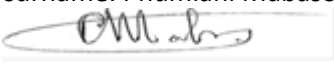
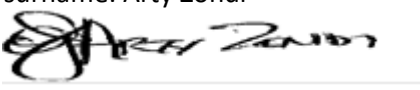




ETHEKWINI MUNICIPALITY Occupational Health & Safety Unit

SITE BASED BASELINE RISK ASSESSMENT

Construction Regulations 5.1(a)

Document Title	Baseline Risk Assessment
Client	EThekwin Municipality-Engineering: Roads and stormwater maintenance Unit.
Project	Enquiry for the repairs to stormwater inlets as and when required in the North Central region of EThekwin Municipality for 24 Months.
Contract Number	1M 30757
Revision	00
Date	16 October 2024
Internal Reference no.	BRA 325/10/2024
Compiled by (Safety officer)	Name and surname: Phumlani Mabaso Signature:  Date: 16/10/2024
Reviewed by (Manager: Safety& Risk)	Name and surname: Arty Zondi Signature:  Date: 16/10/2024
Received by Principal contractor	Name:
	Signature:

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.REVIEW AND MONITORING PLAN

The risk assessment form part of the health and safety plan to be applied on the site and must include the following:

- (a) The identification of the risk and hazards to which to which persons may be exposed to.
- (b) An analysis and evaluation of the risk and hazards identified based on a documented method.

5. REFERENCES

- (a) Tender document number 1M-30757
- (b) Occupational Health & Safety Act and its Regulation

SCOPE OF WORK

This contract includes the following work:

- (a) Carrying out preparation work as requested by the Engineer or Engineering representative.
- (b) Raising and lowering of storm water inlets where necessary.
- (c) Major and minor repairs to storm water inlets (all work to be completed within 10 days).
- (d) Supply and place of all materials and precast products.
- (e) Removal of all rubble associated with the works.

The following activities were assessed:

- (a) Access to the site
- (b) Material delivery to the site
- (c) Traffic management.
- (d) Busy residential/commercial/Industrial areas.
- (e) Removal of damaged driveway slabs, supply and installation of new driveway slabs.
- (f) Removal of concrete precast products and installation of the new ones.
- (g) Manual moving of precast products.
- (h) Protection of existing services.
- (i) Removal of dumped material off site.
- (i) Provision of labour and supervision.

1. RISK ESTIMATION AND EVALUATION

RISK CLASSIFICATION USING A RISK SCORE TECHNIQUE

Exposure (E) How frequently does the hazardous event occur		Risk level
Continuously		10
Frequently (daily)		6
Occasionally (weekly)		3
Unusually (monthly)		2
Rarely (few a year)		1

Probability (P) The probability of a loss when the hazardous event does occur		Risk level
Frequent (happens often)		10
Probable (quite possible)		6
Occasional (unusual, but possible)		3
Remotely possible (has happened somewhere)		1
Improbable (practically impossible)		0.5

Severity (S) Consequences of the hazardous event		Risk level
Catastrophic many fatalities; or interruption of longer than 2 weeks; or asset or environmental damage (or both) exceeding R100m		100
Disaster (few fatalities; or interruption between one and 2 weeks; or asset or environmental damage (or both) exceeding R10m)		40
Very serious (one fatality; or interruption of 6 days; or asset or environmental damage (or both) exceeding R100,000		7
Important (temporary disability; or interruption between 6 and 24 hours; or damage exceeding R10,000		3
Noticeable (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	Risk level
Over 400-----5	Very high risk – discontinue operation or activity
200 to 400 -----4	High risk – immediate correction needed
70 to 200-----3	Substantial risk – correction needed
20 to 70-----2	Possible risk – attention needed
Under 20 -----1	Risk accepted

BASELINE RISK ASSESSMENT WORKSHEET

	Activity	Hazard	Risk	Risk Evaluation			Risk Score	Risk level
				E	P	S		
1	Access to the site							
	Traveling to and from site in a vehicle.	- Safety belts not worn when traveling in, or operating a vehicle. - Vehicle not equipped with safety belts for all passengers. - Over speeding of vehicles. - Driving on public roads.	- Injuries caused when in vehicle accident. - Fatalities when in vehicle accident - Risk of personnel being injured by over speeding vehicles. - Involved in accident.	6	6	7	252	4
2	Material delivery to the site							
	Loading and offloading of heavy equipment manually.	Employee being struck by the load.	- Back strain - Skeletal damage - Head, hand, and foot injuries. - Serious injury - Fatality	3	6	7	126	3
3	Traffic management on site							
	The use of	Poor/ no	Accidents, death,	6	6	7	252	4

	construction vehicle on the public and streets • Execution of activities on the road in line with the scope of work. • Exposed group/employees • Placing of temporary traffic warning signs.	traffic management plan in place • Lack of traffic management training • Unroadworthy plant and vehicle • Collision with other vehicles • Workers exposed to high traffic volume. • Personnel movement and vehicles • Signs not visible to the road users. • Signs being placed at an unreasonable distance. • Personnel in charge of traffic control not familiar with the traffic management	broken bones, damage to property • Noncompliance with the National Road Traffic Act, Council Road Traffic bi-laws and other applicable Regulations • Blockage/ inconvenient access to industrial/ commercial areas • Personnel are at risk of being bumped by a vehicle or an Accident • It may cause injuries possibility of fatalities.					
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		plan.						
4	Busy residential/ commercial/ industrial areas							
	Working next to residential, commercial, industrial areas	- Public exposure to construction activities. - Destruction of businesses and services in the area. - Other activities in the areas - Strikes in the area	- Injuries public and employees, broken bones, damage to property, death, - Production loss, disturbance of personnel activities - Fights, lawsuits, disagreement - Damage to property, injuries to employees	6	6	7	252	4
5	Removal of damaged driveway slabs, Supply and installation of new driveway slabs.							
	- Preparing foundation. - Compacting - Steel fixing during driveways slabs. - Pouring of ready-mix concrete - Floating of the slab. - Saw cutting the existing slab. - Breaking the existing slab.	- Dust - Faulty hand tools - Manual handling of steel/ sharp points - Cement contact with body - Over bending - Noise - Vibration.	- Lung disease, eye irritation - Injury to hands - Skeletal injuries - NIHL. - Muscular pains.	6	6	3	108	3

6	Removal of damaged concrete precast products and installation of the new ones.							
	- Lifting of heavy objects by hands. - Concrete precast products repairs. - Mixing cement on site for infrastructure repairs. - Saw cutting during repairs. - Breaking of the precast product to be repaired. - Compacting. - Floating of the concrete - Brickwork during lowering and raising of double or single splayed storm water inlets.	- Unsafe lifting methodology. - Damage to underground services - Cement dust inhalation. - Dust. - Faulty machine. - Unguarded blade. - Roller operated by an incompetent person - Skin contact.	- Feet and finger crushed. - Service delivery interruption. - Respiratory problems. - Injuries. - Lung disease, eye irritation.	6	6	3	108	3
7	Manual moving of precast product							
	Manual handling and moving of precast product using wheelbarrows,	- Unsafe wheelbarrows, - Manual handling of precast product - Lifting of	- Injury to hands/ toes - Skeletal injuries - Slippery surface - Tripping hazards - Ergonomic risks	3	3	3	27	2

		- excess/ heavy load - Ergonomics hazards						
8	Protection of existing services							
	Working in the precence of watermain, sewer, stormwater, electrical cables, telkom/ neotel cables , gas/petroleum pipeline.	- Disturbance of the services, - Sewer spillage, - Blockage of sewer and stormwater lines - Exposure to biological agents - Electrocution - Damage to Telkom/ neotel cables, stormwater, sewer	- No water and electricity, community strikes, - Health hazards - Environmental hazards - Burns, death - Financial costs for replacing damaged cables	6	6	7	252	4
9	Removal of dumped material off site							
	Manual clearing of the site.	- Rubble existing on site - Manual handling of heavy objects - Illegal dumping.	- Backache. - Fine	6	6	3	108	3
10	Provision of labour and supervision							
	Recruitment of	Community	Strikes which	2	6	3	36	2

	employees. • Continuous supervision on site.	members not happy about the local labour being recruited. • Delays on services delivery or work to be executed.	may lead to physical assaults and damage to company property. • Application of penalties to the contractor by the client for failing to deliver on time.					