



## ETHEKWINI MUNICIPALITY Occupational Health & Safety Unit

### BASELINE RISK ASSESSMENT

Document Title	Baseline Risk Assessment
Client	EThekwin Municipality – Transversal Unit (Office of HEAD: PMU)
Project	Managing contractor for the implementation of Ward Based Community Infrastructure Projects (CIP) for West 2 Region within eThekwini municipality
Contract Number	1A-32435
Internal reference	BRA08/08/2025
Compiled by (Safety officer)	Name and surname: Siya Nkosi Signature:  Date: 28/08/2025
Reviewed by (Manager: Safety & Risk)	Name and surname: Arty Zondi Signature:  Date: 28/08/2025

## **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**

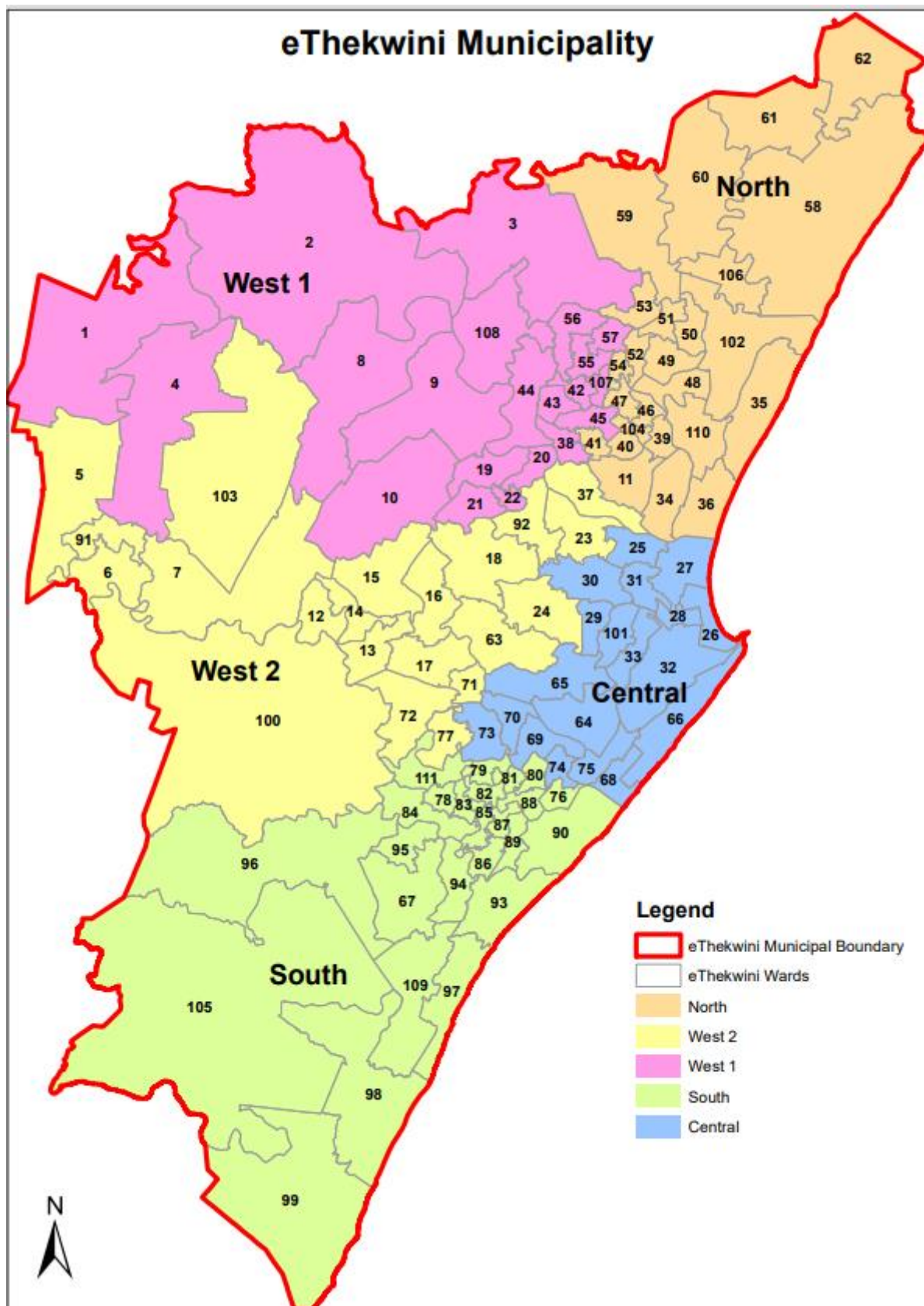
The risk assessment form part of the health and safety plan to be applied on the site and must include the following:

- (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 1A-32435
- (b) Occupational Health & Safety Act and its Regulation

## 6. LOCALITY PLAN



## **SCOPE OF WORK**

Site clearance

Containerized and in-situ ablutions

Domestic electrical works

General building/ maintenance

Concrete works and urinary division

Excavation

Plumbing works

Road works; sidewalks, footpaths and median areas

Kerbs; haunches; protection works and steel guardrails

Mainholes and appurtenant drainage works

Outdoor gyms bases, platforms and sport grounds

Water tanks and boreholes

Traffic accommodation

Public safety

Use of hand-tools and electrical tools

Construction vehicle and mobile plants

Working in a fall risk position

## 1. RISK ESTIMATION AND EVALUATION

### RISK CLASSIFICATION USING A RISK SCORE TECHNIQUE

<b>Exposure (E) How frequently does the hazardous event occur</b>		<b>Risk level</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 level</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 level</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
<b>Risk classification (Risk score = E x P x S )</b>		
<b>Risk score</b>	<b>Risk level</b>	
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"><li>Manual and mechanical site clearing</li></ul>	<ul style="list-style-type: none"><li>Incompetent driver/ operator. Unsafe construction mobile plant/ hand tools. Petrol and oil spillages. Existing services. Noise</li></ul>	<ul style="list-style-type: none"><li>Accident/ property damage/ machinery running out of control. Injury to body. Environmental contamination. Noise induced hearing loss</li></ul>	3	6	3	54	2
2	Containerized and in-situ ablutions							
	<ul style="list-style-type: none"><li>Clearing and grub. Installation of containers. Cutting and grinding. Plumbing.</li></ul>	<ul style="list-style-type: none"><li>Mobile plant running out of control. Unsafe mobile plant. Untrained person using a grinder. Cuts. Incorrect plumbing connections. Water interruption.</li></ul>	<ul style="list-style-type: none"><li>Damage to the nearest properties. Public members could be knocked by mobile plant. Loss of limb. Injury to hands or part of body. Water loss in the area or part of.</li></ul>	3	6	3	54	2

3	<b>Domestic electric works</b>							
	<ul style="list-style-type: none"> <li>New electrical installations. Electrical repairs.</li> </ul>	<ul style="list-style-type: none"> <li>Electric shock. Incorrect electrical installations. Elevated positions</li> </ul>	<ul style="list-style-type: none"> <li>Electrocution. Burn. Fall risk. Body injuries.</li> </ul>	3	3	3	27	2
4	<b>General building/ maintenance</b>							
	<ul style="list-style-type: none"> <li>Blockwork. Plastering. Painting. Swimming pools repairs/ maintenance.</li> </ul>	<ul style="list-style-type: none"> <li>Inhalation or contact with cement dust. Elevated positions. Flying objects. Paint inhalation. Unsafe handtools. Unsafe elevated positions platforms.</li> </ul>	<ul style="list-style-type: none"> <li>Respiratory infection or lungs problems. Falling from elevated positions. Broken bones or fracture. Damage to eyes. Injury to hands.</li> </ul>	3	3	3	27	2
5	<b>Concrete works and urinary division</b>							
	<ul style="list-style-type: none"> <li>Concrete works; slab construction; Blockwork</li> </ul>	<ul style="list-style-type: none"> <li>Unsafe machinery or equipment; concrete spillage; concrete or mortar contact</li> </ul>	<ul style="list-style-type: none"> <li>Machinery running out of control; soil contamination; injury to body; skin infection</li> </ul>	3	3	3	27	2

		with body.						
6	<b>Excavation</b>							
	<ul style="list-style-type: none"> <li>Manual and mechanical excavation of trenches using construction mobile plants and hand tools</li> </ul>	<ul style="list-style-type: none"> <li>Collapsing of trenches. Unsafe access to trench. Unsafe machinery/ hand tools. Unprotected trenches. People exposure to excavations. Engulfment</li> </ul>	<ul style="list-style-type: none"> <li>Death/ buried/ trauma/ panic attack. Broken bone/ dislocation. Accidents/ injuries to hands. Falling into excavation. Death/ broken bones</li> </ul>	3	6	7	126	3
7	<b>Plumbing works</b>							
	<ul style="list-style-type: none"> <li>Pipe repairs/ pipe laying</li> </ul>	<ul style="list-style-type: none"> <li>High water pressure; Unsafe access and aggress; No trained or competent supervisor in place; Unsafe tools; Live electrical cables; Unidentified existing underground</li> </ul>	<ul style="list-style-type: none"> <li>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</li> </ul>	3	6	7	126	3



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

	<ul style="list-style-type: none"> <li>Kerbing and channeling using hand-tools. Retaining structure using wire baskets and stones or retaining blocks. Steel guardrails</li> </ul>	<ul style="list-style-type: none"> <li>Manual handling of kerbs. Unsafe tools. Ergonomic hazards. Manual handling of stones/ retaining blocks. Untrained welders; Flying objects; Unsafe welding equipment</li> </ul>	<ul style="list-style-type: none"> <li>Skeletal injuries/ Injuries to hands and toes. Ergonomic risks. Skin burn; fire; eye damage or injury</li> </ul>	3	6	3	54	2
10	<b>Manholes and appurtenant drainage system</b>							
	<ul style="list-style-type: none"> <li>Manholes repair; manholes cleaning</li> </ul>	<ul style="list-style-type: none"> <li>Open manhole; Lifting of manhole cover; Possible of pinch; Heavy manhole cover; Unsafe opening of manhole cover; Lack of supervision</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>	3	6	3	54	2
11	<b>Outdoor gym bases, platforms and sport ground</b>							

	<ul style="list-style-type: none"> <li>Construction of platforms; Excavation; installation of gym equipment and signage; Paving. Grading and grassing of sport fields</li> </ul>	<ul style="list-style-type: none"> <li>Untrained mobile plant operator; oil or petrol spillage; manual handling of equipment and material; unsafe tools; Repetitive movement or over-bending</li> </ul>	<ul style="list-style-type: none"> <li>Machinery running out of control; soil contamination; injury to hands and feet; ergonomic risks; back pain</li> </ul>	3	3	3	27	2
12	<b>Water tanks</b>							
	<ul style="list-style-type: none"> <li>Excavation and construction of a stand; installation of gutter and jojo tank</li> </ul>	<ul style="list-style-type: none"> <li>Unsafe tools; unsafe ladder; exposure to cement product; manual handling of jojo tank; elevated positions</li> </ul>	<ul style="list-style-type: none"> <li>Injury to hands; falling from elevated position or ladder; broken bone;</li> </ul>	3	3	1	9	1
13	<b>Traffic accommodation</b>							
		<ul style="list-style-type: none"> <li>Failure to control traffic; Failure to display signage.</li> </ul>	<ul style="list-style-type: none"> <li>Traffic congestion; Accidents; Death; Injury to body/</li> </ul>	3	6	7	126	3

		Passing-by traffic/ vehicles	pedestrians					
14	<b>Public Safety</b>							
		<ul style="list-style-type: none"> <li>Public exposure to construction activities; community unrest; fighting over resources</li> </ul>	<ul style="list-style-type: none"> <li>Injury to body; work stoppage; Legal claims</li> </ul>	6	6	3	108	3
15	<b>Use of hand-tools and electrical tools</b>							
	<ul style="list-style-type: none"> <li>Conducting activities using hand-tools and electrical tools</li> </ul>	<ul style="list-style-type: none"> <li>Unsafe hand-tools/ electrical tools. Possible of pinch</li> </ul>	<ul style="list-style-type: none"> <li>Injury to hands</li> </ul>	6	3	1	18	1
16	<b>Working in a fall risk positions</b>							
		<ul style="list-style-type: none"> <li>Falling into; Falling from; Medical unfit; Untrained person. Unsafe ladder</li> </ul>	<ul style="list-style-type: none"> <li>Broken borne/ disablement/ death</li> </ul>	6	6	3	108	3

## RISK PROFILE:

### MANAGING CONTRACTOR FOR THE IMPLEMENTATION OF WARD-BASED COMMUNITY INFRASTRUCTURE PROJECTS FOR WEST 2 REGION WITHIN ETHEKWINI

