLATIONS

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	
Identify where socket outlets need to be installed & see if sufficient wiring is present	Poor Housekeeping, copper ends of wire.	Tripping over tools/material, and lacerations to hands and arms	2	3	6		Good housekeeping to me maintained at all times. Competent employees to work with wiring.			1	1	1	Site Manager, Site Supervisor & EHS Manager/Officer
Strip insulation of wiring	Use of wire strippers and/or carpet knife	Hand /finger pinching from wire strippers, or lacerations to fingers.	2	3	6		Competent/skilled employees to remove insulation from wires.			1	1	1	Site Manager, Site Supervisor & EHS Manager/Officer
Insert wires to socket outlet assembly & tighten screws at connection	Incorrect screwdriver, copper ends of wire.	Stripping of screw head and lacerations to hand/arm.	2	3	6		Correct tool for the job. Skilled employee to perform task.			1	1	1	Site Manager, Site Supervisor & EHS Manager/Officer
Installation of light fittings	Working at heights (ladder)	Falling and causing an injury.	3	4	12		Ladders to be inspected before use, and an employee to hold the ladder while another is working on it. Each ladder to be numbered and inspected prior to use and a monthly inspection checklist filled in.			3	1	3	Site Manager, Site Supervisor & EHS Manager/Officer
	Awkward positions	Back injury	2	3	6		Employees to be taught the correct lifting, carrying procedures. Training to be given to employees.		Overalls, safety shoes, hard hats, reflective vests, safety gloves, hearing protection, safety harness (when applicable)	3	1	3	Site Manager, Site Supervisor & EHS Manager/Officer
Installing cables into sleeves, trench or cable tray	Uneven ground, large heavy cable drum, manually turning up cable jack	Falling of cable drum, resulting in foot/leg injury, back injury, pinching of hand/fingers.	4	2	8		All required PPE to be worn. Ground to be level as possible. Enough manpower to be used. Mechanical means of handling to be used if possible. Competent employee to use cable jack. <u>Cable jacks to be load tested.</u>	Cable jack to have a load test certificate		3	2	6	Site Manager, Site Supervisor & EHS Manager/Officer
Pull cable from drum to be installed in underground sleeves, service ducts or cable tray	Uneven ground, pulling large cable drum	Falling of cable drum, resulting in foot/leg injury, back injury, pinching of hand/fingers.	4	2	8		All required PPE to be worn. Ground to be level as possible. Enough manpower to be used. Mechanical means of handling to be used if possible. Competent employee to use cable jack. Cable jacks to be load tested.	Cable jack to have a load test certificate		2	2	4	Site Manager, Site Supervisor & EHS Manager/Officer
Pull cable through sleeve to inside of the building	Existing cables, using nylon rope to pull draw wire, pulling large, heavy quantities of cable.	Existing cables getting damaged could cause possible fire, skin burns from handling nylon rope, ergonomic injury from pulling cable	3	2	6		Only competent employee to perform task. Hand protection to be used. Mechanical means to pull cable if not enough man power available.			2	1	2	Site Manager, Site Supervisor & EHS Manager/Officer
Installing exterior lighting	Height work	Risk of falling	4	3	12		Fall protection plan to be followed. A cherry picker/man lift to be used if possible. Scaffolding to be inspected prior to use. Employees to ensure they have double lanyard safety harness connected at all times to an anchor point.			3	1	3	Site Manager, Site Supervisor & EHS Manager/Officer

Average

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BASELINE RISK ASSESSMENT - ASPHALT SURFACING

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	
If contractor is working on a road that is being used by the military base, then a traffic management plan must be submitted for approval. All traffic calming measures to be implemented.													
Use of concrete cutter to cut through existing base	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.		Safety glasses, dust mask, safety gloves	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	Site Manager, Site Supervisor & EHS Manager/Officer
	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	Site Manager, Site Supervisor & EHS Manager/Officer
	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	Site Manager, Site Supervisor & EHS Manager/Officer
Cutting through existing asphalt	Exposure to a hazardous chemical	Inhalation of harmful fumes and dust	4	2	8		Employee to wear a dust mask. Employee to receive risk assessment training and be aware of all the hazards.			2	1	2	Site Manager, Site Supervisor & EHS Manager/Officer
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

BASELINE RISK ASSESSMENT - ASPHALT SURFACING

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	
	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 there 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
	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 be broken if there are not rebar. Drilling machine/grinder to be used by a trained and competent person.		Ear muffs, safety goggles, hand gloves	3	2	6	Supervisor
Placing asphalt on sub base	Working with a hazardous chemical	Skin irritation/dermatitis	3	2	6		Employees to wear gloves when working with asphalt.			2	1	2	
	Manual handling	Back injury	3	2	6		Employees to assist each other when lifting, carrying material. Ergonomic training to be given to employees. Mechanical means to be utilised if possible.			2	1	2	
Use of compaction roller	Vibrations	White knuckle syndrome, hand injury.	3	2	6		Employees to wear gloves that will absorb the vibrations of the roller.		Safety gloves.				

Average

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3

BASELINE RISK ASSESSMENT - MECHANICAL INSTALLATIONS:

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	
Pipe work	Poor Housekeeping	Tripping over tools/material, and lacerations to hands and arms	2	3	6		Good housekeeping to be maintained at all times. Competent employees to work with wiring.			1	1	1	Site Manager, Site Supervisor & EHS Manager/Officer
Pipe cutting	Use of pipe cutter	Hand injury	2	3	6		Competent/skilled employees to use pipe cutter.			1	1	1	Site Manager, Site Supervisor & EHS Manager/Officer
Fastening pipes	Incorrect hand tools	Hand injury	2	3	6		Correct tool for the job. Skilled employee to perform task.			1	1	1	Site Manager, Site Supervisor & EHS Manager/Officer
Installing pipes	Working at heights (ladder)	Falling and causing an injury.	3	4	12		Ladders to be inspected before use, and an employee to hold the ladder while another is working on it. Each ladder to be numbered and inspected prior to use and a monthly inspection checklist filled in.			3	1	3	Site Manager, Site Supervisor & EHS Manager/Officer
	Awkward positions	Back injury	2	3	6		Employees to be taught the correct lifting, carrying procedures. Training to be given to employees.			3	1	3	Site Manager, Site Supervisor & EHS Manager/Officer
Moving pipes into position	Heavy pipes and awkward positions	Back injury, foot injury, hand injury	4	2	8		All required PPE to be worn. Ground to be level as possible. Enough manpower to be used. Mechanical means of handling to be used if possible.			3	2	6	Site Manager, Site Supervisor & EHS Manager/Officer
Pipework	Welding	Arc eyes, burning	4	2	8		Competent / skilled employee to do welding activities. A hot work permit to be obtained. All required PPE to be worn. A welding curtain to be used.	Hot work permit	Overalls, safety shoes, hard hats, reflective vests, safety gloves, hearing protection, safety harness (when applicable)				
Installation of detectors	Working at heights (ladder)	Falling and causing an injury.	3	4	12		Ladders to be inspected before use, and an employee to hold the ladder while another is working on it. Each ladder to be numbered and inspected prior to use and a monthly inspection checklist filled in.			3	1	3	Site Manager, Site Supervisor & EHS Manager/Officer
	Working from scaffolding	Fall from heights	3	2	6		Access scaffolding will not be of a high height. All scaffolding must be inspected by a competent inspector prior to use, with the applicable signage.			2	1	2	Site Manager, Site Supervisor & EHS Manager/Officer
Installation of medical gas equipment	Unauthorised installer	Serious injury	5	4	20		An authorised installer to do the gas installation. Contractor to be approved by the Mechanical Engineer.			3	2	6	Site Manager, Site Supervisor & EHS Manager/Officer
Installation of Kitchen equipment	Moving heavy equipment	Foot and back injury	4	2	8		Employees to assist each other when moving and carrying/placing equipment. Mechanical means to be used if possible.			2	1	2	Site Manager, Site Supervisor & EHS Manager/Officer
	Use of hand tools and portable electrical tools	Hand, eye injury	3	2	6		All portable electrical tools and hand tools to be used for their intended purpose. All to be inspected prior to use.			2	1	2	Site Manager, Site Supervisor & EHS Manager/Officer

Average

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BASELINE RISK ASSESSMENT - PAVING

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	
Deliver kerbs to site	Kerbs fall off truck	Employees / members of the public could get injured / fatality and damage to plant, equipment and property.	4	3	12		Driver has a valid license. Vehicle checked before use. Headlights to be on at all times. Driver has medical certificate of fitness.	Crane truck to provide load test certificate		1	3	3	Site Manager, Site Supervisor & EHS Manager/Officer
	Vehicle accident	Serious injury, fatality	4	3	12		Driver has a valid license. Vehicle checked before use. Headlights to be on at all times. Driver has medical certificate of fitness.	Crane truck to provide load test certificate					
	Speeding	Serious injury, fatality	4	3	12		Driver has a valid license. Vehicle checked before use. Headlights to be on at all times. Driver has medical certificate of fitness.	Crane truck to provide load test certificate					
Offloading kerbs	Dropping material	Serious injury, fatality	4	3	12		Crane truck operator to be competent and have a medical certificate of fitness	Crane truck to provide load test certificate					
	Placing kerbs in the incorrect area	serious injury, to public	3	3	12		Crane truck operator to be competent and have a medical certificate of fitness. Driver to know which area to off load material	Crane truck to provide load test certificate					
Laying kerbs	Manual Handling	Back injury, repetitive motion injury, hand injury	3	3	9		Proper lifting technique to be used. SWP and tool box talk training.		Gloves, safety shoes	3	1	3	Supervisor

Average

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3

BASELINE RISK ASSESSMENT - BUILDING MANHOLES

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 TLB to dig hole	Struck by plant	Can cause damage to equipment and serious injury to user and others	4	3	12		Plant operator qualified. Medical certificate of fitness. Training given to all employees			1	3	3	Site Manager, Site Supervisor & EHS Manager/Officer
Working in an excavation	Collapse of excavation	Engulfment	4	3	12	Shoring to be used if the appointed, competent excavation inspector recommends shoring, or /and the safety agent and engineer.	Excavation to be inspected prior to manhole being worked in. It must be documented that it is safe for employees to work in the excavation. Battering and shoring to be used if required. Excavations to be barricaded after work is finished for the day. A ladder must be in close proximity to employees to ensure safe access and egress.					0	Excavation inspector and construction work supervisor.
Cast base	Open manhole	Fall into manhole, serious injury	4	3	12		Provide access ladder in manhole. All employees to have medical certificate of fitness. Workers to receive training, SWP, tool box talks			3	1	3	Supervisor Storeman
Build man hole	Struck by bricks	Serious injury, head injury	3	3	9		Workers to receive training, supervision.		Hard hats, safety shoes,	2	1	2	Supervisor Storeman
	Stuck in manhole	Serious injury	3	4	12		Provide access ladder in manhole. All employees to have medical certificate of fitness. Workers to receive training, SWP, tool box talks			3	1	3	Supervisor Storeman

Average

11

2

BASELINE RISK ASSESSMENT - LAYING PRE CAST CONCRETE KERBS

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	
Deliver kerbs to site	Kerbs fall off truck	Employees / members of the public could get injured / fatality and damage to plant, equipment and property.	4	3	12		Driver has a valid license. Vehicle checked before use. Headlights to be on at all times. Driver has medical certificate of fitness.	Crane truck to provide load test certificate		1	3	3	Site Manager, Site Supervisor & EHS Manager/Officer
	Vehicle accident	Serious injury, fatality	4	3	12		Driver has a valid license. Vehicle checked before use. Headlights to be on at all times. Driver has medical certificate of fitness.	Crane truck to provide load test certificate					
	Speeding	Serious injury, fatality	4	3	12		Driver has a valid license. Vehicle checked before use. Headlights to be on at all times. Driver has medical certificate of fitness.	Crane truck to provide load test certificate					
Offloading kerbs	Dropping material	Serious injury, fatality	4	3	12		Crane truck operator to be competent and have a medical certificate of fitness, employees to be taught the correct lifting and carrying techniques.	Crane truck to provide load test certificate					
	Placing kerbs in the incorrect area	serious injury, to public	3	3	12		Crane truck operator to be competent and have a medical certificate of fitness. Driver to know which area to off load material, task specific ergonomic training to be given to employees.	Crane truck to provide load test certificate					
Laying kerbs	Manual Handling	Back injury, repetitive motion injury, hand injury	3	3	9		Proper lifting technique to be used. SWP and tool box talk training.		Gloves, safety shoes	3	1	3	Supervisor

Average

12

3

BASELINE RISK ASSESSMENT - GABIONS PITCHING

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	
Deliver kerbs to site	Stones fall off truck	Employees / members of the public could get injured and damage to plant, equipment and property.	4	3	12		Driver has a valid license. Vehicle checked before use. Headlights to be on at all times. Driver has medical certificate of fitness. A tipper truck to be used.	Vehicle operators competency certificate to be on file.		1	3	3	Site Manager, Site Supervisor & EHS Manager/Officer
	Vehicle accident	Serious injury, fatality	4	3	12		Driver has a valid license. Vehicle checked before use. Headlights to be on at all times. Driver has medical certificate of fitness.						
	Speeding	Serious injury, fatality	4	3	12		Driver has a valid license. Vehicle checked before use. Headlights to be on at all times. Driver has medical certificate of fitness.						
Offloading stones	Dropping material	Serious injury, fatality	4	3	12		Stones to be delivered to the exact area where employees will be manually placing the stones into the gabion baskets.						
	Placing stones in the incorrect area	serious injury, to public	3	3	12		Stones to be delivered to the exact area where employees will be manually placing the stones into the gabion baskets.						
Placing stones into the gabion baskets	Manual Handling, hand injury	Back injury, repetitive motion injury, hand injury	3	3	9		Proper lifting technique to be used, SWP and tool box talk training. Employees to wear gloves as the stones and wire basket could injury them.		Gloves, safety shoes	3	1	3	Supervisor

Average

12

3

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. Scaffolding not to be used in inclement weather.	Daily working at height permit required.	Overalls, safety shoes, hard hats, double lanyard safety harnesses.	2	2	4	Site Manager, Site Supervisor & EHS Manager/Officer
	Employees not permitted to work at heights 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 lanyard 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. Ensure 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	
Doing brick work, plastering, painting, installation of gutters, facial boards etc	Working with tools and equipment at heights	Slipping and falling, objects from above falling to a lower level and causing injury to employees below.	3	4	12		Area below to be cordoned off to ensure that employees don't have 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 up 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 especially the non-conformances of height work requirements. Continuous training to be given to employees.			1	2	2	
	Poor housekeeping	Slipping, tripping and falling.	4	2	8		Adequate secure ladders/platforms, safety harnesses, double lanyard safety harnesses to be used. Housekeeping to be constantly monitored. Employees to store their tools correctly.			1	2	2	

Average

12

3

BASELINE RISK ASSESSMENT - BRICKWORK AND DEMOLITION

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. Scaffolding not to be used in inclement weather.	Daily working at height permit required.	Overalls, safety shoes, hard hats, double lanyard safety harnesses.	2	2	4	Site Manager, Site Supervisor & EHS Manager/Officer
Demolition of internal walls	Demolition	Unplanned collapse causing serious injury to employees	4	4	16	Method statement approval	A detailed method statement to be approved by the structural engineer prior to demolition commences. Contractor to ensure adjoining structures are not at risk of collapsing.	Demolition work permit		2	2	4	
Demolition of internal walls	Use of portable electrical tools / jack hammer	White knuckle syndrome, debris in eyes, foot injury	4	2	8		Competent employee to use portable electrical tools. All required PPE to be used.		Hearing protection, safety gloves, eye protection, safety shoes	2	2	4	
	Use of hand tools	Flying debris causing eye injury, back injury	4	2	8		Employees to receive task specific training. Risk assessment training to be conducted and all required PPE to be used.		Hearing protection, safety gloves, eye protection, safety shoes	2	2	4	
Building walls	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. Ensure 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, placing and fastening of roof trusses	Working with tools and equipment at heights	Slipping and falling, objects from above falling to a lower level and causing injury to employees below.	3	4	12		Area below to be cordoned off to ensure that employees don't have 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 up 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 manageable 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	

BASELINE RISK ASSESSMENT - BRICKWORK AND DEMOLITION

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 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	
Building concrete ring beams	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. Ensure 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	
	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	
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 espically 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			

BASELINE RISK ASSESSMENT - ROOF WORK & INSTALLATION OF ROOF TRUSSES

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. Scaffolding not to be used in inclement weather.	Daily working at height permit required.	Overalls, safety shoes, hard hats, double lanyard safety harnesses.	2	2	4	Site Manager, Site Supervisor & EHS Manager/Officer
	Employees not permitted to work at heights 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 lanyard 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. Ensure 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, placing and fastening of roof trusses	Working with tools and equipment at heights	Slipping and falling, objects from above falling to a lower level and causing injury to employees below.	3	4	12		Area below to be cordoned off to ensure that employees don't have 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 up 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 manageable 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	
Placing and fastening roof sheets	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. Ensure 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 manageable 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	

BASELINE RISK ASSESSMENT - ROOF WORK & INSTALLATION OF ROOF TRUSSES

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 on the edge of a roof	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 especially the non-conformances of height work requirements. Continuous training to be given to employees.			1	2	2	
	Poor housekeeping	Slipping, tripping and falling.	4	2	8		Adequate secure ladders/platforms, safety harnesses, double lanyard safety harnesses to be used. Housekeeping to be constantly monitored. Employees to store their tools correctly.			1	2	2	

Average

10

3

BASELINE RISK ASSESSMENT - IRONMONGERY, JOINERY AND SANITARY INSTALLATIONS

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	
Ironmongery - Joinery & Sanitary ware	Poor Housekeeping	Tripping over tools/material, and lacerations to hands and arms	2	3	6		Good housekeeping to me maintained at all times. Competent employees to work with wiring.			1	1	1	Site Manager, Site Supervisor & EHS Manager/Officer
Ironmongery - Joinery & Sanitary ware	Exposed to hazardous chemicals e.g. Paint, glue, epoxy	Inhalation of fumes. Burning of skin	3	2	6		All MSDS to be on site and first aider to know first aid procedures. Employees to wear the required PPE e.g. Dust masks, gloves.			1	1	1	Site Manager, Site Supervisor & EHS Manager/Officer
Ironmongery - Joinery & Sanitary ware	Incorrect hand tools	Hand injury	2	3	6		Correct tool for the job. Skilled employee to perform task.			1	1	1	Site Manager, Site Supervisor & EHS Manager/Officer
Ironmongery - Joinery & Sanitary ware	Working at heights (ladder)	Falling and causing an injury.	3	4	12		Ladders to be inspected before use, and an employee to hold the ladder while another is working on it. Each ladder to be numbered and inspected prior to use and a monthly inspection checklist filled in.			3	1	3	Site Manager, Site Supervisor & EHS Manager/Officer
	Awkward positions	Back injury	2	3	6		Employees to be taught the correct lifting, carrying procedures. Training to be given to employees.			3	1	3	Site Manager, Site Supervisor & EHS Manager/Officer
Moving material into place	Heavy pipes and awkward positions	Back injury, foot injury, hand injury	4	2	8		All required PPE to be worn. Ground to be level as possible. Enough manpower to be used. Mechanical means of handling to be used if possible.			3	2	6	Site Manager, Site Supervisor & EHS Manager/Officer
Installing burglar bars	Welding	Arc eyes, burning	4	2	8		Competent / skilled employee to do welding activities. A hot work permit to be obtained. All required PPE to be worn. A welding curtain to be used.	Hot work permit					
Installation of joinery (cupboards)	Working at heights (ladder)	Falling and causing an injury.	3	4	12		Ladders to be inspected before use, and an employee to hold the ladder while another is working on it. Each ladder to be numbered and inspected prior to use and a monthly inspection checklist filled in.			3	1	3	Site Manager, Site Supervisor & EHS Manager/Officer
	Working from scaffolding	Fall from heights	3	2	6		Access scaffolding will not be of a high height. All scaffolding must be inspected by a competent inspector prior to use, with the applicable signage.			2	1	2	Site Manager, Site Supervisor & EHS Manager/Officer
Installing sanitary ware	Moving heavy equipment	Foot and back injury	4	2	8		Employees to assist each other when moving and carrying/placing equipment. Mechanical means to be used if possible.			2	1	2	Site Manager, Site Supervisor & EHS Manager/Officer
	Use of hand tools and portable electrical tools	Hand, eye injury	3	2	6		All portable electrical tools and hand tools to be used for their intended purpose. All to be inspected prior to use.			2	1	2	Site Manager, Site Supervisor & EHS Manager/Officer

Average

8

2

BASELINE RISK ASSESSMENT - REPAIRS OF CONCRETE

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	
Pre-use inspection of concrete cutter	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		Train to be given. Checklist to be completed. Any damaged equipment to be removed from site.		Hear protection, eye protection, dust mask, full length overalls, safety shoes, hand gloves	1	3	3	Site Manager, Site Supervisor & EHS Manager/Officer
Chang of 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 blades on grinder/skill-saw. Task to be supervised by a competent supervisor. User to ensure that the machine is plugged out.			3	1	3	Supervisor Storeman
	Incorrect tools used to change the blades	Damage to equipment or injury to hands to caused by us incorrect tools to change blades	3	3	9		Task to be supervised by a competent supervisor. Only trained and competent person to change the on the machine or blades on skill-saw/grinder			2	1	2	Supervisor Storeman
	Incorrect 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 on the machine or blades on skill-saw/grinder. Supervisor to ensure that the correct and blade is provided and fitted.			3	1	3	Supervisor Storeman
	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 /blade on the machine/skill-saw/grinder after the fitment of the or blade.			3	1	3	Supervisor Storeman
	Damaged blade fitted	Can cause damage to equipment and serious injury to user	3	4	12		Task to be supervised by a competent supervisor. /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
Cutt through road surface	Dust, debris, noise	Eye injury, dust inhalation, hear loss	3	4	12		Authorization to be received from the RE . All equipment to be safe for use risk assessment and SWP train to be given to employees. Only authorised and competent employees to use the concrete cutter. Concrete cutter to be inspected prior to use, to ensure that all guards are in place. Construction work signage to be in place.		Dust mask, hear protection, safety glasses	2	2	4	Supervisor EHS Officer

Average

11

3

BASELINE RISK ASSESSMENT - TEMPORARY WORKS AND CONCRETE WORKS

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 weight & size 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 construction 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 weight & size 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 complete 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 AND CONCRETE WORKS

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 formwork 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 exceeding 1,8m ensure that employee is wearing a safety harness 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. Dermatitis / injury to hands if skin in constant contact with concrete.	2	2	4		The correct use 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 machinery or its 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 personnel not to be in close proximity of the concrete truck/boom.			2	2	4	Construction Manager

Average

14

4

BASELINE RISK ASSESSMENT - ASBESTOS ROOF SHEETS

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	

Only a registered asbestos company may remove asbestos building material, as per the Asbestos Regulations in the Occupational Health and Safety Act (85 of 1993)

Climbing to an elevated position to work to remove asbestos material	Access scaffolding	Serious injury or death	3	2	6	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. Scaffolding not to be used in inclement weather.	Daily working at height permit required.	Disposable overalls, dust masks, safety gloves	2	2	4	Site Manager, Site Supervisor & EHS Manager/Officer
	Employees not permitted to work at heights 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.		Disposable overalls, dust masks, safety gloves	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. Ensure 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.	Disposable overalls, dust masks, safety gloves	2	2	4	
Climbing to an elevated position to work to remove asbestos material	Working with tools and equipment at heights	Slipping and falling, objects from above falling to a lower level and causing injury to employees below.	3	4	12	Area below to be cordoned off to ensure that employees don't have 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.	Disposable overalls, dust masks, safety gloves	2	2	4	
	Trying to carry materials, tools up 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.		Disposable overalls, dust masks, safety gloves	2	2	4	
Removal of asbestos material	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.		Disposable overalls, dust masks, safety gloves	1	2	2	
Removal of asbestos material	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.		Disposable overalls, dust masks, safety gloves	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 especially the non-conformances of height work requirements. Continuous training to be given to employees. Adequate secure ladders/platforms, safety harnesses, double lanyard safety harnesses to be used. Housekeeping to be constantly monitored. Employees to store their tools correctly.		Disposable overalls, dust masks, safety gloves	1	2	2	
	Poor housekeeping	Slipping, tripping and falling.	4	2	8			Disposable overalls, dust masks, safety gloves	1	2	2	

Average

10

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