




**Transnet National Ports Authority  
Health and Safety Management  
Refurbishment Of 06 Toulon Road  
Building at Bayhead Precinct in the Port of Durban  
Baseline Risk Assessment**

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Health & Safety Manager Date

Accepted by:  Sanelisiwe Shozi 06/09/2023  
Project Manager Date

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## 1. Project Scope and Description

### 1.1 Executive overview

This refurbishment project is initiated to accommodate the TNPA's clothing store which is currently located at an area earmarked for the Automotive Terminal expansion. This scope is part of the relocation work packages and shall solely focus on the refurbishment of 06 Toulon Road Building at Bayhead precinct in the Port of the Durban.

#### General description of the works :

- Removal of Existing Asbestos Roof And Side Cladding
- Demolitions Work
- Roof Work and Side Cladding
- Remove All Failed Warehouse Steel Work And Instal New
- Installation Of New Ceiling BOARD
- New Flooring Work
- High pressure cleaning of Walls
- Painting
- Brick work and plaster work

<b>Risk Assessment Title</b>	Refurbishment Of 06 Toulon Road Building at Bayhead Precinct in the Port of Durban
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<b>Risk Assessment Team</b>				
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### **Option/Activities Covered**

This baseline risk assessment focusses on the high-level Health and Safety risks anticipated during construction taking into consideration all construction methods.

- Access to site
- Site establishment
- Fencing
- Demolition Works
- Roof & Side Cladding removal
- Installation of new roof Aluminium sheets and side cladding sheets
- Warehouse Steel Works
- Ceiling Board Replacement
- Painting
- Installation of new aluminium doors and windows
- Fencing
- Stormwater Drains
- Paving
- Cleaning and waste removal

## Scope of Risk Assessment

The risks identified on the Refurbishment Of 06 Toulon Road Building at Bayhead Precinct is based on the option explored by the Transnet (NPA) project team.

The *Employer's* project specific objectives are to achieve Completion of the works by meeting the Completion Date whilst still maintaining the highest environmental, quality and safety standards and whilst minimising any disruptions.

Emphasis is placed on the Employer's commitment to environmental management and safety and their objective of Zero Harm and the Employer's objective of achieving a zero LTI and zero environmental legal contravention during the construction contract.

This is a legal and a live document which will be timeously updated as the study progresses.

### **Geographical location:**

The geographical location of the intended construction work is 06 Toulon Road Building at Bayhead Road Precinct.

Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
<b>Access into the Site</b>	<ul style="list-style-type: none"> <li>Driving under the influence of alcohol and drugs.</li> </ul>	<ul style="list-style-type: none"> <li>Injury to persons and property damage. (Reckless and Negligent driving)</li> </ul>	<ul style="list-style-type: none"> <li>The contractor's drivers shall abide by all general road traffic rules found in the National Road Traffic Act (Act 93 of 1996) and Regulations thereto or otherwise.</li> </ul>	<b>HIGH</b>
	<ul style="list-style-type: none"> <li>Non-Compliance to the Speed Restrictions</li> </ul>	<ul style="list-style-type: none"> <li>Accidents leading to Injury to persons and property damage.</li> </ul>	<ul style="list-style-type: none"> <li>All drivers shall abide by the speed limit of 30km/h whilst inside the site area.</li> <li>The contractor's drivers shall abide by all general road traffic rules found in the National Road Traffic Act (Act 93 of 1996).</li> <li>Adherence to Site specific Rules.</li> </ul>	<b>MEDIUM</b>
	<ul style="list-style-type: none"> <li>Heavy vehicles/Congested roads</li> </ul>	<ul style="list-style-type: none"> <li>Incidents/accidents taking place due to inpatients drivers</li> </ul>	<ul style="list-style-type: none"> <li>Trips to be planed ahead of time</li> <li>Adherence to the Road Traffic Act.</li> </ul>	<b>MEDIUM</b>
	<ul style="list-style-type: none"> <li>Parking in areas not designated for parking</li> </ul>	<ul style="list-style-type: none"> <li>Obstruction to the road and lead to injury to persons/ property damage.</li> </ul>	<ul style="list-style-type: none"> <li>Contractor shall ensure that all their drivers' park in designated areas to avoid obstruction on the road due to high vehicle movement.</li> <li>Contractor's employees must ensure they adhere to rules and regulations as per the site and use the respective walkways and routes to minimise /eliminate any incidents or accidents.</li> <li>Contractor must ensure that a traffic management plan is developed and</li> </ul>	<b>MEDIUM</b>

Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
			implemented when activities affect road traffic.	
<b>Site Establishment/ Loading and offloading of containers and materials</b>	• No designated eating area.	• Employees contracting diseases due to eating at hazardous areas on site.	• Contractor to adhere to OHSACT ACT 85 of 1993 and Facilities Regulations of 1994.	<b>MEDIUM</b>
	• Substandard electrical installations	• Electrocution and property damage.	• Electrical installation must be done as per the Electrical installation regulation.	<b>HIGH</b>
	• No ablution facilities.	• Communicable disease due to lack of hygiene.	• Contractor to adhere to OHSACT ACT 85 of 1993 and Facilities Regulations of 1994, Health and Safety Project specification.	<b>LOW</b>
	• Unstable Fencing Condoning the site area	Fencing falling over could lead to incidents/accidents and injuries by moving adjacent vehicles and persons	• Layout drawings to be submitted for approval • Contractor to ensure solid fencing is installed and proper supports to avoid any falling fencing and Jersey barriers in front of fencing for re enforcement.	<b>HIGH</b>
	• Incompetent Drivers transporting containers and equipment to site area	• Property Damage and Injuries to employees	• Contractors to ensure all drivers are competent prior to them appointing these employees as drivers	<b>HIGH</b>
	• Substandard rigging and lifting practices.	• Injuries and property damage.	• Contractor must develop the rigging study as per driven machinery regulation.	<b>HIGH</b>

Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
		<ul style="list-style-type: none"> <li>Suspended load falling/swinging causing injuries</li> </ul>	<ul style="list-style-type: none"> <li>Competent riggers to be appointed, and proof of competency and previous experience be provided</li> </ul>	
	<ul style="list-style-type: none"> <li>Using drinking water from un-identified source/connection.</li> </ul>	<ul style="list-style-type: none"> <li>Sickness of employees resulting from drinking water from unsafe sources.</li> </ul>	<ul style="list-style-type: none"> <li>Drinking water must only be sourced from a connection identified as safe for drinking.</li> </ul>	HIGH
	<ul style="list-style-type: none"> <li>Uneven Surfaces and poor ground stability</li> </ul>	<ul style="list-style-type: none"> <li>Injuries to persons, possible fatalities and property damage</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to ensure level ground Stability and adhere to geotech studies</li> </ul>	MEDIUM
	<ul style="list-style-type: none"> <li>Moving plant and equipment</li> </ul>	<ul style="list-style-type: none"> <li>Accidents</li> <li>Traffic Congestion</li> <li>Injury to persons</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to develop traffic manage plan</li> <li>Contractor to comply with health and safety site specification.</li> </ul>	HIGH
	<ul style="list-style-type: none"> <li>Incompetent rigger and crane operator.</li> </ul>	<ul style="list-style-type: none"> <li>Loads falling causing injuries and property damages.</li> <li>Loads swinging causing injuries and property damages.</li> </ul>	<ul style="list-style-type: none"> <li>Competent operator and riggers with previous experience and competencies must be appointed.</li> <li>Contractor to comply with Driven Machinery regulations, 2015 and 18 (11)</li> <li>Guide ropes to be used to control load.</li> </ul>	MEDIUM
	<ul style="list-style-type: none"> <li>Employees working under suspended loads</li> </ul>	<ul style="list-style-type: none"> <li>Loads falling causing injuries and possible fatalities</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to ensure that no person always walks or works under suspended loads.</li> <li>Contractor to ensure area is barricaded where suspended loads will be moving</li> </ul>	HIGH
	<ul style="list-style-type: none"> <li>Incorrect manual Handling.</li> </ul>	<ul style="list-style-type: none"> <li>Back injuries.</li> <li>Pinch points.</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to ensure employees are trained on correct manual lifting techniques.</li> <li>Contractor to ensure ergonomics procedure is in place as per manual handling and employees shall adhere to</li> </ul>	LOW



Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
			this procedure when manual handling materials on site	
	<ul style="list-style-type: none"> <li>High wind speeds</li> </ul>	<ul style="list-style-type: none"> <li>Loads falling causing injuries and property damages.</li> <li>Loads swinging causing injuries and property damages.</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to take note of the weather prior to any lifting activities.</li> <li>Contractor to ensure that no lifting must take place when there is inclement weather and or the wind speed is equal or more than 30km/h</li> </ul>	HIGH
Removal and Installation of existing Manholes, foundations, and concrete slabs and paving	<ul style="list-style-type: none"> <li>Exposure to noise</li> </ul>	<ul style="list-style-type: none"> <li>Noise induced hearing loss</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to comply with Noise induced Hearing Loss regulations, 2003</li> </ul>	MEDIUM
	<ul style="list-style-type: none"> <li>Exposure to dust</li> </ul>	<ul style="list-style-type: none"> <li>Respiratory diseases caused by dust inhalation.</li> </ul>	<ul style="list-style-type: none"> <li>Contractor must comply with Hazardous Chemical Substances Regulations and ensure dust suppression</li> </ul>	LOW
	<ul style="list-style-type: none"> <li>Incompetent jack hammer operators</li> </ul>	<ul style="list-style-type: none"> <li>Injuries</li> <li>Property damage</li> </ul>	<ul style="list-style-type: none"> <li>Only competent operators will operate the jack hammer.</li> </ul>	LOW
	<ul style="list-style-type: none"> <li>Vibration</li> </ul>	<ul style="list-style-type: none"> <li>Hand arm vibration syndrome due to excessive vibration.</li> </ul>	<ul style="list-style-type: none"> <li>Rotation of operators as and when (to reduce exposure time) required.</li> <li>Maintenance and care of equipment</li> <li>Training - ensure that employees are trained to recognise the signs and symptoms of</li> <li>Appropriate PPE?</li> </ul>	LOW
	<ul style="list-style-type: none"> <li>Defective jack hammer</li> </ul>	<ul style="list-style-type: none"> <li>Injuries to operator or fellow co-workers</li> </ul>	<ul style="list-style-type: none"> <li>Serviced and well-maintained jack hammer must be used.</li> <li>Inspection of jack hammer and other tools must be done before use.</li> </ul>	LOW

Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
			<ul style="list-style-type: none"> <li>Defective jack hammer must be removed from site.</li> </ul>	
	<ul style="list-style-type: none"> <li>Using of plant close to the other existing structures</li> </ul>	<ul style="list-style-type: none"> <li>Possible fire</li> <li>Property damage</li> </ul>	<ul style="list-style-type: none"> <li>The acceptable working distance of the plant must be always monitored closely.</li> </ul>	HIGH
Installation of paving	<ul style="list-style-type: none"> <li>Moving plant and equipment</li> </ul>	<ul style="list-style-type: none"> <li>Accidents</li> <li>Traffic Congestion</li> <li>Injury to persons</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to develop traffic manage plan</li> <li>Contractor to comply with health and safety site specification.</li> </ul>	HIGH
	<ul style="list-style-type: none"> <li>Uneven Surfaces and poor ground stability</li> </ul>	<ul style="list-style-type: none"> <li>Injuries to persons, possible fatalities, property damage</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to ensure level ground Stability and adhere to geotech studies</li> </ul>	MEDIUM
	<ul style="list-style-type: none"> <li>Moving of machinery</li> </ul>	<ul style="list-style-type: none"> <li>Machinery knocking employees resulting in injuries</li> </ul>	<ul style="list-style-type: none"> <li>Employees to be aware and stay clear of moving machinery.</li> <li>Reverse sound to be fitted on moving machinery.</li> <li>Only competent and experienced operator shall operate machinery.</li> <li>Contractor to comply with Driven Machinery regulations, 2015 and 18(11)</li> </ul>	MEDIUM
	<ul style="list-style-type: none"> <li>Existing services, Damage to electrical cables, water services, communication cables disruption</li> </ul>	<ul style="list-style-type: none"> <li>Damage to cables and services results in disruption to operations, services and electrocution</li> </ul>	<ul style="list-style-type: none"> <li>Hand excavation mandatory</li> <li>Permit system must be followed</li> <li>Survey</li> <li>Detection equipment</li> <li>Existing undergrounds services plans.</li> </ul>	HIGH
	<ul style="list-style-type: none"> <li>Incorrect use of hand tools</li> </ul>	<ul style="list-style-type: none"> <li>Injuries to employees</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to ensure inspection of all equipment including hand tools</li> </ul>	LOW

Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
	<ul style="list-style-type: none"> <li>Exposure to noise</li> </ul>	<ul style="list-style-type: none"> <li>Noise induced hearing loss</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to comply with Noise induced Hearing Loss regulations, 2003</li> </ul>	<b>MEDIUM</b>
	<ul style="list-style-type: none"> <li>Exposure to dust</li> </ul>	<ul style="list-style-type: none"> <li>Respiratory diseases caused by dust inhalation.</li> </ul>	<ul style="list-style-type: none"> <li>Contractor must comply with Hazardous Chemical Substances Regulations and ensure dust suppression</li> </ul>	<b>LOW</b>
	<ul style="list-style-type: none"> <li>Incompetent jack hammer operators</li> </ul>	<ul style="list-style-type: none"> <li>Injuries</li> <li>Property damage</li> </ul>	<ul style="list-style-type: none"> <li>Only competent operators will operate the jack hammer.</li> </ul>	<b>LOW</b>
	<ul style="list-style-type: none"> <li>Vibration</li> </ul>	<ul style="list-style-type: none"> <li>Hand arm vibration syndrome due to excessive vibration.</li> </ul>	<ul style="list-style-type: none"> <li>Rotation of operators as and when required.</li> <li>Contractor to comply with Occupational Health Risk assessment.</li> </ul>	<b>LOW</b>
	<ul style="list-style-type: none"> <li>Defective jack hammer</li> </ul>	<ul style="list-style-type: none"> <li>Injuries to operator or fellow co-workers</li> </ul>	<ul style="list-style-type: none"> <li>Serviced and well-maintained jack hammer must be used.</li> <li>Inspection of jack hammer and other tools must be done before use.</li> <li>Defective jack hammer must be removed from site.</li> </ul>	<b>LOW</b>
	<ul style="list-style-type: none"> <li>Using of plant close to the other existing structures</li> </ul>	<ul style="list-style-type: none"> <li>Possible fire</li> <li>Property damage</li> </ul>	<ul style="list-style-type: none"> <li>The use of the plant from the barge or berth must not pose a risk to hitting or coming into contact with any structures by ensuring there is a flag man in place to guide the competent operator whilst performing his task at hand</li> <li>The acceptable working distance of the plant must be always monitored closely.</li> </ul>	<b>HIGH</b>

Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
Refurbishment of existing structures/Concrete Slabs and removal of existing debris works from site.	• Structure stability	• uncontrolled collapse	<ul style="list-style-type: none"> <li>Structure stability to be assessed as part of the method statement before and during demolition.</li> <li>Area to be barricaded to avoid any employees walking/working in proximity of the structure</li> <li>Continuous assessment of the structure and monitoring of employees not to work close to unstable structure</li> </ul>	<b>HIGH</b>
	• Improper disposal of waste materials	• Injuries and illness to employees. Work stoppage.	• Contractor to ensure they comply to the approved EMP. Contaminated materials must be disposed at an approved disposal site.	<b>MEDIUM</b>
	• Open excavations	• Injury to people.	• Contractor must ensure they comply with the excavation permit. Contractor to comply with geotech controls.	<b>MEDIUM</b>
	• Damage to underground services during excavation	• Injury to persons when damaging underground services	<ul style="list-style-type: none"> <li>Contractor to ensure that underground services are identified and avoided during excavation.</li> <li>Contractor to apply for excavation permit prior to all excavation activities.</li> </ul>	<b>MEDIUM</b>

Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
	<ul style="list-style-type: none"> <li>Poor Ingres &amp; egress to the excavation</li> </ul>	<ul style="list-style-type: none"> <li>Employees sustaining injuries due to poor access to the trench.</li> </ul>	<ul style="list-style-type: none"> <li>For each excavation more than 1.2 metres deep, a safe means of access and egress (e.g., Ladders, steps or ramps) must be provided for persons working in the excavation.</li> <li>Safe entry and exit points must be located i.e., an exit point must not be more than 6 metres away from any person working in the excavation.as per CR 13</li> </ul>	HIGH
	<ul style="list-style-type: none"> <li>Excavation collapsing</li> </ul>	<ul style="list-style-type: none"> <li>Employees being buried in deep excavations</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to ensure that deep excavations are controlled as per cr13.</li> </ul>	HIGH
	<ul style="list-style-type: none"> <li>Contaminated material exposed during excavation</li> </ul>	<ul style="list-style-type: none"> <li>Possible contamination to the environment</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to ensure compliance to geotech risk controls.</li> </ul>	HIGH
	<ul style="list-style-type: none"> <li>Dust generated when back filling with sand.</li> </ul>	<ul style="list-style-type: none"> <li>Respiratory diseases caused by dust inhalation.</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to develop the safe work practices. And to ensure compliance to the Construction Regulations.</li> </ul>	HIGH
	<ul style="list-style-type: none"> <li>Vibration</li> </ul>	<ul style="list-style-type: none"> <li>Collapse of open excavations and could lead to injuries and burying of employees</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to comply to excavation permit conditions and develop method statement and safe work procedure.</li> </ul>	MEDIUM
	<ul style="list-style-type: none"> <li>Erection of temporary works from Unapproved Drawings</li> </ul>	<ul style="list-style-type: none"> <li>Injury to persons and employees</li> <li>Fatilities</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to ensure compliance to CR 12</li> <li>Adherence to SANS CODE 10085</li> </ul>	MEDIUM

Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
Layer works	<ul style="list-style-type: none"> <li>Defective tools used to place formwork</li> </ul>	<ul style="list-style-type: none"> <li>Injuries to employees</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to ensure inspection of all equipment including hand tools</li> </ul>	LOW
	<ul style="list-style-type: none"> <li>Incorrect use of hand tools</li> </ul>	<ul style="list-style-type: none"> <li>Injuries to employees</li> </ul>	<ul style="list-style-type: none"> <li>Contractor must ensure that employees are using the correct type of tool for the activity.</li> </ul>	LOW
	<ul style="list-style-type: none"> <li>Manual handling of reinforcement material</li> </ul>	<ul style="list-style-type: none"> <li>Back injuries</li> <li>Musculoskeletal disorders</li> </ul>	<ul style="list-style-type: none"> <li>Employees not to lift material heavier than 20kg alone.</li> </ul>	LOW
	<ul style="list-style-type: none"> <li>Manual handling of formwork material</li> </ul>	<ul style="list-style-type: none"> <li>Injuries to employees when lifting material in awkward position</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to ensure that employees are trained to not handle materials in awkward positions though Risk assessments, DSTI and toolbox talks. (Ergonomics training)</li> <li>Employees not to lift material heavier than 20kg alone.</li> <li>Contractor to ensure usage of appropriate gloves.</li> </ul>	MEDIUM
	<ul style="list-style-type: none"> <li>Incorrect stacking of bricks</li> </ul>	<ul style="list-style-type: none"> <li>Stacking collapsing injuring employees</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to appoint a stacking supervisor to supervise all stacking activities.</li> <li>Bricks must be stacked on a levelled surface.</li> </ul>	LOW

Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
Removal and Installation of steelwork	<ul style="list-style-type: none"> <li>Undertaking hot work without a hot work permit in place.</li> </ul>	<ul style="list-style-type: none"> <li>Work stoppages</li> <li>Time Delays</li> </ul>	<ul style="list-style-type: none"> <li>The contractor shall apply for a hot work permit prior to commencement of the task.</li> <li>Permits and warning signs are to be displayed at entry points to hot work areas.</li> <li>Permits must be valid at the time work is being undertaken.</li> </ul>	HIGH
	<ul style="list-style-type: none"> <li>Exposure to UV, IR Radiation</li> </ul>	<ul style="list-style-type: none"> <li>Arc-eye</li> <li>loss of vision</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to comply with section 9 of General Safety Regulations</li> <li>Contractor to ensure operators are trained in safe work practices</li> <li>The contractor shall compile a comprehensive risk assessment prior to commencement of task.</li> <li>Contractor to ensure that welders are trained, competent and experienced.</li> </ul>	LOW
	<ul style="list-style-type: none"> <li>Hot works</li> </ul>	<ul style="list-style-type: none"> <li>Possible fire</li> <li>Burns to employees</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to comply with section 9 of General Safety Regulations</li> <li>Warning signs shall be posted around and at each level below the area of each overhead welding or burning operation. Fire extinguishers shall be available and fire blankets shall be used for protection.</li> <li>The contractor to ensure appropriate screening is in place to protect the surrounding workspace.</li> </ul>	MEDIUM

Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
			<ul style="list-style-type: none"> <li>Ensure operator has been trained in safe work practices</li> </ul>	
	<ul style="list-style-type: none"> <li>Defective machinery</li> </ul>	<ul style="list-style-type: none"> <li>Injuries to employees and possible property damage</li> </ul>	Contractor to ensure the inspection of hot work equipment by a competent person.	LOW
Installation of new Brick work and Plaster works	<ul style="list-style-type: none"> <li>Defective tools used to place formwork</li> </ul>	<ul style="list-style-type: none"> <li>Injuries to employees</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to ensure inspection of all equipment including hand tools</li> </ul>	LOW
	<ul style="list-style-type: none"> <li>Incorrect use of hand tools</li> </ul>	<ul style="list-style-type: none"> <li>Injuries to employees</li> </ul>	<ul style="list-style-type: none"> <li>Contractor must ensure that employees are using the correct type of tool for the activity.</li> </ul>	LOW
	<ul style="list-style-type: none"> <li>Manual handling of reinforcement and Plaster materials</li> </ul>	<ul style="list-style-type: none"> <li>Back injuries</li> <li>Musculoskeletal disorders</li> </ul>	<ul style="list-style-type: none"> <li>Employees not to lift material heavier than 20kg alone.</li> </ul>	LOW
	<ul style="list-style-type: none"> <li>Manual handling of other supporting materials</li> </ul>	<ul style="list-style-type: none"> <li>Injuries to employees when lifting material in awkward position</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to ensure that employees are trained to not handle materials in awkward positions though Risk assessments, DSTI and toolbox talks. (Ergonomics training)</li> <li>Employees not to lift material heavier than 20kg alone.</li> <li>Contractor to ensure usage of appropriate gloves.</li> </ul>	MEDIUM
	<ul style="list-style-type: none"> <li>Incorrect stacking of bricks</li> </ul>	<ul style="list-style-type: none"> <li>Stacking collapsing injuring employees</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to appoint a stacking supervisor to supervise all stacking activities.</li> </ul>	LOW



Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
			<ul style="list-style-type: none"> <li>Bricks must be stacked on a levelled surface</li> </ul>	
<b>High Pressure Cleaning</b>	<ul style="list-style-type: none"> <li>Manoeuvring / Handling Machine and Equipment</li> </ul>	<ul style="list-style-type: none"> <li>Pushing, Pulling, lifting, Carrying. Crushing Injuries from unintentional Machine Movement</li> </ul>	<ul style="list-style-type: none"> <li>Observe Correct Manual Handling Procedures Assess weight before lifting - seek assistance</li> <li>Make sure Machine is on firm Level Surface</li> <li>Chock Wheels , apply Park Brake</li> </ul>	
	<ul style="list-style-type: none"> <li>High Pressure Water</li> </ul>	<ul style="list-style-type: none"> <li>Injuries to Body</li> </ul>	<ul style="list-style-type: none"> <li>Conduct inspection on pressure washer unless and read manufacturer's instructions wear all required ppe barricade work area - restrict access erect hazard warning signs, do not use without protective hose clamps on operators end of high pressure hose do not use if evidence of water leaks in the event of a water jet injury - seek immediate medical attention</li> </ul>	
	<ul style="list-style-type: none"> <li>flying debris from pressure cleaning</li> </ul>	<ul style="list-style-type: none"> <li>Eye / Skin damage</li> </ul>	<ul style="list-style-type: none"> <li>Use appropriate PPE including goggles / face mask, long shirt sleeves and long trousers and gloves</li> </ul>	
	<ul style="list-style-type: none"> <li>Trip, Slip and falling</li> </ul>	<ul style="list-style-type: none"> <li>Injuries to Body</li> </ul>	<ul style="list-style-type: none"> <li>Extreme caution to be taken with hoses on the ground /tripping Wet ground slipping wear appropriate nonslip footwear If used on platforms must be approved access platform</li> </ul>	
<b>Fencing- Fence line to be set out</b>	<ul style="list-style-type: none"> <li>Underground services e.g. Electricity cables, sewer /water pipes to</li> </ul>	<ul style="list-style-type: none"> <li>Employees may be electrocuted, Injury to employees. Fatality</li> </ul>	<ul style="list-style-type: none"> <li>Adherence to Electrical Installation Regulations, under the Occupational Health &amp; Safety Act, Act 85 of 1993.</li> <li>Contractor must adhere to SANS 10142</li> </ul>	

Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
	be detected prior to excavation			
	<ul style="list-style-type: none"> <li>Incorrect use of hand tools</li> </ul>	<ul style="list-style-type: none"> <li>Injuries to employees</li> </ul>	<ul style="list-style-type: none"> <li>Contractor must ensure that employees are using the correct type of tool for the activity.</li> </ul>	
	<ul style="list-style-type: none"> <li>Manual handling of other supporting materials</li> </ul>	<ul style="list-style-type: none"> <li>Injuries to employees when lifting material in awkward position</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to ensure that employees are trained to not handle materials in awkward positions though Risk assessments, DSTI and toolbox talks. (Ergonomics training)</li> <li>Employees not to lift material heavier than 20kg alone.</li> <li>Contractor to ensure usage of appropriate gloves.</li> </ul>	
	<ul style="list-style-type: none"> <li>Contaminated material exposed during excavation for fencing poles</li> </ul>	<ul style="list-style-type: none"> <li>Possible contamination to the environment</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to ensure they comply to the approved EMP.</li> <li>Contaminated materials must be disposed at an approved disposal site.</li> </ul>	
	<ul style="list-style-type: none"> <li>Unstable Fencing once erected</li> </ul>	<ul style="list-style-type: none"> <li>Fencing falling over could lead to incidents/accidents and injuries by moving adjacent vehicles and persons</li> </ul>	<ul style="list-style-type: none"> <li>Layout drawings to be submitted for approval</li> <li>Contractor to ensure solid fencing is installed and proper supports to avoid any falling fencing and Jersey barriers in front of fencing for re enforcement.</li> </ul>	
Working in Elevated Positions	<ul style="list-style-type: none"> <li>Working at Heights.</li> </ul>	<ul style="list-style-type: none"> <li>Falling from heights, sustaining injuries such as loss of limbs and possible fatalities</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to consider the weather when working at heights.</li> <li>Contractor must ensure that working at heights activities do not take place in inclement weather and or when the wind speed is high.</li> </ul>	<b>HIGH</b>

Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
			<ul style="list-style-type: none"> <li>• Fall protection plan to be developed by appointed competent person and implemented</li> <li>• Demarcation of areas where there is work at heights</li> <li>• The Contractor must ensure that all employees working at heights undergo Medical Surveillance to ensure fitness for duty.</li> <li>• Contractor to ensure that employees are trained and found competent to work at heights and proof of training must be provided.</li> <li>• Contractor to ensure that employees are trained and found competent to use double lanyard safety harness.</li> <li>• Contractor to comply with section 10 of Construction Regulations, 2014</li> </ul>	
	<ul style="list-style-type: none"> <li>• High wind speeds</li> </ul>	<ul style="list-style-type: none"> <li>• Loads falling causing injuries and property damages.</li> <li>• Loads swinging causing injuries and property damages.</li> </ul>	<ul style="list-style-type: none"> <li>• Contractor to take note of the weather prior to any lifting activities.</li> <li>• Contractor to ensure that no lifting must take place when there is inclement weather and or the wind speed is equal or more than 30km/h</li> </ul>	HIGH
	<ul style="list-style-type: none"> <li>• Defective ladder used</li> </ul>	<ul style="list-style-type: none"> <li>• Employee falling from a ladder sustaining injuries</li> </ul>	<ul style="list-style-type: none"> <li>• Contractor to ensure ladder inspection is done before use.</li> <li>• Contractor to ensure that employees are trained on the safe use of a ladder.</li> </ul>	HIGH

Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
Handling, Storage & Disposal of Hazardous chemical substances.	<ul style="list-style-type: none"> <li>Incorrect storage and handling of hazardous waste</li> </ul>	<ul style="list-style-type: none"> <li>Contamination of receiving environment.</li> </ul>	<ul style="list-style-type: none"> <li>Waste storage as per project EMP requirements</li> <li>Cradle-to-grave approach to be followed.</li> <li>Contractor to adhere to the OHSACT and HCS Regulations, when dealing with Hazardous Chemical Substances.</li> <li>Waste to be transported and disposed of as per National and Local Regulations</li> <li>Licensed waste contractor to be appointed.</li> <li>All painters must be trained, and proof of competency and previous experience be provided.</li> <li>Correct PPE to be worn for the task</li> <li>MSD's to be read and adhered to when using Hazardous &amp; Chemical substances</li> </ul>	HIGH
Working in confined spaces	<ul style="list-style-type: none"> <li>Unauthorised entry</li> </ul>	<ul style="list-style-type: none"> <li>Physical Injuries / death</li> </ul>	<ul style="list-style-type: none"> <li>The confined space is to be manned by a competent and trained safety watch preventing unauthorised entry into the area.</li> <li>All employees must be trained and found competent before entering confined space.</li> <li>Air monitoring to be conducted prior to entering the confined space, and throughout the duration of the task.</li> <li>Contractor to apply for confined space entry permit before going inside confined space.</li> </ul>	HIGH

Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
	<ul style="list-style-type: none"> <li>Insufficient oxygen levels</li> </ul>	<ul style="list-style-type: none"> <li>Respiratory illnesses due to suffocation</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to comply with Section 5 of General safety regulations.</li> </ul>	HIGH
Electrical installations	<ul style="list-style-type: none"> <li>Isolation and lock out procedure not followed during installation</li> </ul>	<ul style="list-style-type: none"> <li>Electrocution</li> <li>Possible fatality</li> <li>Physical damage to structures.</li> </ul>	<ul style="list-style-type: none"> <li>Adherence to Electrical Installation Regulations, under the Occupational Health &amp; Safety Act, Act 85 of 1993.</li> <li>Contractor must adhere to SANS 10142</li> </ul>	HIGH
	<ul style="list-style-type: none"> <li>Working in awkward positions</li> </ul>	<ul style="list-style-type: none"> <li>musculoskeletal disorders</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to ensure that employees do not stay in awkward positions for a long time.</li> </ul>	HIGH
	<ul style="list-style-type: none"> <li>Manual handling</li> </ul>	<ul style="list-style-type: none"> <li>Hand and back injuries</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to ensure employees are trained on correct manual lifting techniques.</li> <li>Employees to use appropriate gloves when doing manual handling.</li> <li>Employees not to lift material heavier than 20kg alone.</li> </ul>	LOW
External environmental conditions not associated with any activities	<ul style="list-style-type: none"> <li>Working in the sun without drinking liquids</li> </ul>	<ul style="list-style-type: none"> <li>Dehydration</li> </ul>	<ul style="list-style-type: none"> <li>Provide cool water in the workplace and encourage workers to drink it frequently in small amounts before, during and after working.</li> </ul>	HIGH
	<ul style="list-style-type: none"> <li>Open excavation/trenches</li> <li>Use of defective tools and equipment (spades and forks)</li> </ul>	<ul style="list-style-type: none"> <li>Employee falling into excavation and or excavation full of water during rainy periods</li> <li>Injuries (cuts, abrasion etc)</li> </ul>	<ul style="list-style-type: none"> <li>Method statement for drainage of excavations, adequate drainage procedure, daily inspections, and inspections after inclement weather, monitor weather forecasts, ensure correct batter angles, shoring to prevent collapse</li> </ul>	HIGH

Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
			<ul style="list-style-type: none"> <li>Contractor to ensure employees are trained on safe use of hand tools.</li> <li>Pre-inspections of tools by Contractor</li> <li>Contractor to ensure appropriate PPE is always worn.</li> </ul>	
	<ul style="list-style-type: none"> <li>High wind speeds</li> </ul>	<ul style="list-style-type: none"> <li>Loads falling causing injuries and property damages.</li> <li>Loads swinging causing injuries and property damages.</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to take note of the weather prior to any lifting activities.</li> <li>Contractor to ensure that no lifting must take place when there is inclement weather and or the wind speed is equal or more than 30km/h</li> </ul>	<b>HIGH</b>
	<ul style="list-style-type: none"> <li>Exposure to cement dust</li> </ul>	<ul style="list-style-type: none"> <li>Inhalation of dust which may lead to respiratory illnesses</li> </ul>	<ul style="list-style-type: none"> <li>Contractor must comply with Hazardous Chemical Substances Regulations</li> </ul>	
	<ul style="list-style-type: none"> <li>Extreme weather conditions</li> </ul>	<ul style="list-style-type: none"> <li>The contractor may expose employees to risks associated with hot and cold thermal stress (e.g., heat stress and dehydration)</li> </ul>	<ul style="list-style-type: none"> <li>Requirements for Thermal Stress to be included onto Health and Safety Plan</li> </ul>	
	<ul style="list-style-type: none"> <li>Inadequate lighting</li> </ul>	<ul style="list-style-type: none"> <li>Insufficient light - not enough (too little) light for the need.</li> <li>Glare - too much light for the need.</li> <li>Improper contrast.</li> <li>Poorly distributed light.</li> <li>Flicker.</li> </ul>	<ul style="list-style-type: none"> <li>Contractor must conduct Lighting survey before initiating night work.</li> <li>Contractor to ensure the site is well lit at night as workers should not be allowed to work in the dark.</li> </ul>	

Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
Installation of electrical works and fibre to the facilities	<ul style="list-style-type: none"> <li>No lockout procedure in place.</li> <li>Incorrect placement/use of equipment</li> <li>Working at heights</li> <li>Use of hand tools (drill machine, multimeter, spanners)</li> </ul>	<ul style="list-style-type: none"> <li>Unauthorised equipment operation, equipment starting unexpectedly</li> <li>Electric shock</li> <li>Fires</li> <li>Property damage</li> <li>Hand injuries, cuts, and abrasions</li> </ul>	<ul style="list-style-type: none"> <li>Lockout/tag out procedure</li> <li>Train employees on Lockout procedure</li> <li>SOP</li> <li>Competent Electrician</li> <li>COC certificate</li> <li>PPE</li> <li>EIR 6 (Electrical Contractor)</li> <li>EIR 9 (Issuing of certificate of competence)</li> <li>CR 9 (Risk assessment for construction work)</li> <li>Contractor must adhere to SANS 10142</li> <li>Contractor to ensure ladder inspection is done before use.</li> <li>Contractor to ensure that employees are trained on the safe use of a ladder.</li> </ul>	
Painting	<ul style="list-style-type: none"> <li>Manual handling</li> <li>Working @ Heights</li> <li>Handling of hazardous materials</li> <li>Chemical Fumes from paint</li> <li>Paint coming into contact with the skin</li> </ul>	<ul style="list-style-type: none"> <li>Musculoskeletal disorders like backaches, from twisting and lying at awkward angles to access restricted areas</li> <li>Falling from heights, sustaining injuries such as loss of limbs and possible fatalities</li> <li>Skin irritation and Exposure to solvent vapours may result in a number of health effects, e.g. the central</li> </ul>	<ul style="list-style-type: none"> <li>Appropriate PPE including gloves</li> <li>Only experienced and qualified employees to use power tools</li> <li>Contractor to consider the weather when working at heights.</li> <li>Contractor must ensure that working at heights activities do not take place in inclement weather and or when the wind speed is high.</li> <li>Fall protection plan to be developed by appointed competent person and implemented</li> <li>Demarcation of areas where there is work at heights</li> </ul>	HIGH

Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
		nervous system, respiratory system. • Respiratory illnesses	• The Contractor must ensure that all employees working at heights undergo Medical Surveillance to ensure fitness for duty. • Contractor to ensure that employees are trained and found competent to work at heights and proof of training must be provided. • Contractor to ensure that employees are trained and found competent to use double lanyard safety harness. • Contractor to comply with section 10 of Construction Regulations, 2014 • Contractor to adhere to the OHSACT and HCS Regulations, when dealing with Hazardous Chemical Substances.	
Manual and mechanical Demolition of adjacent building	• Debris falling onto employees; Debris / Building material laying all over • Weakened structures falling over onto employees. • Exposure to excessive noise during demolition. • Possible exposure to live electricity. • Possible exposure to sewage system.	• Debris could fall through openings or over edges onto employees causing multiple injuries; Employees could trip and fall sustaining multiple injuries. • Multiple injuries / death • Excessive noise could cause hearing loss over a period. • Employees could be shocked or electrocuted by live electrical cables.	• All areas where debris can possibly fall from heights to lower levels must be barricaded and controlled. Housekeeping must be done daily, and access ways kept clear from obstructions. Appropriate and safe methods of removing the material should be followed (rubble chute) • Overalls, hardhats, safety boots, eye protection, ear protection and dust masks must be worn by employees.	



Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
		<ul style="list-style-type: none"> <li>• Employees can be exposed to health hazards, Ground or water contamination.</li> <li>• Dust pollution</li> </ul>	<ul style="list-style-type: none"> <li>• Watering down of the area is also required to minimize dust clouds created on site</li> <li>• Competent person appointed in writing to supervise demolition work.</li> <li>• Snow netting must be used to barricade demolition area with signage posted up in strategic positions to ensure no unauthorised entry, Supervision must be present at all times to ensure that employees work according to the method statement drawn up for the specific demolition; Any unstable walls need to be covered with timber sheets and propped to ensure that it does not fall over onto employees; Props / supports may only be removed on the Site Managers / Engineers instruction; Demolition must take place under strict supervision and management's instruction Correct and safe to use tools to be used; Employees must be trained in the use of these tools;</li> <li>• Competent person appointed in writing to supervise demolition work.</li> <li>• The area must be declared a noise zone and appropriate signage must be erected. All services and their locations must be identified and blanked off or de-</li> </ul>	

Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
			<p>energised before demolition may commence.</p> <ul style="list-style-type: none"> <li>• All services and their locations must be identified and blanked off before demolition may commence.</li> <li>• Survey to be carried out to determine if there is any asbestos present anywhere in or on the structure to be demolished;</li> <li>• If there is any doubt regarding the contents of the materials i.e. cement based roofing sheeting, piping insulations etc., samples to be send away for analysis;</li> <li>• No demolition of the structure to take place until it is declared safe</li> <li>• Compliance with the OHSA</li> </ul>	
Demolitions of existing /Structures/Concrete Plinths and removal of existing debris works from site.	• Structure stability	• uncontrolled collapse	<ul style="list-style-type: none"> <li>• Structure stability to be assessed as part of the method statement before and during demolition.</li> <li>• Area to be barricaded to avoid any employees walking/working in proximity of the structure</li> <li>• Continuous assessment of the structure and monitoring of employees not to work close to unstable structure</li> </ul>	HIGH
	• Improper disposal of waste materials	<ul style="list-style-type: none"> <li>• Injuries and illness to employees.</li> <li>• Work stoppage.</li> </ul>	• Contractor to ensure they comply to the approved EMP.	MEDIUM

Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
			Contaminated materials must be disposed at an approved disposal site.	
	• Open excavations	• Injury to people.	• Contractor must ensure they comply with the excavation permit. Contractor to comply with geotech controls.	MEDIUM
	• Damage to underground services during excavation	• Injury to persons when damaging underground services	• Contractor to ensure that underground services are identified and avoided during excavation. • Contractor to apply for excavation permit prior to all excavation activities.	MEDIUM
	• Poor Ingres & egress to the excavation	• Employees sustaining injuries due to poor access to the trench.	• For each excavation more than 1.2 metres deep, a safe means of access and egress (e.g., Ladders, steps or ramps) must be provided for persons working in the excavation. • Safe entry and exit points must be located i.e. an exit point must not be more than 6 metres away from any person working in the excavation.as per CR 13	HIGH
	• Excavation collapsing	• Employees being buried in deep excavations	• Contractor to ensure that deep excavations are controlled as per cr13.	HIGH
	• Contaminated material exposed during excavation	• Possible contamination to the environment	• Contractor to ensure compliance to geotech risk controls.	HIGH
	• Dust generated when back filling with sand.	• Respiratory diseases caused by dust inhalation.	• Contractor to develop the safe work practices. And to ensure compliance to the Construction Regulations.	HIGH

Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
	• Wind Speeds	• Collapse of the existing structures could lead to injuries and fatalities	• Contractor to ensure compliance to CR 12 • Contactor to develop SWP and implement.	MEDIUM
	• Improper disposal of waste materials	• Injuries and illness to employees. • Work stoppage.	• Contractor to ensure they comply to the approved EMP. Contaminated materials must be disposed at an approved disposal site.	MEDIUM
	• Open excavations	• Injury to people.	• Contractor must ensure they comply with the excavation permit. Contractor to comply with geotech controls.	MEDIUM
	• Damage to underground services during excavation	• Injury to persons when damaging underground services	• Contractor to ensure that underground services are identified and avoided during excavation. • Contractor to apply for excavation permit prior to all excavation activities.	MEDIUM
	• Poor Ingres & egress to the excavation	• Employees sustaining injuries due to poor access to the trench.	• For each excavation more than 1.2 metres deep, a safe means of access and egress (e.g., Ladders, steps or ramps) must be provided for persons working in the excavation. • Safe entry and exit points must be located i.e., an exit point must not be more than 6 metres away from any person working in the excavation.as per CR 13	HIGH
	• Excavation collapsing	• Employees being buried in deep excavations	• Contractor to ensure that deep excavations are controlled as per cr13.	HIGH

Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
	<ul style="list-style-type: none"> <li>Contaminated material exposed during excavation</li> </ul>	<ul style="list-style-type: none"> <li>Possible contamination to the environment</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to ensure compliance to geotech risk controls.</li> </ul>	HIGH
	<ul style="list-style-type: none"> <li>Asbestos material uncovered</li> </ul>	<ul style="list-style-type: none"> <li>Diseases such as Mesothelioma and asbestosis.</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to comply with ASBESTOS ABATEMENT REGULATIONS, 2020 and Transnet Asbestos Management Procedure and all applicable legislation.</li> </ul>	HIGH
	<ul style="list-style-type: none"> <li>Dust generated when back filling with sand.</li> </ul>	<ul style="list-style-type: none"> <li>Respiratory diseases caused by dust inhalation.</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to develop the safe work practices. And to ensure compliance to the Construction Regulations.</li> </ul>	HIGH
	<ul style="list-style-type: none"> <li>Vibration</li> </ul>	<ul style="list-style-type: none"> <li>Collapse of open excavations and could lead to injuries and burying of employees</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to comply to excavation permit conditions and develop method statement and safe work procedure.</li> </ul>	MEDIUM
	<ul style="list-style-type: none"> <li>Erection of temporary works from unapproved Drawings</li> </ul>	<ul style="list-style-type: none"> <li>Injury to persons and employees</li> <li>Fatilities</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to ensure compliance to CR 12</li> <li>Adherence to SANS CODE 10085</li> </ul>	MEDIUM
	<ul style="list-style-type: none"> <li>Wind Speeds</li> </ul>	<ul style="list-style-type: none"> <li>Injuries and fatalities to employees</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to ensure compliance to CR 12</li> <li>Contactor to develop SWP and implement.</li> </ul>	MEDIUM
Roof Work-Removal and disposal of asbestos roof sheeting and side cladding	<ul style="list-style-type: none"> <li>Risk of workers coming into physical contact with asbestos particles</li> </ul>	<ul style="list-style-type: none"> <li>Occupational health Illness.</li> <li>Fatalities</li> </ul>	<ul style="list-style-type: none"> <li>Before an employee is exposed to asbestos he must be informed and trained in the practical aspects and the theoretical knowledge of asbestos.</li> <li>Fully exposed asbestos pipes should, where possible be lifted out of the trench as a full unit without breakages.</li> </ul>	HIGH

Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
			<ul style="list-style-type: none"> <li>• Lifting should be carried out by mechanical means using the lifting equipment presently on site. Sling.</li> <li>• All workers to wear personal protective equipment and clothing i.e., Face mask, safety goggles, safety boots and safety gloves.</li> <li>• The site to be cleaned up daily and all asbestos particles to be placed in the bin provided.</li> <li>• Suitable arrangements to be made with a waste disposal contractor to collect material.</li> <li>• Safe disposal certificate to be supplied by the contractor which must be submitted to TNPA</li> <li>• All work operations to be supervised and monitored daily by site agent</li> <li>• Workers to wash before eating and shower using soap after the completion of the shift.</li> <li>• Contaminated clothing to be washed daily.</li> <li>• Construction Manager/Supervisor to ensure that all work performed with the removal and disposal of the asbestos pipes complies with the Asbestos Regulations.</li> </ul>	

Options and activities				
Options and Activity, step or action step	Hazards	Associated risk event	Risk controls	Risk Rating
			<ul style="list-style-type: none"> <li>Safety Officer to carry out daily inspections and ensure that Safe Disposal Certificate/s are obtained.</li> </ul>	

#### Annexure 1 – Risk Matrix and Descriptions

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Critical
Almost Certain	Medium	Medium	High	Extreme	Extreme
Likely	Low	Medium	High	High	Extreme
Possible	Low	Medium	High	High	High
Unlikely	Low	Low	Medium	Medium	High
Rare	Low	Low	Low	Low	Medium
Assessed Risk Level	Description of Risk Level		Action Required		
Low	If an incident were to occur, there would be little likelihood that an injury would result		Undertake the activity with the existing controls in place		
Medium	If an incident were to occur, there would be some chance that an injury requiring First Aid would result		Additional controls may be needed		

<b>High</b>	If an incident were to occur, it will be likely that an injury requiring medical treatment would result	Controls will need to be in place before the activity is undertaken
<b>Extreme</b>	If an incident were to occur it, it would be likely that a permanent or death would result	Consider alternatives to doing the activity. Significant control measures will need to be implemented to ensure safety

<b>Likelihood</b>	<b>Description of Likelihood</b>		<b>Consequence</b>	<b>Description of Consequence</b>
1. Rare	Will only occur in exceptional circumstances		1. Insignificant	No treatment required
2. Unlikely	Not likely to occur within the foreseeable future, or within the project lifecycle		2. Minor	Minor injury requiring First Aid treatment (e.g. minor cuts, bruises, bumps)
3. Possible	May occur within the foreseeable future, or within the project lifecycle		3. Moderate	Injury requiring medical treatment or lost time
4. Likely	Likely to occur within the foreseeable future, or within the project lifecycle		4. Major	Serious injury (injuries) requiring specialist medical treatment or hospitalisation
5. Almost Certain	Almost certain to occur within the foreseeable future or within the project lifecycle		5. Critical	Loss of life, permanent disability or multiple serious injuries