## ETHEKWINI MUNICIPALITY Occupational Health & Safety Unit



## Baseline Risk Assessment in terms of Construction Regulation 5.1(a)

Document Title	Baseline Risk Assessment in terms of Construction Regulation 5.1(a)
Client	eThekwini Municipality – road provision
Project Name	Upgrade of 200058 STR and access lanes lanes in ward 13
Contract Number	1R-33251
Revision	01
Date	08/09/2025
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Compiled by (Safety officer)	Siziwe Chiliza
	Signature:
Reviewed by (Manager: Safety& Risk)	Arty Zondi
	Signature:

MAIN ACTIVITY				Site Esta	olishment	
REF NO	SUB ACTIVITY	SAFETYRISKS	HEALTH RISK	ENVIROMENTAL RISK	PUBLIC RISK	RECOMMENDED RISK CONTROL MEASURE
1.1	Travel to site	Potholes     Undulating roads     Poor visibility	• Fatigue	Oil/diesel spillages	Community livestock     Other vehicles     driving recklessly     Pedestrians     Construction works     on public road	<ul> <li>All drivers to be deemed competent</li> <li>No staff to travel in rear of vehicles with equipment</li> <li>All equipment to be secured during transport</li> <li>All vehicles to be road worthy</li> <li>No drivers/Operators to be under the influence of alcohol or drugs of any kind.</li> <li>Inspection Records must be kept for all vehicles and plant.</li> </ul>

REF NO	SUB ACTIVITY	SAFETYRISKS	HEALTH RISK	ENVIROMENTAL RISK	PUBLIC RISK	RECOMMENDED RISK CONTROL MEASURE
1.2	Site clearance and de-vegetation	Poor traffic control Incompetent drivers inadequate signage's Moving of construction vehicles and vehicle colliding Snakes insect bites & stings	Back strain     cuts,     Abrasion     heat exhaustion     noise exposure     dust inhalation	Spilling of oil diesel, petrol     Contamination of ground	Tripping hazard     dust inhalation     intermittent noise level	<ul> <li>All staff to have medicals done by an occupational medical practitioner prior to commencement of work. All workers to have valid medicals with annexure 3 documents signed and stamped by Occupational Medical Practitioner with records in file.</li> <li>All staff to work under supervision</li> <li>Dust suppression is to be maintained</li> <li>Responsible 8.1 to ensure Instructions are given on Manual handling using Safe Work Procedure (SWP) for Manual Handling.</li> <li>Only Licensed and Appointed Mechanical Aids Operators (i.e.         <ul> <li>Crane Operators, TLB operators, Bobcat Operators, etc.) to operate plant on site.</li> <li>Inspection &amp; Maintenance records must be maintained for all mechanical aids on site.</li> </ul> </li> </ul>

REF NO	SUB ACTIVITY	SAFETYRISKS	HEALTH RISK	ENVIROMENTAL RISK	PUBLIC RISK	RECOMMENDED RISK CONTROL MEASURE
1.3	Site fencing	Pinch points from manual handling Trip hazards Underground services	Heat exposure     Dust     Noise     Chemical burns/ contact dermatitis from cement and eye injuries from cement splashes	Hydrocarbon spills	Unauthorised persons entering site     School learners entering site     Damage to underground services	<ul> <li>All contractor staff and local labour to be inducted of all "no go" areas</li> <li>All staff have company logo PPE with name tags</li> <li>Contractor staff to work within designated areas only</li> <li>Contractor to conduct DSTI's (Daily Safety Task Instruction) and communicated at the beginning of the shift daily. DSTI close out to be conducted and attendance registered signed by all staff.</li> <li>Flagman to be provided to ensure vehicles are guided onto site.</li> <li>Wear hand protection (PVC Gloves), safety glasses and face shield always by the operator of the concrete chute.</li> <li>Concrete spillages to be cleaned up and concrete truck chute to be cleaned in concrete wash area.</li> <li>Stacking &amp; Storage Supervisor to be appointed to control lay down areas.</li> </ul>

REF NO	SUB ACTIVITY	SAFETYRISKS	HEALTH RISK	ENVIROMENTAL RISK	PUBLIC RISK	RECOMMENDED RISK CONTROL MEASURE
1.4	Placing of mobile offices	Use of mechanical aids for offloading     Failure of lifting equipment     Fall from heights     Manual handling     Mechanical aids overturning     Overhead power lines	Noise Hand and body injuries Heat exposure Dust exposure	Hydrocarbon spills	Exposure to dust     Interaction of machinery and learners	<ul> <li>All operators to be deemed competent</li> <li>All riggers to be deemed competent</li> <li>All lifting equipment to be. load tested</li> <li>Flagman/banksman to be present on-site during movement of plant</li> <li>Access control to be managed on site</li> <li>All staff to have the required PPE</li> <li>Staff working at heights to be trained for heights safety</li> <li>Contractor to conduct DSTI's (Daily Safety Task Instruction) and communicated at the beginning of the shift on a daily basis. DSTI close out to be conducted and attendance registered signed by all staff.</li> <li>Ensure Offloading area is clear, level, secure and free from slip trip and falling hazards.</li> <li>Mechanical Aids must be operated in accordance with the operators training and manufacturers guidelines</li> </ul>

REF NO	SUB ACTIVITY	SAFETYRISKS	HEALTH RISK	ENVIROMENTAL RISK	PUBLIC RISK	RECOMMENDED RISK CONTROL MEASURE
1.5	Connection of power supply	Electrocution Hand injuries	Heat exhaustion	None	Interruption of power supply	<ul> <li>Only authorised person to do electrical connection</li> <li>A COC is to be provided for all electrical works done</li> <li>Monthly inspections to be done for all temporary electrical connections</li> <li>Contractor is to be responsible for power consumption</li> <li>Required agreements to be in file for electrical usage</li> </ul>
1.6	Water supply	Injuries during the laying of water pipes	Drinking water which is not safe for human consumption	None	Theft of water by residents	<ul> <li>All drinking water is to be labelled/sign posted</li> <li>Water use is to be managed on site</li> <li>The location of standpipes to be correctly positioned to mitigate theft of water from site</li> </ul>

	Construction of staff facilities: eat area/toilets/ change area	<ul> <li>Manual handling</li> <li>Fall from heights</li> <li>Hand injuries</li> <li>Use of portable electrical power tools</li> </ul>	Electrocution     Dust exposure     Heat exposure	None	None	<ul> <li>Separate facilities for both male and female</li> <li>Drinking water to be provided for staff on site</li> <li>If portable toilets are to be used required service slips are to be maintained on site</li> <li>Staff facilities area to be suitable for staff use</li> </ul>
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MAIN ACTIVITY				Construc	tion Works	
REF NO	SUB ACTIVITY	SAFETYRISKS	HEALTH RISK	ENVIROMENTAL RISK	PUBLIC RISK	RECOMMENDED RISK CONTROL MEASURE
2.1	Site survey	Trips and falls     Injuries from     use of hand     tools	<ul><li>Heat exhaustion</li><li>Dust exposure</li></ul>	Use of cement for markings contamination	Trips and falls     Unauthorised     entrance	<ul> <li>Works to be supervised</li> <li>DSTI to be done</li> <li>Lime to be used for ground markings</li> <li>Required PPE to be used</li> <li>All survey pegs to be made visible</li> <li>If steel is to be used rebar caps are to be fitted onto them</li> </ul>
2.2	Mechanical excavations	<ul> <li>Machinery collides with people</li> <li>Collision with machinery</li> <li>Fall into open excavation</li> <li>Collapse of side walls</li> </ul>	<ul><li>Dust exposure</li><li>Back injuries</li><li>Noise exposure</li></ul>	Hydrocarbon spills	Dust exposure     Collision with     machinery	<ul> <li>DSTI to be done</li> <li>All staff to have the required PPE</li> <li>All plant to be inspected before use</li> <li>All open excavations to be netted off and sign posted</li> <li>Excavated spoil to be 500mm away from edge of excavation</li> <li>Nil staff to be in any excavation when machinery in use</li> </ul>
2.3	Manual excavations	<ul> <li>Slips and falls</li> <li>Fall into open excavations</li> <li>Collapse of side walls</li> </ul>	<ul><li>Dust exposure</li><li>Back injuries</li><li>Heat exhaustion</li></ul>	None	Fall into open excavations	<ul> <li>All staff to be trained in safe works procedure</li> <li>All spoil to be away from edge of excavation</li> <li>Ladders to be provided for access and egress from excavations</li> </ul>

REF NO	SUB ACTIVITY	SAFETYRISKS	HEALTH RISK	ENVIROMENTAL RISK	PUBLIC RISK	RECOMMENDED RISK CONTROL MEASURE
2.4	Unsafe stacking and storage practices	Manual handling injuries     Pinch points     Slips and trips	Back injuries	None	None	<ul> <li>Required PPE to be used</li> <li>DSTI to be done</li> <li>All works to be supervised</li> <li>All steel to be stacked within a designated area</li> </ul>
2.5	Installation of Temporary Electrical Installations	<ul> <li>Use of hand tools injuries</li> <li>Trips and falls</li> <li>Collapse of excavation side walls</li> <li>Contact with machinery</li> </ul>	Chemical burns from concrete     Heat exhaustion     Dust exposure	Ground contamination	Collision with pedestrians	<ul> <li>DSTI to be done</li> <li>Flagman to direct all trucks to site</li> <li>All staff to have the required PPE when handling concrete</li> <li>Nil staff to be in foundation during discharge of concrete into excavation</li> <li>Delivery trucks to use designated access</li> <li>Washing of truck chutes to be done within a concrete wash area</li> </ul>
2.6	Housekeeping	Manual handling injuries     Trips and falls	<ul> <li>Dust exposure</li> <li>Back strains</li> <li>Ergonomically injuries</li> </ul>	Ground contamination due to mixing of mortar on natural ground	Unauthorised access to site	<ul> <li>Proper stacking of bricks to be done</li> <li>Movement of bricks to be done with proper wheelbarrows</li> <li>All staff to have required PPE</li> <li>A platform to be created for mixing of mortar</li> <li>Housekeeping to be maintained on site</li> </ul>

REF NO	SUB ACTIVITY	SAFETYRISKS	HEALTH RISK	ENVIROMENTAL RISK	PUBLIC RISK	RECOMMENDED RISK CONTROL MEASURE
2.7	Site Induction	<ul> <li>Struck by machinery</li> <li>Manual handling injuries</li> <li>Fires</li> </ul>	<ul><li>Dust exposure</li><li>Heat exhaustion</li><li>HAVS</li><li>Noise</li></ul>	Hydrocarbon spills	Unauthorised access	<ul> <li>All staff to have required PPE</li> <li>DSTI to be done</li> <li>All works to be supervised</li> <li>Safe works procedure to be done and communicated to staff</li> <li>Risk assessments to be communicated by means of training</li> </ul>
2.8	Setting up of temporary road works signage	<ul> <li>Struck by machinery</li> <li>Placing of incorrect signage at locations</li> </ul>	incident Damage to property	Environmental degradation	None	The Contract  Manager must ensure that a suitable site-specific Traffic Management Plan is developed and implemented and a competent Traffic Safety Officer  The Contract  Site of the Contract  Traffic Management Plan is developed and implemented and a competent Traffic Safety
2.9	Public vehicular and pedestrian traffic travelling on the public road during construction work	<ul><li>injuries</li><li>car</li><li>collision</li></ul>	2 incident Damage to property	None	None	<ul> <li>All works to be supervised</li> <li>All All temporary road traffic signage must comply with the</li> <li>SARTSM</li> <li>Flagman to direct all vehicles to site</li> </ul>

(asphalt layer)  •  R	Use of hand tools injuries     Trips and falls     Contact with machinery Respiratory failure     Burns	<ul> <li>Chemical burns from asphalt</li> <li>Heat exhaustion</li> <li>High temperature of product</li> </ul>	Ground contamination	none	<ul> <li>Flagman to direct all vehicles</li> <li>All staff to have the required PPE when handling asphalt</li> <li>Delivery trucks to use designated access</li> <li>All spills to be cleaned and disposed</li> <li>Enforced reverse alarms to be fitted Application of dust masks</li> </ul>
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REF NO	SUB ACTIVITY	SAFETYRISKS	HEALTH RISK	ENVIROMENTAL RISK	PUBLIC RISK	RECOMMENDED RISK CONTROL MEASURE
2.11	Backfilling	Manual handling injuries     Trips and falls	<ul> <li>Dust exposure</li> <li>Back strains</li> <li>Ergonomically injuries</li> <li>Heat exhaustion</li> </ul>	Ground contamination due to mixing of mortar on natural ground	Unauthorised access to site	<ul> <li>All staff to have required PPE</li> <li>A platform to be created for mixing of mortar</li> <li>Waste skips to be provided on site</li> <li>All asphalt waste to be properly disposed on site</li> <li>Housekeeping to be maintained on site</li> </ul>

2.12	Refuelling plant and equipment	Extremely flammable, high hazard. The liquid can release vapours at temperature below ambient which forms flammable mixtures	Heat exhaustion	Ground contamination due to mixing of mortar on natural ground	Unauthorised access to site	<ul> <li>Required appointments to be in file</li> <li>All works to be supervised</li> <li>Remove all sources of ignition. Contain and</li> <li>collect spillage with non-combustible absorbent materials. Place in a suitable container for disposal in accordance with waste regulations</li> </ul>
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2.13	Excavator Plate compactor,	<ul> <li>Collapse of scaffolding</li> </ul>	Heat exhaustion	None	Unauthorised access to site	All staff will be deemed fit for work with medicals records in file
	Bomag roller,	Slips and falls				Required PPE will be provided for staff
	Front end	• Fall from				All works to be supervised
	loader, Mobile crane	heights/				•
	Clane	elevated				
	TLB, milling	positions				
	machine,					
	paver,					
	excavator, skid					
	steer(bobcat),					
	rollers (steel					
	drum/ rubber					
	tyre) grader,					
	insist recycler,					

chip spreader,			
bitumen			
distributor(tan			
ker)			

REF NO	SUB ACTIVITY	SAFETYRISKS	HEALTH RISK	ENVIROMENTAL RISK	PUBLIC RISK	RECOMMENDED RISK CONTROL MEASURE
2.15	Employees working in close proximity to moving machinery Exposure to noise	noise	noise	none	No unauthorised access	All power tools to be inspected before use.     Records to be in file     Housekeeping to be maintained on site     Employee to make use of SABS approved hearing protection, supervisor to ensure that the correct P.P.E is used. Task to be supervised by a competent supervisor
2.16	Hazardous chemical substances	injuries Contact with skir eyes Inhalation or indigestion	Skin irritation, burns or infections Could cause loss in eyesight	d	Exposed rebail	ne

2.17	Neighbouring	Dust exposure	Dust pollution	Unauthorised access	Communication with neighbouring business is critical.
	business and	<ul> <li>Heat exhaustion</li> </ul>		to site	Health risk must be communicated to all
	public				employees' dust, noise generated out of the construction work
	exposed to				must be managed
	the nature of				Fence constructed to approved standard
	the				
	construction				
	activities				

REF NO	SUB ACTIVITY	SAFETYRISKS	HEALTH RISK	ENVIROMENTAL RISK	PUBLIC RISK	RECOMMENDED RISK CONTROL MEASURE
2.18	Emergency Preparedness, Emergency Drill & Evacuation	No training No implementation Planning done Failure to have a basic site- specific Emergency Management Plan	Person/s unprepared to respond to the emergency at hand	none	none	The Construction Manager must ensure that a site-specific Emergency Management Plan is developed for implementation. Adequate number of employees trained in the use of fire equipment

2.17	Utilizing incompetent Sub-Contractors	<ul> <li>Use of hand tools injuries</li> <li>Trips and falls</li> <li>Contact with machinery</li> </ul>	Chemical burns from concrete     Heat exhaustion     Dust exposure	Ground contamination	Collision with pedestrians	The Construction Manager must be reasonably satisfied that the Sub Contractors intended to be appointed have the necessary competencies and resources to carry out the work safely
2.18	Brickwork at manholes	<ul> <li>Manual handling injuries</li> <li>Use hand tools injuries</li> </ul>	<ul><li>Ergonomical injuries</li><li>Heat exhaustion</li></ul>	None	None	<ul> <li>DSTI to be done</li> <li>Risk assessment and SWP to be communicated to all staff</li> <li>All power tools to be inspected before use</li> <li>Fall arrest equipment to be used at all heights</li> </ul>

REF NO	SUB ACTIVITY	SAFETYRISKS	HEALTH RISK	ENVIROMENTAL RISK	PUBLIC RISK	RECOMMENDED RISK CONTROL MEASURE
2.19	Mixing mortar	Unsafe     electrocution     loading strain	Loading / unloading material	none	none	The Construction Manager must ensure that a SWP is developed implemented about safe lifting and loading procedures  All work needs to be supervised

REF NO	SUB ACTIVITY	SAFETYRISKS	HEALTH RISK	ENVIROMENTAL RISK	PUBLIC RISK	RECOMMENDED RISK CONTROL MEASURE
2.20	Install Geosynthetic layer	Poor Ergonomics may result in muscular skeletal injuries	<ul> <li>Ergonomical injuries</li> <li>Heat exhaustion</li> </ul>	None	None	The Construction Manager must ensure that workers are trained in the risk of ergonomically injuries and methods to mitigate the risks

MAIN ACTIVITY						
REF NO	SUB ACTIVITY	SAFETYRISKS	HEALTH RISK	ENVIROMENTAL RISK	PUBLIC RISK	RECOMMENDED RISK CONTROL MEASURE
3.3	Construction of drains	Trips and falls Manual handling injuries Underground services Open excavations	Dust exposure     Heat exposure     Ergonomical injuries     Noise exposure	None	None	<ul> <li>All works to be supervised</li> <li>DSTI to be done</li> <li>Risk assessments &amp; SWP to be done</li> <li>All open excavations to be netted off</li> <li>Access and egress to be provided for all open excavations</li> <li>All spoil to be away from excavation side wall</li> </ul>

MAIN ACTIVITY						
REF NO	SUB ACTIVITY	SAFETYRISKS	HEALTH RISK	ENVIROMENTAL RISK	PUBLIC RISK	RECOMMENDED RISK CONTROL MEASURE
3.4	Pouring Ready Mix concrete	<ul><li> Noise</li><li> Dust</li><li> Bumping against,</li></ul>	noise induced hearing loss	None	None	flag person required and Visual check required     Wearing required PPE

		Concrete truck tipping over				
3.5	Waste removal	<ul><li>Noise</li><li>Dust</li><li>Bumping against,</li><li>Struck by flying items</li></ul>	<ul><li>cuts and abrasions</li><li>dust inhalation</li><li>noise induced hearing loss</li></ul>	None	None	<ul> <li>Safe &amp; proper use of hand tools</li> <li>Wearing required PPE</li> <li>practise of proper manual lifting of material</li> </ul>

MAIN ACTIVITY						
REF NO	SUB ACTIVITY	SAFETYRISKS	HEALTH RISK	ENVIROMENTAL RISK	PUBLIC RISK	RECOMMENDED RISK CONTROL MEASURE
3.9	Inlet and outlet structures	Use of hand tools injuries Trips and falls Contact with machinery Working in a restricted area Manual handling	Dust exposure     Ergonomical injuries     Chemical burns	None	None	<ul> <li>Safe &amp; proper use of hand tools</li> <li>Wearing required PPE</li> <li>practise of proper manual lifting of material</li> <li>Supervise the works by a competent supervisor</li> </ul>
3.10	Working with hot asphalt	lack of proper access / working platform	Heat exhaustion	None	None	<ul> <li>DSTI to be done</li> <li>Risk assessment and SWP to be communicated to all staff</li> <li>Scaffold to be erected by competent person</li> <li>Scaffold to be erected as per SANS 10085</li> <li>Supervise the works by a competent supervisor</li> <li>Staff to be trained for work at heights</li> <li>Fall arrest equipment to be used at all heights</li> <li>Adequate lighting to be provided</li> </ul>

REF NO	SUB ACTIVITY	SAFETYRISKS	HEALTH RISK	ENVIROMENTAL RISK	PUBLIC RISK	RECOMMENDED RISK CONTROL MEASURE
6.3	Cleaning tools with solvent	Use of power tool – electrocution  Manual handling  Work in restricted area	2 Dust exposure	None	None	<ul> <li>All power tools to be inspected before use</li> <li>DSTI to be done</li> <li>Risk assessment/SWP to be done and in file</li> <li>All staff to have required PPE</li> </ul>
6.5	Manual lifting of tool	Fall from heights     Fall of     equipment from heights	<ul><li>Dust exposure</li><li>Heat exhaustion</li><li>Manual exertion</li></ul>	None	None	<ul> <li>Work platform to be inspected</li> <li>Full supervision at all times</li> <li>Staff to have fall arrest equipment in use</li> <li>Manual lifting techniques to be always practiced</li> </ul>
	Welding, flame cutting, soldering and similar operations	Fumes inhalation     Eye injury	Chest pain     heat	none	none	Proper PPE required     Close supervision

MAIN ACTIVITY						
REF NO	SUB ACTIVITY	SAFETYRISKS	HEALTH RISK	ENVIROMENTAL RISK	PUBLIC RISK	RECOMMENDED RISK CONTROL MEASURE
7.1	Inlet and outlet structures	Struck by vehicle	heat	none	none	Traffic management plan required
7.2	Applying tack	Eye injury	contamination	none	none	Close supervision all the time

MAIN ACTIVITY						
REF NO	SUB ACTIVITY	SAFETYRISKS	HEALTH RISK	ENVIROMENTAL RISK	PUBLIC RISK	RECOMMENDED RISK CONTROL MEASURE
8.1	Site levelling using excavator/bob cat	Trips and falls Exposed survey pegs Use of hand tools	Heat exposure     Noise exposure	Hydrocarbon spills	Pedestrians     exposed to     machinery     Accidents	Works to be supervised     Staff to use required PPE     Dust suppression to be maintained     Refuelling to be done in designated areas     Rebar caps to be fitted on exposed pegs     Risk assessments and SWP to be done for staff     All plant operators to be deemed competent     Flagman to be present on site
8.2	Backfill and compaction of other layers	Manual handling     Trips and falls     Use of mobile plant accidents	Heat exhaustion     Dust exposure     Noise exposure	Hydrocarbon spills	Pedestrians     exposed to     machinery     Accidents	Works to be supervised     Staff to use required PPE     Dust suppression to be maintained     Refuelling to be done in designated areas     Rebar caps to be fitted on exposed pegs     Risk assessments and SWP to be done for staff     All plant operators to be deemed competent     Flagman to be present on site

REF NO SU	SUB ACTIVITY	SAFETYRISKS	HEALTH RISK	ENVIROMENTAL RISK	PUBLIC RISK	RECOMMENDED RISK CONTROL MEASURE
wa	oncreting of valkways/ riveway	<ul> <li>Use of hand tools injuries</li> <li>Trips and falls</li> <li>Collapse of excavation side walls</li> <li>Contact with machinery</li> </ul>	<ul> <li>Chemical burns from concrete</li> <li>Heat exhaustion</li> <li>Dust exposure</li> </ul>	Ground contamination	Collision with pedestrians	<ul> <li>DSTI to be done</li> <li>Flagman to direct all trucks to site</li> <li>All staff to have the required PPE when handling concrete</li> <li>Nil staff to be in foundation during discharge of concrete into excavation</li> <li>Delivery trucks to use designated access</li> <li>All spills to be cleaned and disposed</li> </ul>

MAIN ACTIVITY				COVID 19		
REF NO	SUB ACTIVITY	SAFETYRISKS	HEALTH RISK	ENVIROMENTAL RISK	PUBLIC RISK	RECOMMENDED RISK CONTROL MEASURE
9.1	Travel to site Deliveries -use of public transport	Nil decontamination of public transport Passengers in public transport not using face masks Nil social distancing in public transport Nil decontamination of supplies and deliveries	Staff contracting the virus during use of public transport Staff contracting virus during handling of contaminated supplies	None	None	<ul> <li>All staff to ensure that they use a face mask and sanitise when using the public transport</li> <li>Contractor could arrange for a dedicated transport for all staff to and from work.</li> <li>Staff are not to use their work PPE when travelling on public transport.</li> <li>All staff to follow decontamination procedures when entering work site</li> </ul>
9.2	Management to prepare site before construction works commence	Nil decontamination of offices and facilities     Failure to align policies and procedures to COVID 19 virus	<ul> <li>Returning staff not provided with COVID related PPE and disinfectants</li> <li>Possible contamination to staff</li> </ul>	none	Unauthorised persons entering site	<ul> <li>Management to ensure all offices, facilities are disinfected with proper disinfectants</li> <li>Overgrown vegetation to be cut before any staff can return to site</li> <li>Required COVID 19 PPE is to be purchased and made available for staff when project commences</li> </ul>

	SUB ACTIVITY	SAFETYRISKS	HEALTH RISK	ENVIROMENTAL RISK	PUBLIC RISK	RECOMMENDED RISK CONTROL MEASURE
	Site preparation	Failure to display related signage's for site access due to COVID virus.     Nil PPE and sanitisers (COVID related) for staff to return to work     Management not inducted/educate d on COVID 19	Staff returning to work are not educated on policy changes Management unable to provide correct information to staff on COVID 19 issues	none	none	<ul> <li>Required access control signage's (COVID related) to be displayed at main entrance</li> <li>Management to rearrange facilities area to ensure social distancing</li> <li>Policies and procedures (COVID related) to be amended and approved before site can reopen. This is to be communicated to all staff</li> <li>An induction program (COVID 19) is to be prepared which is to be communicated to all staff when project commences</li> <li>Required sanitisers and disinfectants to be purchased and made available before project commences</li> <li>Contractor to ensure required staff information form pertaining to COVID 19 is available which is to be filled out by each staff</li> <li>Adequate hazardous waste bins to be made available on site</li> </ul>
9.3	Entering of construction work site	Staff fail to use required PPE	Staff may be infected with the virus	none		All staff to follow the required social distancing when at main entrance

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	Entering construction work	Congestion of staff at main entrance to site Failure of contractor to screen staff entering site Staff not maintaining social distancing	Staff spreading of the virus to other staff  The virus to other staff  Staff spreading of the virus to other staff  The virus to other staff  Staff spreading of the virus to other staff  The virus to other staff  Staff spreading of the virus to other staff  The virus to other staff  Staff spreading of the virus to other staff  Staff spreading sprea	none	none	<ul> <li>Due to lockdown, staff are to declare their movement, medical history during lockdown. These records are to be kept on site for record/tracing purposes</li> <li>All staff are to be tested as per contractor's protocol to enter the site. Taking of staff temperature and desensitising of entire staff. An infrared thermometer is to be used.</li> <li>Contractor to ensure all staff conducting the required testing is provided with the required PPE and is supervised by management.</li> <li>Staff are not permitted to enter the site with their work PPE. Work PPE is to be left on site when leaving site to prevent possible contamination of work PPE</li> <li>Any staff tested with a high temperature or signs of COVID is to follow the quarantine procedure until staff can be tested by the DOH for possible COVID 19 infection.</li> </ul>

9.4	Work tasks	Nil social distancing on site     Staff socialising on site     Staff not using their required PPE to prevent COVID infections	the virus to other staff • Possible infections	none	Possible closure of site due to infection	<ul> <li>Identified tasks are to be evaluated to encourage social distancing</li> <li>All staff to have the required PPE when on site</li> <li>Staff to decontaminate all tools and workspace prior to any activity</li> <li>Monitoring to be done by management</li> <li>Inductions to be done for all staff on social distancing whilst at work.</li> <li>Failure of staff to comply with COVID control measures are to be removed off site.</li> </ul>

REF NO	SUB ACTIVITY	SAFETYRISKS	HEALTH RISK	ENVIROMENTAL RISK	PUBLIC RISK	RECOMMENDED RISK CONTROL MEASURE
9.5	Use of facilities during break intervals	Nil social distancing  Nil hygiene been maintained at break intervals  Nil paper towel provided for staff at wash facilities  Lack of chairs for staff at facilities area	Possible contamination of staff  Staff not practising adequate hygiene control measures Possible spread of virus Inadequate provision of hand wash /sanitisers for staff	none	none	<ul> <li>Breaks are to be staggered to allow social distancing of staff</li> <li>All staff are to take their breaks at the identified facilities area</li> <li>Layout of facilities area to be planned to encourage social distancing</li> <li>Table and chairs to be disinfected before and after all break intervals</li> <li>Toilets to be disinfected at frequent interval.</li> <li>Adequate hand wash and sanitisers are to be provided for staff to frequently wash their hands </li> <li>Paper towels to be provided for staff use</li> <li>Labelled bins to be provided for all hazardous waste</li> <li>Staff are not to share any meals or utensils</li> <li>Staff are not to leave the site to purchase any meals</li> </ul>

9.6	Use of jackhammer	<ul><li>Injuries</li><li>Noise</li><li>Loss limb</li></ul>	vibration	none	none	Tools need to be inspected     Safety team supervisor
9.10	Ground water	Injuries     Wet soil     Soil erosion	Ground seepage	Rock formations Water Wet soil	none	Proper PPE required     Close supervision
9.11	Slope stability	<ul> <li>Multiple injuries</li> <li>Cracks caused by compacting</li> <li>fatality</li> </ul>	Excavation collapsed	Rock formation		<ul> <li>Racking back required</li> <li>Close supervision</li> <li>PPE required</li> </ul>
9.12	excavation	<ul> <li>Collapsed and cause multiple injury</li> <li>fatality</li> </ul>	• vibration			<ul> <li>Competent person to check on excavation</li> <li>Close supervision on blasting</li> <li>Notification for blasting</li> </ul>

9.13	Fixing steel together for	<ul> <li>Wire can poke employees on the eye</li> <li>Physical injuries</li> </ul>	Steel poking	none	none	<ul> <li>DSTI communicated every day before task ma commence.</li> <li>Supervisor to be present all times during the process</li> </ul>
9.14	Lining the inside of the gabion with bedim	Workers can be struck by the roll of bedim     Personal injury stanley knife	• Rolling of bedim	none	none	Proper communication and awareness required between employees correct type of ppe
9.15	Filling gabions with rocks by hand	•	Stone falling	none	none	Awareness whilst in work area