



**Baseline Risk Assessment**

<b>Document Title</b>	Baseline Risk Assessment
<b>Client</b>	eThekwini Municipality eThekwini Transport Authority
<b>Project Name</b>	Managing Contractor for the implementation of Civil Infrastructure within eThekwini Municipality all regions
<b>Contract Number</b>	34252 – 1T
<b>Revision</b>	01
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<b>Approved by</b>	Arty Zondi 
<b>Reference Number</b>	BRA: 466.11.2025

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## **TITLE**

GO! Durban is far more than a public transport network; the system has been designed with a holistic view towards connecting the city and improving the lives of Durban's citizens. The project involves the repair of roads, and sidewalks, the construction and/or repair of access hardenings and trench reinstatements within the eThekweni Municipality. The work will be carried out (under traffic) where necessary and were ordered by the Engineer and includes the following: -

- Preparation works as requested by the Engineer.
- Relocation of services where necessary.
- Major and minor road patching repairs and trench reinstatements in roadways and
- sidewalks, including pothole repairs, surface treatments, road signs and road markings
- Earthworks, structural works, Pipe Jacking
- Supply of all materials and precast products.
- Removal of all rubble associated with the works.
- Cleaning of the site on completion of each work order.

## **TERMS OF REFERENCE**

Occupational Health and Safety Unit and Line Management from ETA conducted a Baseline Risk Assessment based on the scope of works set out in **1T-34252**

The Assessment was conducted on **12 November 2025**, during normal working hours.

## **EXECUTIVE SUMMARY**

The Occupational Health and Safety Act of 1993, and Its relevant regulations require employers to conduct a Baseline Risk Assessment before the work is performed.

This assessment and observations were made at the above site under the conditions which prevailed on the date of the assessment. Detailed conclusions are given in the relevant sections of this report.

## **SCOPE OF WORK**

- Site Clearance
- Concrete Work
- Earthworks: Bulk
- Earthworks for Pipe Trenches
- Earthworks for Concrete Lined Canals
- Earthworks for Structures
- Lime Stabilisation
- Graded Crushed Stone
- Cement Treated Graded Crushed Stone
- Road Asphalt
- Pre-coated Stone Chippings
- Kerbs and Haunches

- Sidewalks, Footpaths and Median Areas
- Steel Guardrails & Conc. Median Barriers
- Concrete Interlocking Block Surfaces
- Water bound Macadam Base
- Dump rock Subgrade Improvement
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- Protection Works
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- Manholes and Appurtenant Drainage Works
- Pipe Jacking
- Lateral Support Systems
- Pump Stations: Sewage
- Reinstatement
- Road Signs
- Road Markings

### **Risks associated with the works**

In addition to traffic-related risks as stipulated in this specification, the contractor is advised on some other risks associated with different surface treatments applicable in this contract to make allowances for such in the Health and Safety Plan.

#### a) Asphalt

Risks associated with:

- Use of plant and equipment.
- Working with hot mix asphalt.
- Exposure to dust and bitumen fumes that could affect general workers' respiratory systems if proper protection is not provided.
- Prolonged exposure to hot weather and sun.
- And other significant safety risks.

#### b) Relocation of underground services

#### c) Traffic Management

## BASELINE RISK ASSESSMENT

1. **INTRODUCTION:** In accordance with the Occupational Health and Safety Act, (Act 85 of 1993) the Legislator places specific requirements on an Employer. One of these is prescribed in Section 8(i) of the Act where it requires the Employer to ascertain the risks and dangers which may occur within the workplace or section of the workplace and then goes on to establish working procedures or practices.
  2. **PURPOSE:** This is conducted to create a benchmark of the potential risks that apply to the whole project or business operation.
  3. **SCOPE:** This assessment could be approached on a site, regional or national level concerning any facet of the business operation or process or activity.
4. **ABBREVIATIONS, ACRONYMS AND DEFINITIONS**

ABREVIATION, ACRONYM OR DEFINITION	MEANING
<b>Risk</b>	Uncertain future events that can influence the achievement of the company's objective. Chance of loss
<b>Exposure</b>	Is a condition or practice which involves the employee being subjected to the Hazard or Danger while being <b>normally unprotected</b>
<b>Likelihood of Probability</b>	(Inevitable to almost impossible) the <b>Frequency</b> of the exposure (Constant to rarely) being one of the parameters
<b>Consequence or Severity</b>	This could be either having a financial, injury and or illness outcome
<b>Risk Ranking</b>	There are three stages namely: <b>IDETIFYING the RISK:</b> - in terms of the hazard, threats <b>EVALUATING:</b> - the hazard, threats and or exposures identified to establish the potential magnitude of the RISK involved <b>VALUE JUDGEMENT or APPRAISING:</b> - the acceptability and potential impact as well as the magnitude of the hazards, exposure and evaluating the outcome on the business, operations and or the health and safety of people and processes
<b>Risk Rating</b>	<b>Equals = Severity + Frequency + Exposure</b>

<b>Baseline Risk Assessment</b>	This is conducted to create a benchmark of the potential risks that apply to the whole project or business operation.
<b>Issue based</b>	This is normally focused on operational activities, processes, systems and functions and focuses on identifying the risks within a certain task, process or activity
<b>Continuous Risk Assessment</b>	The processes, systems and activities monitored on an ongoing basis
<b>Hazard</b>	A chemical, physical, social, or political condition that has the potential of causing damage or any kind of harm to people, property the environment or business continuity.
<b>OHS Act</b>	Occupational Health and Safety Act, Act 85 of 1993
<b>Task based Risk Assessment</b>	The appointed Contractor develops a Risk Assessment based on the Clients Baseline and project specific activities
<b>Severity / Consequence</b>	The degree of harm, the potential severity of the injuries or ill health and or the number of people potentially affected
<b>Exposure</b>	Chance that a person or persons will be harmed during the exposure period
<b>Frequency</b>	A measure of the rate of occurrence of an event expressed as the number of occurrences in a given time

ABBREVIATION, ACRONYM OR DEFINITION	MEANING
<b>Frequency</b>	A measure of the rate of occurrence of an event expressed as the number of occurrences in each time
<b>Intolerable Risk</b>	Risk is intolerable and cannot be justified on any grounds
<b>Significant Risk</b>	Risk in which benefit outweighs cost
<b>Moderate Risk</b>	Risk is if the cost of reduction would exceed improvement
<b>Tolerable Risk</b>	A Risk that has been reduced to a level that can be endured by the organization having regard to its legal obligations and its own Safety and Health Policy
<b>Residual Risk</b>	The risk that remains after considering the effect of the existing controls that have been applied

## 5. RISK ASSESSMENT METHODOLOGY

All Risk identified during Risk Identification has to be assessed for significance in terms of the probability of the Risk event to occur and the impact of the event.

Ranking of the Risk can be based on a simple scale ranging from:

- Very likely to almost certainly
- Actual numerical probabilities can be used
- Risk that is ranked High receives the highest priority

### The approach and process:

1. Identify the risk/hazards associated with the work activities
2. Assess the risk in terms of severity, the likelihood of occurring and controllability
3. Evaluate the risks/hazards
4. Determine the level of control
5. Implement controls
6. Monitor the effectiveness of controls

## 7. RISK ESTIMATION AND EVALUATION

### RISK CLASSIFICATION USING A RISK SCORE TECHNIQUE

<b>Exposure (E) How frequently does the hazardous event occur</b>	<b>Risk classification</b>
Continuously .....	10
Frequently (daily) .....	6
Occasionally (weekly) .....	3
Unusually (monthly) .....	2
Rarely (few a year) .....	1
<b>Probability (P) The probability of a loss when the hazardous event does occur</b>	<b>Risk classification</b>
Frequent (happens often) .....	10
Probable (quite possible) .....	6
Occasional (unusual, but possible) .....	3
Remotely possible (has happened somewhere) .....	1
Improbable (practically impossible) .....	0.5
<b>Severity (S) Consequences of the hazardous event</b>	<b>Risk classification</b>
<b>Catastrophic</b> many fatalities; or interruption of longer than 2 weeks. or asset or environmental damage (or both) exceeding R100m .....	100
<b>Disaster</b> (few fatalities; or interruption between one and 2 weeks. or asset or environmental damage (or both) exceeding R10m) .....	40
<b>Very serious</b> (one fatality; or interruption of 6 days; or asset or environmental damage (or both) exceeding R100,000 .....	7
<b>Important</b> (temporary disability; or interruption between 6 and 24 hours; or damage exceeding R10,000 .....	3
<b>Noticeable</b> (first aid needed; or interruption of less than 6 hours; damage exceeding R1000) .....	1

**Risk classification (Risk score = E x P x S )**

**Risk score**

Over 400-----5  
200 to 400 ----- 4  
70 to 200----- 3  
20 to 70----- 2  
Risk accepted

**Risk classification**

Very high risk – discontinue operation or activity  
High risk – immediate correction needed  
Substantial risk – correction needed  
Possible risk – attention needed Under 20 ----- 1

5	
4	
3	
2	
1	

ETHEKWINI MUNICIPALITY  
Occupational Health & Safety Unit



WORK PROCESS CATEGORY: **SITE ESTABLISHMENT**

RISK REF	ACTIVITY	POTENTIAL HAZARD	RISK	RISK EVALUATION			RISK SCORE ExPxS	RISK LEVEL	RISK RANK	CONTROL MEASURE
				E	P	S				
1	Erecting / Placement of temporary offices	Incorrect offloading/ handling  Crane truck overturning while offloading	Injury to people, damage to material and property	6	6	7	252	High	4	Competent person with specific knowledge and experience designated to supervise offloading and placement of temporary offices
2	Ablutions for male/females	Inadequate Welfare Facilities Inadequate or insufficient Toilet Facilities	Inadequate or insufficient Ablution Facilities may result in employees using areas not designated for the use thereof Unhygienic condition	6	6	3	108	Substantial Risk	3	CR 28 1 per30 NBR prescribe chemical toilets for construction site. Sufficient showers and changing facilities for both male and female
3	Sheltered eating facilities	Unsafe positioning of ablution and sheltered eating areas	Unsafe positioning of ablutions and sheltered	6	6	7	252	High	4	Refuse bins with lids provided. Facilities clean and hygienic

			eating areas may result in vehicles veering of the road and into the facilities and resulting in critical injuries							
4	Maintenance workshop Secure/safe storage of materials/plant and equipment	Incorrect stacking of parts and spares could cause tripping hazards	Slips, trips and falls	6	6	3	108	Substantial Risk	3	Adequately ventilated ignition free Emergency shower/eye wash provided
5	Clearing of the site area	Snakes Common venomous snakes in KZN i.e. Black Mamba, Puff Adder, Boom Slang, Green Mamba	The presence of snakes may result in a snake bites causing fatalities	6	6	7	252	High	4	The Contract Manager must ensure that a snake standard or procedure is developed and implemented. The Construction Manager must embark on a snake/venomous animal's awareness training program
6	Site clearing using Earthmoving equipment/machinery	Protected vegetation	Damage to protected vegetation could result in damage to the ecosystem	6	6	3	108	Substantial Risk	3	The Contract Manager must ensure that protected vegetation is clearly demarcated and the Environmental Plan is adhered to
7	The storage /use of flammable liquid/gasses and combustible materials	The incorrect storage of flammable liquids/gasses and combustible materials	The incorrect storage could lead to Environmental spillages	6	6	3	54	Substantial Risk	3	The Construction Manager must ensure that they adhere to the Client H&S Specification with regards to combustible substances.
8	Vehicle leaving/entering the site	Traffic disruption, injury to people	Damage to property	6	6	3	108	Substantial Risk	3	Competent operators/ drivers, use of flag person

9	Unsafe stacking and storage practices	Collapse of stored materials	Collapse of stored materials may result in injury of personnel	6	6	3	108	Substantial Risk	3	The Construction Manager must ensure that they adhere to stacking and storage principles as contained in the General Safety Regulations
10	Installation of Temporary Electrical Installations	Exposed Electrical Cables/ Wires	Contact with exposed electrical cables may result in electrocution	6	6	7	252	High	4	CoC, appointments, registers, competent person
11	Housekeeping	Slips, trips and falls	Tripping and falling on superfluous materials can cause cuts on hands, injury to feet	6	6	3	108	Substantial Risk	3	The Construction Manager must ensure that waste is removed periodically, and work areas always kept clean
11	Security fencing	Access to unauthorized persons	Injury to persons	6	6	3	108	Substantial Risk	3	Construction manager to put system of control in place. No unauthorized entry signs to be posted and access controlled
12	Essential emergency equipment <ul style="list-style-type: none"> <li>• Firefighting equipment</li> <li>• First Aid Boxes</li> <li>• Drinking water</li> </ul>	Not having the essential services on hand	Health/loss of property through fire	6	6	3	108	Substantial Risk	3	Construction manager to ensure these requirements are on site from the day site is established

**WORK PROCESS CATEGORY: ACCESS TO THE SITE**

RISK REF	ACTIVITY	POTENTIAL HAZARD	RISK	RISK EVALUATION			RISK SCORE ExPxS	RISK LEVEL	RISK RANK	CONTROL MEASURE
				E	P	S				
13	Accessing the site using construction vehicles	Transportation of staff to and from the site	Construction vehicles could crash into other vehicles / buildings resulting in damage to equipment or employees being injured	6	6	7	252	High	4	The Contract Manager must develop a Driving Policy which incorporates the use of cell phones whilst driving and adherence to speed limits. The Contract Manager must ensure all construction vehicles and staff comply to CR23
14		Potholes/Speed humps	Construction trucks could crash into other vehicles resulting in damage to equipment	6	6	3	108	Substantial Risk	3	The Construction Manager must ensure that waste is removed periodically, and work areas kept clean at all times
15	Accessing uneven topography or surfaces	Machinery overturning	Employees slipping and falling. Machinery / tools rolling down embankment out of control	6	6	7	252	High Risk	4	Contract Manager must compile a site specific risk assessment for the various site locations and develop a safe work procedure from these

16	Delivering of equipment to the site	Pedestrian /children using public road	Vehicles/trucks could crash into pedestrians walking along the roadside resulting in critical injuries or fatalities	6	6	7	252	High Risk	4	Contract Manager to ensure the truck is deemed roadworthy. Ensure the Environmental Management Plan is adhered to and the vehicle is equipped with a spill control kit.
17		Oil or petrol spill	Oil and petrol spill could cause ground contamination	6	6	1	36	Possible Risk	2	Contract Manager to ensure the truck is deemed roadworthy. Ensure the Environmental Management Plan is adhered to and the vehicle is equipped with a spill control kit.
18	Site Induction	Injuries due to persons not familiar to the site	Property damage Sustainable injuries	3	6	3	108	Substantial Risk	3	
		Roads blocked off due to community protest	Construction trucks and vehicles could crash into barricades resulting in damage to equipment or severe injuries	6	6	7	252	High Risk	4	The Contract Manager must ensure that close communication is kept with the local authorities and the appointed Community Liaison Officer to ensure that all personnel accessing the site

**WORK PROCESS CATEGORY: TRAFFIC ACCOMMODATION**

RISK REF	ACTIVITY	POTENTIAL HAZARD	RISK	RISK EVALUATION			RISK SCORE ExPxS	RISK LEVEL	RISK RANK	CONTROL MEASURE
				E	P	S				
19	Setting up of temporary road works signage	Placing of incorrect signage at locations	Misinformation may cause drivers to become unable to discern what to do resulting in accidents and irate members of the public	6	6	3	108	Substantial Risk	3	The Contract Manager must ensure that a suitable site specific Traffic Management Plan is developed and implemented and a competent Traffic Safety Officer is appointed for the duration of the contract.  All temporary road traffic signage must comply with the SARTSM
20		Handling and placement of signage without wearing the correct PPE	Handling of signage without gloves, reflective vests	3	3	1	9	Risk Accepted	1	The Contract Manager must ensure that a task specific risk
			and safety boots may result in injuries							assessment for PPE control is implemented

21	Public vehicular and pedestrian traffic travelling on the public road during construction work	Workers injured by passing traffic	Collision of public vehicles and workers	10	6	7	420	Very High	5	The Contract Manager must ensure that a competent Traffic Safety Officer is appointed and a site specific Traffic Management Plan is implemented
22		Limited or no advanced warning area may result in accidents	Collision of public vehicles and workers	6	6	7	252	High	4	The Traffic Safety Officer must ensure that temporary road works signage is laid out as per the SARTSM and approved Traffic Management Plan

WORK PROCESS CATEGORY: **MATERIALS DELIVERY TO THE SITE**

RISK REF	ACTIVITY	POTENTIAL HAZARD	RISK	RISK EVALUATION			RISK SCORE ExPxS	RISK LEVEL	RISK RANK	CONTROL MEASURE
				E	P	S				
23	Transporting of material to and from the site	Defective tipper trucks, excavators and front end loaders	The use of defective plant /equipment may result in accidents	6	6	3	108	Substantial Risk	3	The Contract Manager must verify that all Tipper trucks utilized on site has a recent service inspection register in place and is signed off by the relevant Technical Manager
24		incompetent Operators	The use of incompetent operators may result in accidents	6	6	7	252	High	4	The Contract Manager must verify that the Operators are deemed competent to operate the Tippers and are medically fit
25		Reversing into public vehicles or property	Reversing into vehicles and property resulting in damages	6	6	3	108	Substantial Risk	3	The Contract Manager must ensure that each driver is accompanied by a competent banks man and designated safe areas for offloading demarcated

26		Uneven ground, soft soil,	Damage to plant and equipment as well as crushing injuries or fatalities	6	6	7	252	High	4	The Contract Manager must ensure that each driver is accompanied by a competent banks man when working in high risk areas
27		Steep Gradients	Damage to plant and equipment as well as crushing injuries or fatalities	6	6	7	252	High	4	The Contract Manager must assess steep gradients on foot before plant is moved onto the site to determine if the area is safe before work commences
28	Loading / off loading the truck	Incorrect slings being used	Property damage and serious injury or fatality	6	6	7	252	High	4	Rigging to be done by a trained and competent rigger and the task to be supervised by the supervisor
29	Aggregate / sand and other materials delivered	Uneven ground, soft soil,	Damage to plant and equipment	6	6	3	108	Substantial Risk	3	The Contract Manager must assess steep gradients on foot before plant is moved onto the site to determine if the area is safe
30	Manual handling Ergonomics	Incorrect posture	Back strain Skeletal damage	3	6	3	54	Possible Risk	2	Employees to be trained in the correct lifting technique
31	Mechanical handling	Employee being struck	Serious injury	3	6	3	198	Substantial Risk	3	Constant supervision
32	Lifting / lowering operation	Employee being struck by the load	Serious injury Fatality	10	6	7	420	Very High	5	Rigging to be done by a trained and competent rigger and the task to be supervised by the supervisor

WORK PROCESS CATEGORY: **EXCAVATION**

RISK REF	ACTIVITY	POTENTIAL HAZARD	RISK	RISK EVALUATION			RISK SCORE ExPxS	RISK LEVEL	RISK RANK	CONTROL MEASURE
				E	P	S				
33	Ground / soil condition	Soft or unknown type	Cave in / collapse	6	6	7	252	High Risk	4	Request a Geo Tech Report
34	Trenching	Spoil too close to the edge of the excavation	Spoil falling into trench, collapse of trench, injury / fatality	10	6	7	420	Very High	5	Spoil to be kept at equal distance as the actual dept of the trench
35	Shoring	Inadequate shoring	Sides collapsing	10	6	7	420	Very High	5	Daily inspection by excavation supervisor
36	Water in excavation	Sides of excavation not stable	Collapse of excavation resulting in injury / drowning/ fatality	10	6	7	420	Very High	5	Method statement of drainage of excavation Drainage procedure Daily inspections
				10	6	7	420	Very	5	The Construction Manager must
37	Excavation	Open Excavations Falling into	Open excavations could result in employees, or members of the public falling into it  Fatality					High		appoint a competent Excavation Supervisor at the work front. Excavations must be checked daily. The Construction Manager must ensure that open excavations (if necessary) are barricaded with a barrier or fencelike structure of at least 1m.

										(Requirements of CR13 must be met)
38	Manual Excavation	Open Excavation >1.5m	Excavations > 1.5m caving in may result in multiple fatalities	6	6	7	252	High	4	Excavations guarded / barricaded/ lighted after dark in public areas. Soil dumped at least 1m away from the edge of excavation. On sloping ground soil dumped on lower side of excavation The Construction Manager must ensure that excavations are shored/braced or vertical walls sloped to 45 degrees and the excavation
39		Unauthorized entry	Unauthorized access to site may result in critical injury to people	6	6	7	252	High	4	The Construction Manager must ensure that excavations should be preferably not open beyond what can be closed daily
40		The use of Hand tools (picks, spades)	An employee using a pick could strike the employee in front/rear resulting in injury	3	6	3	54	Possible Risk	2	The Construction Manager must ensure that employees are instructed in the contents of the site specific risk assessment

41		Working in natural elements, sun, rain, glare & wind	Prolonged exposure to extreme high temperatures may result in heat stroke	3	6	3	54	Possible Risk	2	The Construction Manager must ensure that all employees have undergone medical examinations by an Occupational Health Practitioner and the requirements of the Environmental Regulations for Workplaces are adhered to.
42		Poor Ergonomics	Poor Ergonomics may result in muscular skeletal injuries	3	6	3	54	Possible Risk	2	The Construction Manager must ensure that a SWP is developed implemented and that all employees are instructed in the content of the site specific risk assessment
43		Snake bite	The presence of snakes may result in snake bites causing fatalities	6	6	7	252	High	4	The Construction Manager must ensure that a snake standard or procedure is developed and implemented on
										site. The Construction Manager must embark on a snake awareness training
44	Mechanical Excavation	The use of Defective Plant	The use of defective plant may result in accidents	6	6	3	108	Substantial Risk	3	The Construction Manager must verify that all plant utilized on site has a recent service inspection register in place and signed off by the relevant technical manager

45		untrained operator	The use of an untrained operator may result in accidents	6	6	7	252	High	4	The Construction Manager must verify that the Operator is deemed competent to operate that specific plant and is medically fit The Safety Officer must take cognizance of the requirements of the Driven Machinery Regulations 2015
46		Public / Contractor interface	Public accessing the work area could result in injuries	6	6	3	108	Substantial Risk	3	The Construction Supervisor must ensure all work are adequately barricaded / cordoned off to prevent member of the public from entering

**WORK PROCESS CATEGORY: EARTHWORKS**

RISK REF	ACTIVITY	POTENTIAL HAZARD	RISK	RISK EVALUATION			RISK SCORE ExPxS	RISK LEVEL	RISK RANK	CONTROL MEASURE
				E	P	S				
47	Layer works	Traffic accidents on site when transporting materials. Reversing of trucks and mobile plant  Dust inhalation	Damage to property  Respiratory failure	6	6	3	108	Substantial Risk	3	Speed limit to be adhered to Enforced reverse alarms to be fitted Application of dust masks
48	Backfilling	Suitable access and egress in and out of excavations deeper than 1 meter not provided.  Collapse of excavation during backfilling operations	Injury to persons  Injury to persons Fatality	6	6	7	252	High	4	Competent excavation supervisor to ensure that access is provided, employees informed of requirements  Only authorized persons to be in work area, area must be barricaded, hand backfilling mandatory

**WORK PROCESS CATEGORY: DRIVING / OPERATING OF CONSTRUCTION VEHICLES AND MOBILE PLANT**

RISK REF	ACTIVITY	POTENTIAL HAZARD	RISK	RISK EVALUATION			RISK SCORE ExPxS	RISK LEVEL	RISK RANK	CONTROL MEASURE
				E	P	S				
49	Trenching machine	Unauthorised or incompetent person operating the machine	Injury to persons, damage to property	6	6	7	252	High	4	Only competent operator to be appointed
50	Excavator	Unauthorised or incompetent person operating the machine	Injury to persons, damage to property	6	6	7	252	High	4	Only competent operator to be appointed
51	Bomag roller	Unauthorised or incompetent person operating the machine	Injury to persons, damage to property	6	6	7	252	High	4	Only competent operator to be appointed
52	Plate compactor	Operator working with plate compactor not trained, running over workers feet	Foot injury and bruises	6	6	7	252	High	4	Only competent operator to be appointed
53	Front end loader	Unauthorised opr incompetent person operating the machine	Injury to persons, damage to property	6	6	7	252	High	4	Only competent operator to be appointed
54	Concrete breaker (Jack hammer)	Noise	Noise Induced hearing Loss	6	6	3	108	Substantial Risk	3	Employee to make use of SABS-approved hearing protection, supervisor to ensure that the correct P.P.E is used

**WORK PROCESS CATEGORY: WORKPLACE ENVIRONMENT, HEALTH AND HYGIENE**

RISK REF	ACTIVITY	POTENTIAL HAZARD	RISK	RISK EVALUATION			RISK SCORE ExPxS	RISK LEVEL	RISK RANK	CONTROL MEASURE
				E	P	S				
55	Exposure to noise	Noise	Noise Induced hearing Loss	6	6	3	108	Substantial Risk	3	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
56	Exposure to vibration	Vibration	White finger	6	6	3	108	Substantial Risk	3	Supervisor to rotate employees and allow for frequent breaks
57	Protection against dehydration and heat exhaustion	Dehydration/collapse	Health consequences to workers	6	6	3	108	Substantial Risk	3	Measures in place to prevent heat exhaustion in heat stress problem areas
58	Wet / cold condition	Affecting ability to work safely	Injury to workers	6	6	3	108	Substantial Risk	3	Provide rain wear / wellingtons where necessary Provide protection against the cold
59	Hazardous chemical substances	Contact with skin/ eyes Inhalation or indigestion	Skin irritation, burns or infections Could cause loss in eyesight	6	6	3	108	Substantial Risk	3	All substances identified and list available. MSD's Substances stored safely
60	Manual handling	Back strain / injury	Injury	6	6	3	108	Substantial Risk	3	Correct lifting technique
61	Dust	Inhalation	Respiratory failure	6	6	3	108	Substantial Risk	3	Application of dust masks

**WORK PROCESS CATEGORY: PUBLIC SAFETY**

RISK REF	ACTIVITY	POTENTIAL HAZARD	RISK	RISK EVALUATION			RISK SCORE ExPxS	RISK LEVEL	RISK RANK	CONTROL MEASURE
				E	P	S				
62	Neighboring business and public exposed to the nature of the construction activities	Emission of HCS, dust and noise	Health risk impact	6	6	3	108	Substantial Risk	3	Communication with neighbouring business is critical. Health risk must be communicated to all employees Dust, noise generated out of the construction work must be managed
63	Unauthorised person/s entering the work zone	Unknown to the immediate surroundings	Serious injury Fatality	10	6	7	420	Very High	5	Security to control Contracts manager to ensure no unauthorised person/s to enter the work zone

**WORK PROCESS CATEGORY: PUBLIC SAFETY, SECURITY MEASURES AND EMERGENCY PREPARENESS**

RISK REF	ACTIVITY	POTENTIAL HAZARD	RISK	RISK EVALUATION			RISK SCORE ExPxS	RISK LEVEL	RISK RANK	CONTROL MEASURE
				E	P	S				
64	Notices and signs	Appropriate signage not displayed	Person /s not aware of the danger Injury / serious injury	6	6	7	252	High	4	Contract Manager to ensure all danger areas are properly demarcated at all times
65	Emergency Preparedness	No Emergency Plan in place	Person/s unprepared to respond to the emergency at hand	6	6	3	108	Substantial Risk	3	Emergency contact numbers displayed with designated person
66	Emergency Drill & Evacuation	No training No implementation Planning done	Person/s unprepared to respond to the emergency at hand	6	6	3	108	Substantial Risk	3	Adequate number of employees trained in the use of fire equipment
67	Development and implementation of an Emergency Management Plan	Failure to have a basic site specific Emergency Management Plan	Failure to have a basic, site specific Emergency Management Plan may result in injury and damage to property	6	6	3	108	Substantial Risk	3	The Construction Manager must ensure that a site specific Emergency Management Plan is developed for implementation
68		Workers not trained in the Emergency Plan	Workers not trained in the Emergency Plan may result in their inability to respond to Emergencies	6	6	3	108	Substantial Risk	3	The Construction Manager must ensure that those workers are adequately and regularly trained to respond to Emergencies.

69		Insufficient or no Emergency equipment or personnel	Insufficient or no Emergency equipment or personnel on site may result in Emergencies being critical	6	6	7	252	High	4	The Construction Manager must ensure that a suitable number of employees are appointed to the Emergency Team and that First Aid boxes, First Aiders, Fire Team members and any other equipment as identified during the risk assessment process is on site.
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**WORK PROCESS CATEGORY: COMMUNITY MANAGEMENT**

RISK REF	ACTIVITY	POTENTIAL HAZARD	RISK	RISK EVALUATION			RISK SCORE ExPxS	RISK LEVEL	RISK RANK	CONTROL MEASURE
				E	P	S				
70	Poor liaison with the CLO	Failure to adequately monitor and manage the multi faced social issues	Failure to manage social issues could result in violent protests and injury to employees	6	6	3	108	Substantial Risk	3	The Construction Manager must ensure that a Community Liaison Officer (CLO) and project steering Committee is appointed to manage social issues
71		Roads blocked off due to community protest	Construction trucks and vehicles could crash into barricades resulting in damage to equipment or severe injuries	6	6	7	252	High	4	The Contract Manager must ensure that close communication is kept with the local authorities and the appointed Community Liaison Officer to ensure that all personnel accessing the site are timeously alerted.

**WORK PROCESS CATEGORY: SUB – CONTRACTOR MANAGEMENT**

RISK REF	ACTIVITY	POTENTIAL HAZARD	RISK	RISK EVALUATION			RISK SCORE ExPxS	RISK LEVEL	RISK RANK	CONTROL MEASURE
				E	P	S				
72	No proper management control	Failure to adequately assess Sub Contractors S.H.E Management System before work commences and at regular intervals	Failure to manage Sub Contractors may result in injury and noncompliance to Legislation	6	6	3	108	Substantial Risk	3	The Safety Officer must ensure that the appointed Sub Contractors S.H.E system is audited monthly and on site activities supervised or
73	Inadequate supervision	Inadequate Supervision may result in a high level of employee unsafe behavior		6	6	3	108	Substantial Risk	3	The Construction Manager must ensure that Sub Contractors have adequate competent Supervision on site at all times
74	Utilizing incompetent SubContractors	Utilizing incompetent Sub Contractors may result in accidents		6	6	7	252	High	4	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
75	Utilizing incompetent SubContractors	Utilizing incompetent Sub Contractors may result in damage to the Environment		6	6	7	252	High	4	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

**WORK PROCESS CATEGORY: CONSTRUCTION ACTIVITIES**

RISK REF	ACTIVITY	POTENTIAL HAZARD	RISK	RISK EVALUATION			RISK SCORE ExPxS	RISK LEVEL	RISK RANK	CONTROL MEASURE
				E	P	S				
77	Mixing mortar	Repetitive strain injuries	Loading / unloading material	3	6	3	54	Possible Risk	2	The Construction Manager must ensure that a SWP is developed implemented about safe lifting and loading procedures.
81		Working from height	Working from height may result in falls and critical injuries	6	6	7	252	High	4	The Construction Manager must ensure that all personnel working from height are deemed medically fit by an Occupational Health Practitioner and a Fall Protection Plan developed and implemented
82		Operating of TLB or Excavator in close proximity to workers and public vehicles	Critical injuries caused by TLB/ Excavator striking workers or TLB rolling over	6	6	7	252	High	4	The Construction Manager must ensure that the TLB/ Excavator Operator utilize a banks man
83		Using TLB for lifting pipes or other material	Critical injuries caused by the TLB or Excavator striking workers or rolling over	6	6	7	252	High Risk	4	The Construction Manager must ensure that the TLB/ Excavator has been modified or designed to be used as lifting equipment and the load test certificates provided.

84		Incorrect use of defective hand tools	The incorrect and or defective hand tools could result in non- disabling/ first aid case i.e. the hand or eyes	6	6	3	108	Substantial Risk	3	The Construction Supervisors must ensure that all hand tools are inspected monthly and recorded in an applicable register with all defective hand tools removed from the site
85		Incorrect use of defective electrical tools	The incorrect and or defective hand tools could result in non- disabling/ first aid case i.e. the hand or eyes	6	6	3	108	Substantial Risk	3	The Construction Supervisors must ensure that all portable electrical tools are inspected monthly and recorded in an applicable register with all defective equipment removed from the site
86	Construction of drains /culverts	Poor Ergonomics	Poor Ergonomics may result in muscular skeletal injuries	3	6	3	54	Possible Risk	2	The Construction Manager must ensure that workers are trained in the risk of ergonomically injuries and methods to mitigate the risks

WORK PROCESS CATEGORY: **CONSTRUCTION ACTIVITIES**

RISK REF	ACTIVITY	POTENTIAL HAZARD	RISK	RISK EVALUATION			RISK SCORE ExPxS	RISK LEVEL	RISK RANK	CONTROL MEASURE
				E	P	S				
87	Pouring Ready Mix concrete	Concrete truck tipping over	Concrete truck tipping over could result in serious injury to the operator and workers close by	6	6	7	252	High	4	The Construction Manager must ensure that safe access to the pouring platform is created before the truck arrives on the site
88	Steel fixing	Handling Reinforced steel	Steel fixers handling steel could result in cuts or puncture wounds	2	6	3	54	Possible e Risk	2	The Construction Manager must ensure that only trained employees carry out the steel fixing duties and that all exposed rebar are capped with rebar caps
90	Electrical installation	Power supply not completely isolated	Electrocution	10	6	7	420	Very High	5	Only qualified electricians to do the installation

WORK PROCESS CATEGORY: **CONSTRUCTION ACTIVITIES**

RISK REF	ACTIVITY	POTENTIAL HAZARD	RISK	RISK EVALUATION			RISK SCORE ExPxS	RISK LEVEL	RISK RANK	CONTROL MEASURE
				E	P	S				
91	Paved walkways	Accidents / Incidents	Person /s struck by vehicles	6	6	7	252	High	4	Proper traffic management plan to be in place Traffic safety officer to be appointed on a full time basis
92	Relocation of water Sewer Electrical cables	Disruption of essential services	Community effected	6	6	3	108	Substantial Risk	3	Notification of supply service being disrupted to be communicated well in advance
93	Extension of existing culverts	Work zone not demarcated	Persons/s struck by vehicle	6	6	7	252	High	4	Traffic Management Plan to be fully implemented
94	Kerb Inlet	Work zone not demarcated	Persons/s struck by vehicle	6	6	7	252	High	4	Traffic Management Plan to be fully implemented
95	Cut off drain	Work zone not demarcated	Persons/s struck by vehicle	6	6	7	252	High	4	Traffic Management Plan to be fully implemented
96	Inlet and out let structure	Work zone not demarcated	Persons/s struck by vehicle	6	6	7	252	High	4	Traffic Management Plan to be fully implemented

## RISK PROFILE

