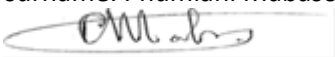
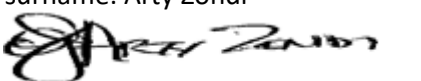




## ETHEKWINI MUNICIPALITY Occupational Health & Safety Unit

### SITE BASED BASELINE RISK ASSESSMENT

#### Construction Regulations 5.1(a)

Document Title	Baseline Risk Assessment
Client	EThekweni Municipality-Development Engineering
Project	Ottawa/Mount Edgecombe cemetery fencing.
Contract Number	4V-28535
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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 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 4V-28535
- (b) Occupational Health & Safety Act and its Regulation

## 6. LOCALITY PLAN



PLEASE NOTE THAT THIS IS A BASELINE RISK ASSESSMENT AND NOT A DETAILED RISK ASSESSMENT OF ALL ANTICIPATED ACTIVITIES ON SITE.

## **SCOPE OF WORK**

All of the works will be considered as restricted works. The works will include but is not limited to the following:

- The contractor is to phase his work such that he will work with more than one team on a minimum of two phases running concurrently.
- The whole of the works shall be completed within 20 weeks.
- General clearance and grubbing in restricted areas
- Excavate in all materials for concrete posts and backfill or spread on site in areas approved by the Engineer
- There will be no stockpiling of material without prior consent from the Engineer
- Excavate unsuitable material to spoil in tip off site
- Supply and install precast concrete palisade post in grade 20/26mm concrete base. Refer to drawing no. 49308
- Supply and install standard 2.4m high, precast concrete palisade fence, refer to drawing no. 49308.
- Supply and install flat wrap razor coil wire, refer to drawing no. 49308.
- Supply and install standard galvanised welded mesh vehicular gate, refer to drawing no. 49308.
- The terrain is steep and limited to vehicles with 4x4 capabilities to traverse the site.
- Access to the site is very limited as it is dense with vegetation and surrounded by formal houses.
- Trucks delivering material will not be able to access all areas of the site. The contractor is to make provision in his rate for this.

**And the following activities were assessed:**

Access to the site

Material delivery to the site

Site establishment

General site clearance and grubbing

Concrete works

Excavation work

Fence, flat wrap razor coil wire and gate installation

Site security

## 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

	Activity	Hazard	Risk	Risk Evaluation			Risk Score	Risk level
				E	P	S		
1	Access to the site.							
	<ul style="list-style-type: none"><li>Traveling to and from site in a vehicle.</li></ul>	<ul style="list-style-type: none"><li>Safety belts not worn when traveling in, or operating a vehicle.</li><li>Vehicle not equipped with safety belts for all passengers.</li><li>Over speeding of vehicles.</li><li>Driving on public roads.</li></ul>	<ul style="list-style-type: none"><li>Injuries caused when in vehicle accident.</li><li>Fatalities when in vehicle accident</li><li>Risk of personnel being injured by over speeding vehicles.</li><li>Involved in accident.</li></ul>	6	6	7	252	4
2	Material delivery to the site.							
	<ul style="list-style-type: none"><li>Loading and offloading of equipment manually.</li><li>Mechanical handling.</li></ul>	<ul style="list-style-type: none"><li>Employee being struck by the load.</li><li>Manual lifting or offloading of heavy material.</li><li>Bending.</li></ul>	<ul style="list-style-type: none"><li>Back strain</li><li>Skeletal damage</li><li>Head, hand, and foot injuries.</li><li>Serious injury</li></ul>	3	6	7	126	3

<b>3</b>	<b>Site establishment.</b>							
	<ul style="list-style-type: none"> <li>Manual and mechanical clearing of the land</li> <li>Off-loading and positioning of containers by mobile crane</li> <li>Fencing off the site</li> <li>Installation of temporary water supply, electricity, ablution facilities,</li> </ul>	<ul style="list-style-type: none"> <li>Incompetent construction mobile plant operator</li> <li>Manual Handling of equipment and materials.</li> <li>Uneven surfaces</li> <li>Driving on dangerous and undulating terrain.</li> <li>Reckless driving.</li> <li>Electrocution</li> <li>Incorrect/ poor connection of temporary services</li> </ul>	<ul style="list-style-type: none"> <li>Injuries, Accidents</li> <li>Skeletal injuries</li> <li>Destruction of services</li> <li>Death, burns</li> </ul>	6	6	7	252	4
<b>4</b>	<b>General site clearance and grubbing.</b>							
	<ul style="list-style-type: none"> <li>Manual clearing of the site.</li> </ul>	<ul style="list-style-type: none"> <li>Overgrown vegetation</li> <li>Rubble existing on site</li> <li>Snakes</li> <li>Bees</li> </ul>	<ul style="list-style-type: none"> <li>Nuisance, poisonous</li> <li>Death, poison</li> <li>Accident/ property damage.</li> </ul>	6	6	7	252	4

		<ul style="list-style-type: none"> <li>• Lifting of heavy objects</li> <li>• Pointed objects e.g. wires, nails, crusher and glasses.</li> <li>• Sharp edges and pointed ends.</li> <li>• Dust accumulation.</li> <li>• Noise</li> </ul>	<ul style="list-style-type: none"> <li>• Hand injuries</li> <li>• Backache.</li> <li>• Hand injuries</li> <li>• Respiratory problems.</li> <li>• NIHL.</li> <li>• Muscular/joint pain.</li> </ul>					
<b>5</b>	<b>Concrete Works</b>							
	<ul style="list-style-type: none"> <li>• Hand mixing and pouring of cement using hand tools</li> <li>• Floating of the concrete</li> <li>• Using hand tools</li> </ul>	<ul style="list-style-type: none"> <li>• Inhalation of cement dust.</li> <li>• Skin contact.</li> <li>• Defective hand tools</li> <li>• Manual handling.</li> <li>• Over bending</li> <li>• Unsafe tools</li> <li>• Ergonomic hazards.</li> </ul>	<ul style="list-style-type: none"> <li>• Lung infection.</li> <li>• Accidents.</li> <li>• Lung disease, eye irritation</li> <li>• Hand injuries.</li> <li>• Backache.</li> </ul>	3	6	7	126	3
<b>6</b>	<b>Excavation work</b>							
	<ul style="list-style-type: none"> <li>• Manual digging for fence and gate posts.</li> </ul>	<ul style="list-style-type: none"> <li>• Faulty hand tools</li> <li>• Hitting underground</li> </ul>	<ul style="list-style-type: none"> <li>• Hand injuries.</li> <li>• Lack of service delivery which may result in</li> </ul>	6	6	3	108	6

		services <ul style="list-style-type: none"> <li>Bending</li> </ul>	community protest <ul style="list-style-type: none"> <li>Back strain</li> </ul>					
<b>7</b>	<b>Fence, flat wrap razor coil wire and gate installation</b>							
	<ul style="list-style-type: none"> <li>Use of hand tools when erecting fence, fixing brackets, bolts, welded mesh vehicular gate and flat wrap razor coil wire.</li> <li>Use of a step ladder.</li> <li>Manual handling of heavy objects.(fence panels and posts)</li> </ul>	<ul style="list-style-type: none"> <li>Sharp protruding ends from razor coil wire.</li> <li>Incorrect lifting technique.</li> <li>Working at height.</li> </ul>	<ul style="list-style-type: none"> <li>Hand injury</li> <li>Trip and fall.</li> <li>Backache.</li> </ul>	6	6	3	108	6
<b>8</b>	<b>Site security</b>							
	<ul style="list-style-type: none"> <li>Provision of security to staff and property</li> </ul>	<ul style="list-style-type: none"> <li>Incompetent security personnel</li> <li>Unguided property</li> <li>Unprotected/ fenced site camp</li> </ul>	<ul style="list-style-type: none"> <li>Loss of property</li> <li>Theft,</li> <li>Financial risk</li> <li>Uncontrolled entry</li> <li>Hijacking/ Mugging</li> </ul>	6	6	3	108	3