
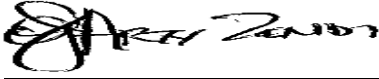




ETHEKWINI MUNICIPALITY
Occupational Health & Safety Unit

BASELINE RISK ASSESSMENT

Document Title	Baseline Risk Assessment
Client	eThekweni Municipality – Human settlements (Housing Engineering)
Project	Formation of framework: Provision of civil infrastructure (Services) for Human settlements projects
Contract Number	1H-33259
Internal reference	BRA14/09/2025
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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 persons may be exposed.
- (b) An analysis and evaluation of the risk and hazards identified based on a documented method,
- (c) A documented plan and applicable safe work procedures to mitigate, reduce or control the risks and hazards that have been identified;
- (d) A monitoring plan; and
- (e) A review plan

5. REFERENCES

- (a) Tender document number 1H-33259
- (b) Occupational Health & Safety Act and its Regulation

6. LOCALITY PLAN

Nil

SCOPE OF WORK

Site clearance

Concrete works and urinary division

Excavation

Plumbing works (Stormwater, sewerline, water reticulation)

Road works; sidewalks, footpaths and median areas

Kerbs; haunches; protection works and steel guardrails

Mainholes and appurtenant drainage works

Traffic accommodation

Public safety

Use of hand-tools and electrical tools

Construction vehicle and mobile plants

Working in a fall risk position

Site establishment

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: IDENTIFYING EXISTING & POTENTIAL RISKS

	Activity	Hazard	Risk	Risk Evaluation			Risk Score	Risk level
				E	P	S		
1	Site clearance							
	<ul style="list-style-type: none"> Manual and mechanical site clearing 	<ul style="list-style-type: none"> Incompetent driver/operator. Unsafe construction mobile plant/hand tools. Petrol and oil spillages. Existing services. Noise. Public exposure to construction work 	<ul style="list-style-type: none"> Accident/property damage/machinery running out of control. Body injuries. Environmental contamination. Noise induced hearing loss. Damage to existing services. Body injuries. 	3	6	3	54	2
2	Concrete works and urinary division							
	<ul style="list-style-type: none"> Concrete works; slab construction; Blockwork 	<ul style="list-style-type: none"> Unsafe machinery or equipment; concrete spillage; concrete or mortar contact with body. 	<ul style="list-style-type: none"> Machinery running out of control; soil contamination; injury to body; skin infection 	3	3	3	27	2
3	Excavation							

	<ul style="list-style-type: none"> Manual and mechanical excavation of trenches using construction mobile plants and hand tools 	<ul style="list-style-type: none"> Collapsing of trenches. Unsafe access to trench. Unsafe machinery/ hand tools. Unprotected trenches. People exposure to excavations. Engulfment 	<ul style="list-style-type: none"> Death/ buried/ trauma/ panic attack. Broken bone/ dislocation. Accidents/ injuries to hands. Falling into excavation. Death/ broken bones 	6	6	7	252	4
4	Plumbing works							
	<ul style="list-style-type: none"> Stormwater. Sewerline. Water reticulation. Pipe repairs/ pipe laying 	<ul style="list-style-type: none"> Unsafe lifting of pipes. Collapsing of trenches. High water pressure; Unsafe access and aggress; No trained or competent supervisor in place; Unsafe tools; Unidentified existing underground services 	<ul style="list-style-type: none"> Capsizing of lifting machinery. Swaying of load. Pipe busting; Loss of water or water services in the area; Water lodging into an excavation leading to dawning of an employee or collapsing of the trench; Incorrect decisions taken; Destruction of services in the 	6	6	7	252	4

			area; Death; Body injuries.					
5	Road works; sidewalks; footpaths and median areas							
	<ul style="list-style-type: none"> Clearing, cutting, filling and leveling of the road using construction mobile. Compaction. Asphalting. Road marking. Installation of signage 	<ul style="list-style-type: none"> Unsafe construction mobile plants. Oil/ petrol spillage. Incompetent driver/ operator. Uneven surface. Dust. Vibration. Noise. Contact with hot asphalt. Fumes. Exposure to hazardous paint. Unsafe drilling machine. Digging for signage poles 	<ul style="list-style-type: none"> Accidents/ Environmental contamination. Accidents/ disablement/ damage to property. Capsizing of construction mobile plants/ Jammed construction mobile plants. Lung disease, eye irritation. Fatigue/ Kidney damage/ Muscle or joint pain. Noise induced hearing loss. Burns/ skin infections. Breathing/ respiratory diseases. Injury to hands 	6	6	3	108	3
6	Kerbs; Haunches; protection work and steel guardrails							

	<ul style="list-style-type: none"> Kerbing and channeling using hand-tools. Retaining structure using wire baskets and stones or retaining blocks. Steel guardrails 	<ul style="list-style-type: none"> Manual handling of kerbs. Unsafe tools. Ergonomic hazards. Manual handling of stones/ retaining blocks. Untrained welders; Flying objects; Unsafe welding equipment 	<ul style="list-style-type: none"> Skeletal injuries/ Injuries to hands and toes. Ergonomic risks. Skin burn; fire; eye damage or injury 	6	3	3	54	2
7	Manholes and appurtenant drainage system							
	<ul style="list-style-type: none"> Manholes repair; manholes cleaning 	<ul style="list-style-type: none"> Open manhole; Unsafe lifting of manhole cover; Possible of pinch; Heavy manhole cover; Unsafe opening of manhole cover; Lack of supervision 	<ul style="list-style-type: none"> Falling into manhole; broken bone or fracture; ergonomic risks; Injury to body; Back pain or skeletal injury; over-raised or too much lowered manhole in the road. 	3	6	3	54	2
8	Construction mobile plant							

		<ul style="list-style-type: none"> Untrained operator or driver; noise; dust; vibration; other vehicles/ road users 	<ul style="list-style-type: none"> Collision with other vehicles; damage to property; noise induced hearing loss; body pain; death; disablement ect 	6	6	7	252	4
9	Site establishment							
	<ul style="list-style-type: none"> Manual and mechanical clearing of the land. Off-loading and positioning of containers by mobile crane. Fencing. Installation of temporary water supply, electricity, ablution facilities 	<ul style="list-style-type: none"> Incompetent construction mobile plant operator. Manual Handling of equipment and materials. Uneven surfaces. Driving on dangerous and undulating terrain. Reckless driving. Electrocutation. Incorrect/ poor connection of temporary services 	<ul style="list-style-type: none"> Body injuries/ Accidents. Destruction of services. Burns/ death 	2	3	3	18	1

10	Traffic accommodation							
		<ul style="list-style-type: none"> Failure to control traffic; Failure to display signage. Passing-by traffic/ vehicles. Lack of visibility on employees working next to the road. 	<ul style="list-style-type: none"> Traffic congestion; Accidents; Death; Injury to body/ pedestrians 	6	6	7	252	4
11	Public Safety							
		<ul style="list-style-type: none"> Public exposure to construction activities; community unrest; fighting over resources 	<ul style="list-style-type: none"> Injury to body; work stoppage; Legal claims 	6	6	7	252	4
12	Use of hand-tools and electrical tools							
	<ul style="list-style-type: none"> Conducting activities using hand-tools and electrical tools 	<ul style="list-style-type: none"> Unsafe hand-tools/ electrical tools. Possible of pinch 	<ul style="list-style-type: none"> Injury to hands 	6	3	1	18	1
13	Working in a fall risk positions							
		<ul style="list-style-type: none"> Falling into; 	<ul style="list-style-type: none"> Broken bone/ 	6	6	3	108	3

		Falling from; Medical unfit; Untrained person. Unsafe ladder	dislocation/ death						
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RISK PROFILE:

Formation of framework: Provision of civil infrastructure (Services) for Human settlements projects

